



ICAO

REPORT OF
THE SEVENTH MEETING OF THE ASIA/PACIFIC AIR TRAFFIC
MANAGEMENT AUTOMATION SYSTEM TASK FORCE
(ATMAS TF/7)

Bangkok, Thailand
2-4 June 2026

The views expressed in this Report should be taken as those of
ATMAS TF/7 Meeting and not of the Organization.

Approved by the Meeting
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1. Introduction

1.1 The Seventh Meeting of the Asia/Pacific Air Traffic Management Automation System Task Force (APAC ATMAS TF/7) was held from **2 – 4 June 2026** in the ICAO APAC Regional Office, Bangkok, Thailand.

2. Attendance

2.1 The Meeting was attended by **50** participants from **14** Member States/Administrations, and **1** International Organization, namely China, Hong Kong China, Indonesia, Lao PDR, Malaysia, Maldives, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, United States, Viet Nam, and ICAO. The List of participants is provided in **Attachment 1**.

3. Opening of the Meeting

3.1 Ms. Wenxiu Chen, Director of CNS Department, East China Regional ATMB, CAAC, Co-Chair of ATMAS TF, opened the Meeting. She welcomed participants and expressed appreciation to the ICAO APAC Office for organizing the event. Ms. Chen highlighted the importance of the Meeting in supporting the continued development and implementation of ATMAS across the APAC region.

3.2 Mr. Joe Chua, Head (Research & Innovation), Civil Aviation Authority of Singapore (CAAS), Co-Chair of ATMAS TF, emphasized the growing importance of ATM automation systems in enabling emerging operational concepts such as FF-ICE and SWIM. He noted the need for ATMAS evolution to support future operational requirements and encouraged active participation and constructive discussions throughout the Meeting.

4. Officers and Secretariat

4.1 Ms. Wenxiu Chen, Director of CNS Department, East China Regional ATMB, CAAC, and Mr. Joe Chua, Head (Research & Innovation), Civil Aviation Authority of Singapore (CAAS), Co-Chaired the Meeting.

4.2 Mr. Zhang De, Regional Officer CNS, acted as the Secretary of the Meeting with the support of Ms. Xu Jian, Associate Programme Officer (CNS) Implementation and Ms. Varapan Meefuengsart, the Programme Assistant from ICAO Asia and Pacific Regional Office.

5. Organization, working arrangement, language and documentation

5.1 The Meeting met as a single body. The working language for the Meeting was English, inclusive of all documentation and this Report. The Meeting considered **Eleven** (11) Working Papers, **Eighteen** (18) Information Papers, and **Six** (6) Presentations under its **Nine** (9) Agenda Items. A List of Papers is provided in **Attachment 2**.

6. Draft Conclusions, Draft Decisions and Decisions of ATMAS TF – Definition

6.1 ATMAS TF recorded its actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

Draft Conclusions deal with matters that, according to APANPIRG's terms of reference, require the attention of States or action by the ICAO in accordance with established procedures;

Draft Decisions deal with the matters of concern only to APANPIRG and its contributory bodies; and

Decisions of the ATMAS TF that relate solely to matters dealing with the internal working arrangements of the ATMAS TF.

7. **List of Conclusions/Decisions from ATMAS TF/7**

Reference Number	Title of (Draft) Conclusions/Decisions
1. Draft Decision ATMAS TF/7/01	- Request for an ATM Automation System Coordination Group (ATMAS CG) in the APAC Region

Agenda Item 1: Adoption of the Agenda

Adoption of Agenda - Sec (WP/01)

- 1.1 The provisional agenda presented in **WP/01** was adopted as the agenda for the Meeting.

Agenda Item 2: Review of Outcomes of Relevant Meetings

Review of Relevant ICAO Meetings – Sec (WP/02)

- 2.1. This paper summarized key outcomes from relevant ICAO Asia/Pacific meetings held in 2025, particularly APANPIRG/36 and CNS SG/29. It highlighted conclusions and decisions that were related to this Meeting.

- 2.2. It was noted that the CNS SG/29 Meeting adopted five (5) conclusions and six (6) decisions. In addition, based on the outcome of discussions on various agenda items, the CNS SG/29 Meeting developed three (3) Draft Conclusions and one (1) draft Decision for consideration by the APANPIRG/36, which were adopted by the APANPIRG/36 Meeting. The Meeting noted the Conclusions/Decisions adopted by the CNS SG/29 and the APANPIRG/36 and discussed the follow-up.

Outcomes of SURICG/11 Meeting – Sec (WP/03)

- 2.3. The Eleventh Meeting of the Surveillance Implementation Coordination Group (SURICG/10) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from 25 – 27 March 2026, including the outcomes of the Fifth Meeting of the Surveillance Study Group (SURSG/5), which was held from 23 – 24 March 2026 in the ICAO APAC Regional Office, Bangkok, Thailand. The meeting report, working papers, information papers, and other resources can be accessed by the following link:

<https://www.icao.int/APAC/meetingdocs?fid=33637>

- 2.4. It was noted that SURSG/SURICG has recommended ASTERIX and JSON for the use of surveillance information sharing in the APAC region. In addition, for the global surveillance data exchange format, it was suggested that the Surveillance Panel (SP) would be informed of regional developments through an information paper for their consideration and feedback.

- 2.5. The SURSG/5 Meeting reviewed and finalised *the Guidance Materials for the sharing of surveillance data in SWIM*. The finalised Guidance Material was endorsed by *Draft Conclusion SURICG/11/01 (SURSG/5/01) – Guidance Materials for the sharing of surveillance data in SWIM* for CNS SG/30 adoption. As SWIM development in the region is ongoing, it was anticipated that future updates on the Guidance Material would be necessary, especially on any further required details of the surveillance information services. The Meeting was informed that SURICG has assumed this responsibility and will respond appropriately.

Outcomes of ACSICG/13 Meeting – Sec (WP/04)

- 2.6. The paper summarized relevant information and updates on the outcomes of ATN Workshop and the Thirteenth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/13) held at Nadi, Fiji, from 20 to 24 April 2026. The meeting report, working papers, information papers, and other resources can be accessed by the following link:

<https://www.icao.int/APAC/meetingdocs?fid=42491>

Outcomes of SWIM TF/11 – Sec (IP/17)

2.7. The paper presented the relevant outcomes of the Eleventh Meeting of the System Wide Information Management Task Force (SWIM TF/11) held at Bangkok, Thailand, from 25 to 29 May 2026. The meeting is to note the transition towards a digital oriented network to support data exchanges, and coordination will require ATMAS to evolve to ensure continued interoperability while maintaining the required performance requirements. The meeting report, working papers, information papers, and other resources can be accessed by the following link:

<https://www.icao.int/APAC/meetingdocs?fid=60121>

2.8. It was noted that after Decision CNS SG/29/14 made by CNS SG/29 in 2025 for the creation of ANS Information Assurance Task Force (ANSIA TF), it was agreed that the ANSIA TF would prepare the draft Terms of Reference (ToR), its key deliverables, and plan in close coordination with CRV OG, ACSICG, SWIM TF, TFP Secretary and IMP Secretary. After CNS SG/29, with the collaborative efforts of ANSIA TF experts, the first draft of the ToR was finalised. The ANSIA TF/1 reviewed and modified the draft ToR, and the *Draft Decision ANSIA TF/1/1 – Adoption of Terms of Reference (ToR) of the ANS Information Assurance Task Force (ANSIA TF)* was endorsed by the ANSIA TF/1 for CNS SG/30 adoption.

2.9. The Meeting was presented with the information on draft APAC FF-ICE/R1 Plan, particularly the implementation timeline. It was informed that the draft APAC FF-ICE/R1 Plan, including all feedback from ATFM & A-CDM SG/16 and SWIM TF/11, will be submitted to CNS SG/30 (6-10 July 2026) and ATM SG/14 (3-7 August 2026) for approval. Subject to approval by both groups and the availability of Doc 9965 Manual on FF-ICE Vol. II – Implementation Guidance, the draft APAC FF-ICE/R1 Plan will be submitted to APANPIRG/37 (tentatively in November 2026) for endorsement. Additionally, the dissolution of the FF-ICE Ad-Hoc group and the establishment of the APAC FF-ICE Implementation Task Force will be proposed to ATM SG. The Implementation Task Force would, *inter alia*, address the transition from FPL2012 to FF-ICE, operations in a mixed-mode environment, and FF-ICE/R1 implementation issues in the APAC region.

Update on the Surveillance Performance Requirements Manual and its Relevance to ATM Automation Systems (ATMAS) – Thailand and Singapore (IP/02)

2.10. Thailand and Singapore shared the update and the future developments of the Surveillance Performance Requirements Manual (formerly known as RSUR manual).

2.11. The Meeting was informed that the RSUR Manual has been renamed to the Surveillance Performance Requirements Manual to avoid confusion with PBCS concepts, its scope is currently limited to cooperative surveillance systems (SSR, ADS-B, Multilateration) covering 3 NM TMA, 5 NM en-route, and 2.5 NM final approach separations. The PBSSG will continue work on specifications for 3 NM en-route and 5 NM TMA separations.

2.12. It was emphasized that the manual serves as a key ICAO reference providing a technology-independent, performance-based surveillance framework and supports the full ATMAS lifecycle (procurement, acceptance testing, performance monitoring, and interoperability).

2.13. The Meeting noted that, although the Surveillance Performance Requirements Manual is still under ICAO development, its performance benchmarks could have implications for future ATM automation systems and should be considered by States when planning or procuring ATMAS upgrades. A review of the ATMAS IGD document will be required when the Performance-Based Surveillance (PBS) documents have been officially endorsed by the ICAO to effect the necessary changes in ATMAS surveillance performance requirements.

2.14. States and Administrations are encouraged to monitor the progress of ICAO work on PBS, assess the implications of surveillance performance requirements on ATM automation systems, particularly in relation to surveillance data processing, and share relevant studies or experiences at the next ATMAS TF meeting. **ACTION ITEM 7-1**

Agenda Item 3: Global and Regional ATM Automation System (ATMAS) Updates

3.1. No papers were submitted for this agenda item.

Agenda Item 4: ATM Automation System Implementation Experience by States

Review ATMAS Implementation Status in APAC

Repository of the ATMAS in APAC – Sec (WP/05)

4.1. The paper presented the updated table of the ATMAS status in the APAC region, the preliminary analysis of the status, and invited States/Administrations to review and take necessary actions. The Meeting updated the ATMAS repository, which is provided in **Appendix A**.

4.2. The Meeting noted that the repository is maintained as a routine regional monitoring tool and that several updates had been received since ATMAS TF/6. The Meeting further noted the progress of ATMAS implementation across the region, including a number of ongoing modernization projects. States/Administrations were urged to review the repository and promptly notify the Secretariat of any significant changes. **ACTION ITEM 7-2**

Current Developments in ATM Automation Systems in Sri Lanka – Sri Lanka (IP/03)

4.3. Sri Lanka presented a briefing on the status of its ATM Automation related developments in Sri Lanka in recent years and activity plans in the near future, including status of ATM Automation System, Cyber Security Management, and AIDC Implementation.

4.4. The Meeting was informed that successful AIDC trials had been conducted with Malaysia and Chennai, additional trials with Australia were planned, and full implementation of AIDC electronic coordination and transfer procedures with adjacent States was targeted by the end of 2027.

4.5. The Meeting discussed cybersecurity considerations for ATM automation systems and noted that Sri Lanka's cybersecurity governance framework covers both ATM automation and CNS systems. Sri Lanka further informed the Meeting that particular attention is given to systems connected to external networks in order to mitigate cybersecurity risks.

Modernization of Indonesia's Air Traffic Management Automation System – Indonesia (IP/18)

4.6. Indonesia provided an update on the implementation of modernization programmes at the Jakarta Air Traffic Service Center (JATSC), including the installation of a new ATM Automation System (ATMAS), Air Traffic Flow Management (ATFM) system, Aeronautical Message Handling System (AMHS), and Aeronautical Information Management (AIM) systems.

4.7. It was also noted that Indonesia is undertaking the modernization of ATM Automation System (ATMAS) at selected Approach Control units, including Medan, Pontianak and Balikpapan. These initiatives aim to improve operational efficiency, connectivity, and data exchange capabilities within the Jakarta and Ujung Pandang FIRs.

4.8. The Meeting was informed that the modernization programmes are currently in the shadow operation phase. System implementation is planned to begin in the second quarter of 2026. A

phased transition will be carried out to ensure operational readiness and minimal disruption, with full local transition targeted for completion by the end of the fourth quarter of 2026. AIDC implementation with other States is planned for 2027, while limited technical trial may be conducted in Q4 2026.

4.9. The Meeting exchanged views on the transition from AIS to AIM and the future evolution towards FF-ICE and SWIM-enabled operations. The Meeting noted the importance of ensuring that future ATM automation systems are capable of supporting emerging information exchange models during the transition period, and encouraged Indonesia to share further implementation and operation experiences at future meetings.

ATM Automation System Implementation Issues Sharing

ATM Automation System Full-Business-Chain Operation and Maintenance – China (IP/16)

4.10. To address global ATC challenges, China put forward the concept of full-business-chain operation and maintenance for ATM automation systems. These challenges include that ICAO has not yet formulated mandatory specifications for the regular calibration and periodic accuracy verification of ATC surveillance sources, and there remains a lack of unified quantitative control standards for surveillance data transmission globally, covering key indicators such as transmission latency, stability, and data integrity.

4.11. The Meeting was informed that China is actively exploring the establishment of a full-business-chain quality management mechanism for surveillance signals. As global civil aviation moves toward digitalization and collaborative operation, fragmented, siloed O&M modes are no longer viable. It was recommended that all ICAO Member States collaborate on joint research, formulate unified regional full-chain O&M standards and methodologies, and establish a complete operational assurance system to improve the overall safety, efficiency, and cross-border collaboration capability of global ATC operations.

4.12. The Meeting noted the relevance of the paper to the ongoing ICAO work on performance-based surveillance (PBS) and the development of surveillance performance requirements. China emphasized the importance of evaluating surveillance performance from the controller's perspective, focusing on the quality of system tracks presented by ATM automation systems rather than solely on the performance of surveillance sensors.

4.13. New Zealand shared its experience in applying surveillance performance assessments at the output of ATM automation systems, where surveillance data quality is evaluated after processing and presentation to controllers. The discussion recognized similarities between such practices and the user-focused approach proposed in the paper.

4.14. The Meeting acknowledged that there is currently limited guidance on ATM automation system track performance from an end-user perspective and noted the potential value of further study in this area. States were encouraged to share relevant experience and practices, and the Meeting expressed interest in continuing discussions on the subject at future ATMAS TF meetings.

Resilience consideration and contingency planning

Enhancing Cybersecurity Posture for Singapore Air Traffic Management Automation System – Singapore (IP/15)

4.15. This paper presented an overview of Singapore's approach to strengthening the cybersecurity posture of its Air Traffic Management Automation System (ATMAS). It outlined the

threats faced by mission-critical air traffic management systems in the evolving cybersecurity landscape, the key risks identified for Singapore's ATMAS, the layered technical and procedural control measures implemented, and the principal challenges encountered during the enhancement of a large-scale legacy system. Given increasing connectivity with external systems, LORADS III faces elevated cybersecurity risks, including advanced persistent threats, insider threats, supply chain vulnerabilities, legacy system weaknesses, malware and ransomware, denial of service attacks, remote access exploits, and data manipulation. To mitigate these risks, Singapore has implemented a defence-in-depth strategy combining technical and procedural controls, such as privileged access management, multi-factor authentication, endpoint protection, security monitoring (e.g. SIEM), network segmentation, and continuous system monitoring. These are complemented by regular assessments, testing, audits, and cybersecurity exercises to enhance system resilience. Overall, the paper emphasises that a risk-based, layered approach and phased implementation are essential to improving cybersecurity while ensuring operational continuity.

4.16. The Meeting noted that Singapore's experience demonstrates that strengthening the cybersecurity posture of mission-critical ATMAS requires a risk-based and defence-in-depth approach, underpinned by regular assessments, layered technical and procedural controls, and close coordination with system manufacturers and stakeholders. Such measures are essential to safeguard the confidentiality, integrity, and availability of ATMAS functions and to support the continued safety and continuity of air traffic operations.

4.17. It was also highlighted that enhancing cybersecurity in large-scale legacy ATMAS environments is complex and resource-intensive, particularly where operational continuity must be maintained. A phased implementation strategy, supported by compensating controls and continuous monitoring, can enable meaningful security improvements while minimising disruption to critical air traffic services.

4.18. The Meeting appreciated Singapore's sharing of practical experience and noted Singapore's intention to provide further lessons learned and implementation experiences at future meetings as its cybersecurity enhancement programme progresses.

Life cycle management

Smartised Maintenance in Large-Scale Air Traffic Management Automation System - China (IP/05)

4.19. China presented data-driven and AI-assisted approaches for the maintenance of ATM automation systems, highlighting the application of an intelligent maintenance platform to support system monitoring, fault diagnosis, log management, and lifecycle management. China noted the increasing challenges associated with maintaining large-scale ATM automation systems amid growing traffic demand and system complexity, and shared its experience and lessons learned in developing smart maintenance capabilities to improve maintenance efficiency and system reliability.

4.20. The Meeting discussed the potential application of AI and data analytics in ATM automation system maintenance. Participants noted the benefits of moving from traditional reactive maintenance towards predictive and condition-based maintenance through the use of operational and hardware health data. Views were exchanged on the use of AI models to support fault diagnosis, log analysis, lifecycle management, and service assurance, as well as the challenges associated with model training, data quality, and the maturity of AI technologies.

4.21. The Meeting recognized the potential of AI-enabled maintenance approaches to improve system reliability, availability, and maintenance efficiency, and encouraged further sharing of experience and lessons learned among States.

Integration with External Systems*End-to-End Systems Integration Testing to Improve Interoperability – Singapore (WP/10)*

4.22. The Meeting recalled that, at ATMAS TF6 in June 2025, Singapore presented IP/02 to highlight the need for modern architectural design principles in Air Navigation Services (ANS) systems to address the aviation industry's rapid transformation. Singapore recommended four guiding principles:

- a. Modularity – enabling flexible system upgrades and scalability.
- b. Open interfaces with common data standards – ensuring interoperability and reducing vendor lock-in.
- c. Security-by-design – embedding resilience against cyber threats.
- d. Continuous innovation – supporting new operational concepts and long-term adaptability.

4.23. The Meeting noted Singapore is applying these principles in its modernization of its ANS systems with the aim to achieve better vendor integration, operational flexibility, stronger cybersecurity, and cost efficiency. Singapore's plan in conducting end-to-end systems integration testing in the modernization of its Air Navigation Services (ANS) systems was presented. It was noted that, operating on a System-of-Systems (SoS) approach, a dedicated systems integration facility will facilitate advanced system integration testing techniques, including the use of automated scenario simulation and emulator tools for orchestrated and controlled end-to-end SoS-level integration validation, enabling early issue detection and robust performance assurance beyond traditional pair-wise system validation. The facility may also support cross-border data exchange validation, fostering international collaboration to strengthen global aviation safety and resilience.

4.24. During the discussion, participants exchanged views on the benefits and challenges of end-to-end integration testing, particularly in increasingly complex and interconnected ATM environments. The Meeting noted the importance of automated and scenario-based testing to improve testing efficiency, reduce manual effort, and support the validation of operational workflows involving multiple systems.

4.25. The Meeting further recognized that such test platforms could provide a valuable environment not only for software and interface verification, but also for evaluating emerging operational concepts, new services, and future ATM technologies. The Meeting welcomed continued experience sharing and potential collaboration among States in this area.

Space-Based ADS-B Trial in Thailand ATM Automation System (ATMS) – Thailand (IP04)

4.26. Thailand conducted a trial integrating Space-based ADS-B into ATMAS to assess its compatibility, capabilities, and potential to enhance surveillance, address existing gaps, and provide an additional layer of ATS surveillance coverage within the Bangkok FIR. This paper presented the integration process of Space-based ADS-B data into Thailand ATMAS and the performance evaluation results observed during the trial period.

4.27. In response to an inquiry, Thailand advised that the update performance had been evaluated during the trial, achieving approximately 96% probability of update within an 8-second interval, which was consistent with the service provider's expected performance objectives.

Design and Application of Output Standards for Integrated Monitoring Information in ATMAS – China (IP/06)

4.28. To mitigate increasing workload and enhance onsite situational awareness, China proposed a standardized specification for integrated monitoring information output. By leveraging the universal and lightweight advantages of the JSON format, the specification implements both periodic and event-driven output modes to unify disparate system health data into a centralized monitoring platform. The application of this standardized framework in operational environments enables rapid situational assessment and precise fault localization, ultimately bolstering the integrated monitoring and maintenance capabilities for CNS facilities.

4.29. The Meeting noted that the primary challenge lies in retrofitting legacy CNS infrastructure that relies on outdated hardware architectures with limited processing power, requiring extensive engineering effort to support modern JSON and XML output specifications without compromising the stability of core functions. Additionally, the transmission of high-frequency monitoring data from geographically dispersed assets, such as remote VHF stations or radar sites, can impose substantial overhead on limited network bandwidth, necessitating optimization of data payloads and transmission intervals to balance monitoring precision with network efficiency. Successfully addressing these integration challenges provides a strategic foundation for extending the standardized framework to the broader CNS domain. Establishing cross-system data models for VHF, ILS, and ADS-B ground stations will eventually facilitate a unified network-wide view of equipment health, serving as a key driver for the evolution of industry-wide standards and regulatory frameworks.

Research and Application of Air-Ground Data Link-Based Landing Information Interaction Technology for Inbound Flights – China (IP/07)

4.30. China introduced the operational concept and practical application of the Landing Information Deliver (LID) function based on Air-Ground data link for inbound flights. The LID function enables the pre-delivery of Standard Terminal Arrival Route (STAR) and Arrival Runways (ARWY) to flight crews during the cruise phase, establishing an efficient, accurate, and bidirectional digital information channel between flight crews and air traffic controllers.

4.31. It was informed that the LID public trial operation in Shanghai has overall validated the feasibility of the LID function based on Air-Ground data link, achieving pre-delivery of arrival runways, arrival procedures, approach types, and parking stands information, bringing tangible benefits to both airlines and ATC. The implementation of this tool has also accumulated valuable experience for ATM Automation System new function module upgrades. Going forward, China will maintain in-depth communication with airlines and flight crews to extend the application of this tool to the departure phase. Verification tests on departure-related information were conducted last September and October. It is anticipated that the LID function will further reduce workload for both controllers and flight crews, playing a more important role in future airspace management.

Development of New Technology

Runway Inconsistent Warning Function in Air Traffic Management Automation Systems – China (WP/11)

4.32. China presented the Runway Inconsistent Warning (RIW) function of Air Traffic Management Automation Systems (ATMAS), which aims to enhance controller situational awareness and mitigate safety risks related to incorrect runway landing.

4.33. The paper provided a detailed explanation of the warning mechanism. It was noted that for multi-runway airports, RIW polygonal areas are defined for each runway, referenced to the extended runway centerline and bounded by the point where aircraft begin aligning with the runway after intercepting the ILS signal. Once a landing aircraft enters the RIW polygonal zone, the system compares the angle between its flight track and the corresponding runway direction with the predefined deviation threshold, if the angle is less than or equal to the threshold, the aircraft is judged to be in alignment with the runway, thereby triggering the RIW calculation process.

4.34. It was added that a track is eligible for the RIW calculation only when all the following conditions are met: it is successfully coupled with a flight plan, the landing airport information is accurate, and a landing runway has been assigned.

4.35. The Meeting noted RIW function is currently operational at Guangzhou Baiyun International Airport, which operates five parallel runways. It was observed that the RIW function of ATMAS provides real-time monitoring of runway alignment during the final approach and mitigates the safety risks associated with incorrect runway landings through technical means, thereby enhancing the safety and efficiency of air traffic operations.

4.36. The Meeting supported the proposal to incorporate the runway inconsistency warning function into the APAC ATMAS IGD and present to the next meeting for approval. **ACTION ITEM 7-3**

4.37. The Secretariat reminded States/Administrations to review the ATMAS IGD Ad Hoc Group focal point list and provide any necessary updates to ensure the contact information remains current. **ACTION ITEM 7-4**

A Safety Protection System Based on Speech Recognition – China (IP/08)

4.38. China introduced a safety protection system based on speech recognition, which transforms the conversations between controllers and pilots into text. It also compares the controllers' instructions with integrated track information from ATMAS to identify discrepancies and performs alert calculations.

4.39. The Meeting was informed that the system has realized accurate voice recognition and can provide early alerts for potential air traffic control operational risks. In the next step, China will formulate interface specifications between the ATMAS system and the speech recognition system. Text data generated by the speech recognition system will be transmitted to ATMAS, enabling the comparison of voice data, track data, and flight plan data, and achieving integrated display of alert information within the ATMAS system.

4.40. The Meeting discussed the implementation approach of the speech-recognition-based safety protection system. China explained that the speech recognition function is currently implemented as an independent system and that future integration may be achieved through interfaces that provide alerts and analysis results to ATMAS while maintaining the speech-processing functions externally.

4.41. The Meeting also discussed operational considerations, including the identification of controller and pilot transmissions, call-sign association, and the handling of complex communication scenarios such as overlapping transmissions. Singapore shared relevant experience and highlighted that the use of EUROCAE ED-137C format could improve speaker identification accuracy.

4.42. China informed the Meeting that the trial was continuing and that further evaluation was being conducted for more complex operational scenarios. The Chair encouraged States, including China, to share future implementation experiences and lessons learned as the technology matured. **ACTION ITEM 7-5**

ATMAS Testing and Evaluation Cloud Platform Integrating Virtualization, Hyper-Convergence, and Cloud Desktop Technologies – China (IP/09)

4.43. To address the limitations of traditional ATM automation system testing platforms—such as rigid resources and limited scenarios—the ATMBTC of China has developed a next-generation testing and evaluation cloud platform. It integrates virtualization, hyper-convergence, and cloud desktop

technologies. The platform enables resource pooling and elastic provisioning, supports parallel testing of multi-vendors, multi-version systems and high-fidelity scenario simulation. It significantly improves testing efficiency and flexibility, providing strong support for the safe operation and evolution of China's civil aviation ATM systems.

4.44. The Meeting discussed technical aspects of the platform, including virtualization of ATMAS applications, support for system integration testing, and the use of both operational and simulated data sources. China explained that ATMAS applications are deployed on virtualized infrastructure within the platform, while integration testing can be conducted using real surveillance data interfaces as well as simulation tools.

Operation Experience Sharing of Light Guidance Function of A-SMGCS – China (IP/10)

4.45. China introduced operational experience with the Light Guidance Functions of the A-SMGCS system deployed at Beijing Daxing International Airport. The paper described the system architecture, control authority transfer mechanism, operational performance, and safety protection measures. Through optimization of communication mechanisms and control logic, the system has maintained stable and reliable operation while supporting high-density taxi operations and precise guidance under low-visibility conditions.

4.46. The paper also highlighted the use of segmented lighting control, controller validation procedures, and interlocking logic between electronic flight strips and stop-bar lights to enhance runway safety and prevent runway incursions.

The Rationale for Requiring PL Alert Despite the Existence of MTCD – China (IP/11)

4.47. The Meeting recalled that at the 2025 ATMAS TF/6 meeting, China submitted an information paper entitled *Optimization of STCA in Complex Airspace Environment* concerning Short Term Conflict Alert (STCA), in accordance with ICAO ASBU module SNET-B1/1 *Enhanced STCA with aircraft parameters*. On this basis, aiming at near mid-air collision incidents induced by altitude level crossing, this paper proposes the PL (Predict Collision based on Level Bust) alert with CFL instruction as the core constraint. It elaborated on the functional differences of STCA, MTCD and PL alerts in practical deployment. With statistical data, the paper verified the application advantages of PL alert, and outlined its development potential in refined air traffic management in the future.

4.48. The Meeting discussed the relationship between the proposed PL Alert and existing Medium-Term Conflict Detection (MTCD) functions. It was noted that both functions use similar surveillance and flight plan data but apply different prediction models and alerting logic. China explained that the PL Alert focuses on potential conflicts associated with controller-issued flight level clearances and was intended to complement existing MTCD functionality, particularly in situations where controllers require immediate feedback following a level change instruction.

Agenda Item 5: ATMAS integration to SWIM

Upgrade of ATM Automation System for FF-ICE – China (WP/06)

5.1. With the steady advancement of the global Flight and Flow Information for a Collaborative Environment (FF-ICE), the International Civil Aviation Organization (ICAO) has established the sunset date of FPL2012 flight plans. States have gradually commenced formulating and implementing the deployment for FF-ICE Release 1 (R1). Focusing on the core application requirements of FF-ICE, China discussed the core functional upgrade requirements for Air Traffic Management (ATM) Automation Systems to support FF-ICE applications, covering key functional modules including FIXM message reception and processing, flight plan-track correlation, and four-dimensional trajectory profile computation, laying the foundation for subsequent Trajectory-Based

Operations (TBO) implementation.

5.2. China stated that at present, mainstream global ATM automation equipment suppliers have not yet launched mature commercial products supporting FIXM data ingestion and integration of other SWIM-compatible formats. Specialized solutions fully adapting to all phases of FF-ICE are still in the stage of research and development, testing and pilot verification, which is also a common technical challenge faced by ATM service providers worldwide.

5.3. It was noted in accordance with ICAO's globally unified deployment roadmap for FF-ICE, in addition to the core functional upgrades mentioned above, to fully exploit the value of refined flight information carried by FIXM messages and lay a solid foundation for data sharing and in-depth applications in FF-ICE Release 2 in advance, other supporting functional modules of ATM automation systems need to carry out targeted transformation and adaptive upgrades simultaneously.

5.4. The Meeting noted that implementation of FF-ICE would require significant upgrades to ATM automation systems to support structured information exchange, mixed-mode operations during the transition period, and future TBO-related capabilities. The Meeting further noted that the APAC regional sunset date for FPL 2012 is 2032 and encouraged States/Administrations to take account of FF-ICE requirements in future ATM automation modernization programmes.

5.5. The Meeting noted that related FF-ICE implementation activities and guidance material were being developed through other ICAO expert groups and regional groups. The Meeting emphasized the importance of maintaining consistency across ICAO initiatives, avoiding duplication of effort, and ensuring that ATM automation system evolution remains aligned with emerging FF-ICE, SWIM and TBO implementation guidance.

Progress of TBO Pathfinder Development in the Asia/Pacific Region – New Zealand (WP/09)

5.6. This paper presented progress by the Asia-Pacific (APAC) Trajectory-Based Operations (TBO) Pathfinder project (Pathfinder). It was recalled that Pathfinder was initiated under the APAC Air Navigation Service Provider (ANSP) Committee (AAC) to develop pathways for implementing the ICAO global TBO concept in the region.

5.7. It was informed that throughout 2025, Pathfinder efforts were focused primarily on the FF-ICE/R1 application. A summative report of the efforts to support the implementation planning efforts among ANSPs was presented to ATM/SG/13. With the focus for 2026 being FF-ICE Release 2 (FF-ICE/R2), Airspace Users (AUs) will be involved as key stakeholders. Activities in 2026 include updating TBO communication materials, conducting stakeholder engagement in the Philippines, and organising regional webinars led by IATA to raise AU awareness. It was added that technical preparations for the FF-ICE/R2 lab demo (scheduled for March 2027) are underway through technical interchange Meetings and table-top exercises, with AUs input being organised to enhance operational realism and initial meetings have taken place to support two of the airlines to participate as FF-ICE enabled AUs.

5.8. It was added that Pathfinder will also develop trajectory analysis methodologies to quantify TBO benefits for city pairs and ANSPs, documented in a TBO benefits report. It was emphasised that FF-ICE/R2 will extend trajectory negotiation beyond current flight dispatch and tactical airborne changes to negotiation, including pilots, flight operations units and ATM systems, altering the roles and responsibilities of all. States/Administrations were encouraged to support ANSPs and national airlines in raising TBO awareness, work towards SWIM deployment by 2030 and FF-ICE/R1 implementation by 2032 and participate in IATA's regional webinars.

5.9. The Meeting noted that the TBO Pathfinder Project provides a collaborative platform

for States, ANSPs, airlines and other stakeholders to explore practical pathways towards TBO implementation in the APAC Region.

5.10. The Meeting discussed the relationship between Pathfinder outcomes and ATM automation system evolution. It was noted that while the Pathfinder Project is not intended to develop ATM automation system requirements directly, the operational concepts, implementation considerations and lessons learned generated through the project could provide valuable inputs to relevant ICAO technical groups and future ATMAS guidance material. The Meeting encouraged States/Administrations to remain engaged in regional TBO initiatives and monitor the outcomes of Pathfinder activities to support future system planning and modernization efforts.

Multiple ATM Automation System Data Collaboration and Sharing – China (IP/12)

5.11. In response to the current challenges posed by the large number of ATM Automation Systems, cumbersome data configuration, and data from multiple sources and types, China introduced a data collaboration and sharing technology among multiple ATM Automation Systems.

5.12. The Meeting noted it has broken through key technologies for the trustworthy fusion of multi-source flight data, and developed a platform for sharing airspace environmental data and real-time operational data among ATM Automation Systems based on the SWIM concept. It was added that a field validation environment is established in East China ATMB to achieve data collaboration and sharing among ATM Automation Systems of ACC, TMA, Tower, and other information systems, thereby providing more comprehensive and accurate data support for air traffic management.

5.13. In response to an inquiry, China informed that data update authority is assigned according to operational responsibility and aircraft location, while the platform itself remains independent of operational systems and does not affect normal operations if unavailable. The meeting noted that such data-sharing mechanisms could improve consistency among multiple ATM automation systems, support contingency operations, and reduce maintenance efforts through centralized management and synchronization of flight and aeronautical information.

Agenda Item 6: Review of Guidance Material of Implementation of ATMAS in the Asia-Pacific Region (APAC ATMAS IGD)

6.1. No papers were submitted for this agenda item.

Agenda Item 7: ATS Inter-Facility Data - Link Communication (AIDC) Implementation

Review AIDC Implementation Status in APAC

Repository of AIDC Implementation Status in APAC – Sec (WP/07)

7.1. The paper presented the latest repository of AIDC Implementation Status in the APAC region and invited States/Administrations to review and continue to update the AIDC implementation status and Focal Point for AIDC Implementation if necessary. The Meeting updated the table of AIDC Implementation Status in the APAC region, which is provided in **Appendix B**, and the list of focal points for AIDC Implementation, which is provided in **Appendix C** of the Report.

7.2. The Meeting encouraged States to further verify the accuracy of their implementation status and other operational details, and to provide any necessary updates to the Secretariat. **ACTION ITEM 7-6**

AIDC Implementation Experience Sharing by States

Operational Experience with AIDC Coordination and Transfer Messages Between Singapore and Kuala Lumpur FIR – Singapore and Malaysia (IP/13)

7.3. The Meeting recalled that at ATMAS TF/6, it was recommended that the addition of CDN and REJ messages to the recommended core set of AIDC messages for initial implementation. It was informed that Singapore began operational trials of CDN message exchange with Malaysia in October 2025, focusing initially on four sector boundary points (SUKRI, ARAMA, AROSO, SABKA).

7.4. This paper presented Singapore's experience, including statistical results and operational observations. The continued operation of TOC/AOC alongside CDN represents a comprehensive AIDC capability at the boundary, encompassing both coordination and transfer of control automation. Singapore will continue to monitor CDN and TOC/AOC message exchange performance and work with neighbouring states to address identified issues with the aim of achieving higher success rates over time.

7.5. During the discussion, the meeting exchanged views on the operational use of multiple consecutive CDN messages and controller preferences for managing coordination loops. Singapore explained that, while the system does not impose a technical limit on successive CDN exchanges, controllers are encouraged to limit negotiations and, where appropriate, reject and initiate a new coordination sequence. Malaysia supported the operational approach and noted ongoing efforts to address message rejections and syntax-related issues. The meeting noted the lessons learned from the implementation and the intention to expand the use of AIDC operational messages with additional neighbouring FIRs.

Updates on the Development of Global Guidance Material for AIDC – Singapore (IP/14)

7.6. This paper shared the development of ICAO global guidance material for ATS inter-facility data communications (AIDC) of the ICAO CP-OPDLWG panel that was attended by Singapore in May 2026. The new guidance material will replace the Manual of Air Traffic Services Data Link Applications (Doc 9694). It highlights the operational value of AIDC in supporting safe, efficient and interoperable coordination between ATS units, its relevance to ASBU/FICE implementation, and the expected progressive transition towards FF-ICE in a mixed-mode environment.

7.7. The paper also notes the continued role of regional interface control documents, including PAN AIDC ICD, OLDI and NAM ICD, in supporting implementation, and advises that the CP-OPDLWG is developing the new guidance with an estimated publication date of 2028.

Issues Reported and Recommended Solutions

7.8. No papers were submitted for this agenda item.

Agenda Item 8: Review of the Terms of Reference (ToR) and Task List

Review of ToR and Task List – Sec (WP/08)

8.1. The Meeting recalled that ATMAS TF/6 Meeting reviewed the ToR and agreed on the need to modify it further to accommodate the latest needs of ATMAS TF, such as accommodating FF-ICE and SWIM requirements. An ad-hoc group consisting of China, Hong Kong China, India, New Zealand, Singapore, Thailand, and the USA was formed to review the ToR. The revised draft ToR was presented by the ad-hoc group in the ATMAS TF/7 Meeting, which is provided in **Appendix D**.

8.2. The Meeting reviewed the revised ToR and deliberated on the future role and structure

of the ATMAS Task Force, taking into account the outcomes of previous discussions, the transfer of AIDC-related functions from the Asia/Pacific ATS Inter-Facility Data-Link Communications Implementation Task Force (APA TF) in 2023, and emerging regional requirements associated with FF-ICE, SWIM and Trajectory-Based Operations (TBO).

8.3. The Meeting noted that ATM automation systems constitute a fundamental component of ATM infrastructure, providing essential support to air traffic controllers and serving as a key enabler for the progressive realization of SWIM-enabled TBO and other future operational concepts.

8.4. The Meeting further acknowledged that the activities of the ATMAS Task Force had evolved significantly beyond the development and maintenance of the ATMAS Implementation Guidance Document (IGD). In recent years, the Task Force had increasingly served as a regional platform for coordination and information exchange, including the sharing of implementation experiences and best practices, developments related to next-generation ATM automation technologies, coordination of AIDC and FF-ICE implementation activities, and discussions on SWIM and TBO related initiatives across the APAC Region. The presentations in this current edition of the ATMAS has highlighted the need for sustained regional coordination to support ATMAS upgrades/implementation.

8.5. The United States observed that, given the evolution of the group's activities towards coordination, harmonization, implementation monitoring and integration of outputs from multiple expert groups, the region may wish to consider whether a Coordination Group structure would more accurately reflect the current and future role of the group. Singapore expressed support for this direction, noting that the ATMAS Task Force had already convened seven meetings and continued to undertake an expanding range of activities extending beyond the traditional scope of a task force.

8.6. Following further discussion, the Meeting recognized that the current designation of “ATMAS Task Force” no longer adequately reflected the role, responsibilities and functions of the group. The Meeting also considered that the increasing scope of work related to ATM automation evolution, SWIM, FF-ICE and future operational concepts would be difficult to sustain under a task force structure with a limited lifecycle. In evaluating the best governance structure to undertake these important tasks, the meeting agreed that a dedicated coordination group will be the best way forward to ensure continuous alignment with flexible collaboration to meet the revised scope of work.

8.7. In view of these considerations, the Meeting agreed that the future evolution of the ATMAS Task Force into a Coordination Group would better support the continued coordination, harmonization and implementation of ATM automation-related activities in the APAC Region. All participating States expressed support for this proposal and reached consensus to recommend the transition of the ATMAS Task Force into a Coordination Group for consideration by CNS SG.

8.8. Consequently, the meeting developed the following Draft Decision for CNS SG/30 review and consideration.

Draft Decision ATMAS TF/7/01 - Request for an ATM Automation System Coordination Group (ATMAS CG) in the APAC Region	
Considering that: 1. The ATMAS TF has successfully provided a valuable regional forum for the development and maintenance of Air Traffic Management Automation System Implementation and Operations Guidance Document; 2. ATM automation systems in the APAC Region continue to evolve in support of AIDC, FF-ICE, SWIM, TBO, ATFM, DNOTAM, cybersecurity, and other emerging/evolving operational concepts/standards;	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical

3. Sustained regional coordination is required to support ATMAS upgrades/implementation to ensure harmonized implementation, interoperability, transition planning, and information exchange among States and Administrations;
4. ATMAS TF is increasingly serving as a forum for coordination, implementation monitoring, experience sharing, and consolidation of outputs from multiple expert groups rather than the development of new guidance material;
5. Substantial effort has already been invested by the ATMAS TF ad hoc drafting group in updating the Terms of Reference to address SWIM, FF-ICE, TBO, AIDC, and other emerging requirements, providing a mature foundation for a future Coordination Group structure.

That:

The ATMAS TF/7 meeting agreed that:

- a. the current ATM Automation System Task Force (ATMAS TF) should transition to a formal Coordination Group (CG) structure;
- b. the Coordination Group should provide a sustained regional mechanism for coordination, harmonization, and information sharing related to ATM automation systems and associated enabling technologies in the APAC region;
- c. the Coordination Group should support regional implementation and interoperability activities related to SWIM, FF-ICE, TBO, AIDC, ATFM, DNOTAM, and other emerging/evolving ATM initiatives;
- d. the Coordination Group should serve as a focal point for sharing implementation experience, lessons learned, transition considerations, and best practices among States and Administrations;
- e. the Coordination Group should facilitate coordination with relevant ICAO expert groups and other regional implementation groups to promote harmonized development and implementation of ATM automation capabilities throughout the APAC Region;
- f. the revised ATMAS TF Terms of Reference developed by the ATMAS TF ad hoc drafting group should form the basis for the Terms of Reference of the ATM Automation System Coordination Group (ATMAS CG), with only those amendments necessary to reflect the transition from a Task Force to a Coordination Group.

Why: Continued regional coordination, harmonization, and implementation support are required as ATM automation systems evolve to support future operational concepts and information-sharing environments.

Follow-up: ☐ Required from States

When: 4-Jun-26

Status: Draft to be adopted by
CNS SG

Who: ☒ Sub groups ☐ APAC States ☐ ICAO APAC RO ☐ ICAO HQ ☒ Other:
ATMAS TF

8.9. The Meeting updated the Action Item List, which is provided in **Appendix E** of this Report.

Agenda Item 9: Next Meetings and Any Other Business

Any Other Business

9.1. The Secretariat informed the Meeting of the upcoming ICAO APAC SWIM Training and Workshop to be held in Hanoi, Viet Nam, from 25 to 27 August 2026. The workshop aims to support States and Administrations in enhancing their understanding and implementation of SWIM, including its relationship with FF-ICE. Noting the relevance of the workshop to the SWIM-related discussions held during the meeting, the Secretariat encouraged interested States and participants to consider attending the workshop. The Meeting noted the information provided.

Date and Venue for the Next Meeting

9.2. The next Meeting will be held from **2-4 June 2027**. It was suggested that a one-day workshop on ATM automation system integration into a SWIM-enabled environment be conducted before the Meeting on **1 June 2027**. Any States/Administrations interested in hosting the Meeting may contact the ICAO APAC Office for hosting discussions at least 4 months before the Meeting. The exact dates and venue will be communicated to the Member States in due course.

Closing of the Meeting

9.3. In closing the Meeting, the Co-Chairs and ICAO Secretariat thanked all participants for their active participation in the Meeting and valuable contributions to the work program of the ATMAS TF.

Explanation of the Table of ATMAS Status in APAC Region

*Note: If the ATM Automation System has the capability on certain function listed below but not implement yet, please marked in **red**; if the ATM Automation System has already implemented certain function listed below, please keep it in black.*

Column	Element	Explanation	Reference Chapter in ATMAS IGD	Relevant ASBU Block
1.	State/Administration	Name of the State/Administration		
2.	FIR	Name of the Flight Information Region (FIR)		
3.	ATS Unit / Location	Location of the ATM Automation System		
4.	Number of ATS positions	Number of ATS positions in this ATM Automation System (to evaluate the system workload)		
5.	Manufacturer / Brand / Version	Manufacturer / Brand / Version of the system		
6.	System Status	the system is used as Main, Backup, or Emergency		
7.	Surveillance Data Processing Function (SDP)	Surveillance data can be processed by the system, including PSR, Mode A/C, Mode S, ADS-B, WAM, or others	Chapter 3.1.1 & 3.2.1	ASUR B0/1, ASUR B0/2
8.	Bypass Surveillance Data Processing (BSDP)	BSDP is a redundancy module of SDP, which can independently receive, process and distribute surveillance data independently to SDP. When the SDPs fail, the system will switch to BSDP automatically. When the system switches to bypass mode, the HMI should clearly indicate if controller is working in BSDP mode.	Chapter 3.1.3	
9.	Flight Data Communication Network	Type of Flight Data Communication Network used by the system (AFTN, AMHS, or both)		COMI B0/7
10.	Flight Data Processing Function (FDP)	The system can support flight data processing, including Flight Message Processing, Life Cycle Management, 4D Profile Trajectory Calculation, SSR Code Management, Sector Management and Posting Computation	Chapter 3.1.2	
11.	Flight Strip	The system can support print Paper Flight Progress Strip, display Electronic Flight Strip, or both		
12.	Mode S conspicuity code Identification	The flight plan with A1000 will use a 24-bit address or ACID to correlate with system tracks, and warnings/alerts should not be generated when SSR duplication occurs due to Mode S conspicuity code.	Chapter 3.1.2.4	

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Column	Element	Explanation	Reference Chapter in ATMAS IGD	Relevant ASBU Block
13.	Correlation of surveillance and flight data	The system can perform an automatic correlation between the flight plan and the system track based on the SSR code, aircraft 24-bit address, or Aircraft Identification (ACID)	Chapter 3.1.4 & 3.2.2	ASUR-B0/3
	Safety Net Function	Essential alerts or warnings can be generated automatically		
14.	Emergency code warning (7500,7600,7700)	Once the emergency codes were received, the system is suggested to process it and display the Emergency on the concerned positions.	Chapter 3.1.5.2	
15.	Short Term Conflict Alert (STCA)	The system will provide a separation alert for a potential or actual infringement of separation minima between aircraft as basic STCA, using aircraft intent parameters (Selected Flight Level), considering ATC practices (level-off prediction test and turn prediction test).	Chapter 3.1.5.3	SNET-B0/1 & SNET-B1/1 & SNET-B1/2
16.	Minimum Safe Altitude Warning (MSAW)	The system will assist controllers with alerts of the potential risk of an aircraft infringing a defined minimum safe altitude over a concerned region.	Chapter 3.1.5.4	SNET-B0/2
17.	Area Proximity Warning (APW)	The system will alert controllers of any potential or actual unauthorized penetration of aircraft into Special Use Airspaces (SUA).	Chapter 3.1.5.5	SNET-B0/3
18.	Approach Path Monitoring (APM) Warning	The system will monitor the aircraft's vertical and lateral deviation from the final approach profile in ATMAS, and generate visual and/or aural alerts when an aircraft exceeds or is predicted to exceed the defined tolerance of deviation.	Chapter 3.1.5.6	SNET-B0/4
19.	Route Adherence Monitoring (RAM)	The system will monitor if an aircraft (i.e., surveillance track) is following the planned route, as stated in the associate flight plan.	Chapter 3.2.3.4	FRT0 B0/4
20.	Cleared Level Adherence Monitoring (CLAM)	The system will monitor the conformance of the Actual Flight Level (AFL) of an aircraft to the Cleared Flight Level (CFL) issued by the air traffic controller and provide warnings if the deviation between the two levels (i.e. Level Bust) was found after the aircraft has been level-off.	Chapter 3.2.3.5	FRT0 B0/4

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Column	Element	Explanation	Reference Chapter in ATMAS IGD	Relevant ASBU Block
21.	Meteorological Information Processing	The system is capable of receiving, processing, and displaying meteorological information, including GRIB, QNH, and weather data derived from mono-radar, or other	Chapter 3.1.6	AMET
22.	Air Ground Data Link Function (AGDL)	The AGDL function mainly processes the information based on the data link communication, including ADS-C (Automatic Dependent Surveillance-Contract), CPDLC (Controller-Pilot Data Link Communication), and DCL (Departure Clearance).	Chapter 3.1.7	COMS
23.	System Parameter Management Function	The system is capable of managing the variable system parameters through a user/ops orientated adaptation interface used by trained adaptors.	Chapter 3.1.8	
24.	ATS Inter-facility Data Communication Function (AIDC)	The system can support ATS-related information exchanges within the ATMAS of adjacent Control Units and Flight Information Regions adopted in the Asia-Pacific region, including Handover and Coordination	Chapter 3.1.9	FICE B0/1
25.	Human Machine Interface Function (HMI)	Operational users can monitor air traffic situations and modify flight plans and other relevant information through physical peripherals and/or onscreen control interfaces.	Chapter 3.1.10	
26.	Recording and Playback Function	The system has the basic, enhancement, none, or both recording and playback function.	Chapter 3.1.11 & 3.2.8	
27.	System Monitoring and Control Function	The system can provide the monitoring and controlling function, and the failure of the monitoring and controlling function should not affect the operation of other modules.	Chapter 3.1.12	
28.	GNSS Time Synchronization	The system can synchronize with the external GNSS signals or not	Chapter 3.1.13	
	Extended Alerts and Warning			

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Column	Element	Explanation	Reference Chapter in ATMAS IGD	Relevant ASBU Block
29.	Departure No Transgression Zone (DTZ)	The DTZ function informs the controller if a track is predicted to infringe a Departure No Transgression Zone area within a predefined time interval, or has already infringed a Departure No Transgression Zone area. The DTZ function also may suppress improper STCA generate between two normal flights in DMA (Departure Monitoring Area).	Chapter 3.2.3.1	
30.	No Transgression Zone (NTZ)	The system will warn controllers of a predicted or actual unauthorized penetration of NTZ by aircraft during final approach.	Chapter 3.2.3.2	
31.	Medium Term Conflict Detection Warning (MTCD)	The system will provide warnings to controllers for potential conflict for “aircraft-to aircraft” or “aircraft-to-airspace” encounters up to a looking ahead time.	Chapter 3.2.3.3	FRT0 B0/4
32.	Similar Callsign Advisory (SCA)	The system will provide advisory to alert controllers when an aircraft carries a similar callsign with another one in the same jurisdiction controlled by a controller.	Chapter 3.2.3.6	
33.	Reduce Vertical Separation Minimum (RVSM) Warning	The system will provide alerts to controllers when a non-RVSM approved/compliant aircraft is within or is predicted to enter RVSM airspace.	Chapter 3.2.3.7	
34.	Position Report Monitoring (PMON)	The system will monitor ATO/ETO and provide warnings to controllers accordingly.	Chapter 3.2.3.8	
35.	Last Known Position Display	Last Known Position Display occurs when correlated tracks, uncorrelated, or ADS-C tracks with critical alerts are lost.	Chapter 3.2.3.9	
36.	SSR Inconsistency Warning	For correlated flight plan tracks, when the Mode 3/A code in the surveillance data is inconsistent with the SSR code in the flight plan, the system is suggested to raise ASSR Inconsistency Warning.	Chapter 3.2.3.10	

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Column	Element	Explanation	Reference Chapter in ATMAS IGD	Relevant ASBU Block
37	PBN Capability Indication	The system will provide PBN indicator and/or PBN route mismatch indication for controllers in order to indicate whether the aircraft match the RNAV/RNP Route or Arrival.	Chapter 3.2.3.11	APTA
38	Downlink Aircraft Parameters Processing and Display	The system have the capability to process and display aircraft downlink aircraft parameters (DAPs) in Track Fusion, Related Warnings, or Downlink Data Window	Chapter 3.2.4	ASUR-B0/3
39	Integrated Technology	the system has integrated some new technologies, including Arrival Manager (AMAN), Departure Manager (DMAN), or Enhanced Wake Turbulence Separation and Pairwise Separation Tools, or None	Chapter 3.2.5 & 3.2.6 & 3.2.9	RSEQ, WAKE
40	System Log Management	The system is able to collect and manage operational logs and error messages.	Chapter 3.2.7	
41	Interoperability	The system supports exchange messages with other external systems, including Integrated Tower System, A-SMGCS, Tower Electronic Strip System, Others, or None, to implement information sharing		SURF, SWIM
42	Operational Data Synchronization	The system can synchronize operational data to the backup system when in master mode, including flight data, operational setting data.	Chapter 3.2.10	
43	Statistics and Analysis Function	The system can generate reports on the surveillance data, flight plan, alarm information and traffic flow data.	Chapter 3.2.11	
44	Remarks	Any other need to be mentioned		

ATM Automation System Repository in APAC Region																																													
State/Administrati on	FIR	ATS Unit / Location	Number of ATS positions	Manufacturer / Brand / Version	System Status	Surveillance Data Processing Function (SDP)	Bypass Surveillan ce Data Processin g (BSDP)	Flight Data Communication Network	Flight Data Processing Function (FDP)	Flight Strip	Mode S conspic uity code identific ation	Correlation of surveillance and flight data	Safety Net Function								Meteorological Information Processing	Air Ground Data Link Function (AGDL)	System Parameter Management Function	ATS Inter-facility Data Communication Function (AIDC)	Human Machine Interface Function (HMI)	Recording and Playback Function	System Monitoring and Control Function	GNSS Time Synchronizati on	Extended Alerts and Warning										Downlink Aircraft Parameters Processing and Display	Integrated Technology	System Log Management	Interoperability	Operational Data Synchronization Function	Statistics and Analysis Function	Remarks
													Emergency code warning (7500,760 0,7700)	Short Term Conflict Alert (STCA)	Minimum Safe Altitude Warning (MSAW)	Area Proximity Warning (APW)	Approach Path Monitoring (APM) Warning	Route Adherence Monitoring (RAM)	Cleared Level Adherence Monitoring (CLAM)	Departure No Transgression Zone (DTZ)									No Transgression Zone (NTZ)	Medium Term Conflict Detection Warning (MTCD)	Similar Callsign Advisory (SCA)	Reduce Vertical Separation Minimum (RVSM) Warning	Position Report Monitoring (PMON) Warning	Last Known Position Display	SSR Inconsistency Warning	PBN Capability Indication									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44		
AFGHANISTAN																																													
AUSTRALIA																																													
BANGLADESH	Dhaka FIR	Dhaka ACC	18	Thales TopSky ATC	Main	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	AMHS	Flight Message Processing+ Life Cycle Management+ SSR Code Management	Paper+ Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC	Online	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	Integrated Tower System+ASMGCS+ Tower Electronic Strip System	flight data+ operational setting data	Yes	This ATM system is currently available under Trial Operations.			
BHUTAN																																													
BRUNEI DARUSSALAM																																													
CAMBODIA	Phnom Penh FIR	ACC, APP/ Phnom Penh	14	THALES / TopSky-ATC	Main	PSR+Mode A/C+Mode S+ADS-B+WAM	No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper	No	SSR code+24-bit Address+ACID	Yes	Basic+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH	None	Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	None	operational setting data	Yes	Statistic - only Flight statistic is available		
		ACC, APP/ Phnom Penh TWR	4	THALES / TopSky-ATC	Emergency	PSR+Mode A/C+Mode S+ADS-B+WAM	No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper	No	SSR code+24-bit Address+ACID	Yes	Basic+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH	None	Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	None	operational setting data	Yes	Statistic - only Flight statistic is available		
CHINA	China FIR	China	1382	THALES(EUROCAT-X), INDR(AIRCORN), Nanjing Les(Numen), COATC(AirNet), Best(SkyNet-X)	Main+Backup	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	No	SSR code+24-bit Address+ACID	Yes	Basic+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC+DC L	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN	Yes	Integrated Tower System+ASMGCS+ Tower Electronic Strip System	flight data+ operational setting data	Yes				
HONG KONG, CHINA	Hong Kong FIR	Hong Kong	113	Raytheon	Main+Backup + Ultimate backup	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar	ADS-C+CPDLC+DC L	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN	Yes	Tower Electronic Strip System	flight data	Yes			
MACAO, CHINA																																													
COOK ISLANDS																																													
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA																																													
FUJI	NFFF	ACC/NADI	8	ADACEL Aurora Alpha	Main	PSR+Mode A/C+Mode S+ADS-B	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	No	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	Tower Electronic Strip System	flight data+ operational setting data	No			
FRANCE																																													
FRENCH POLYNESIA																																													
NEW CALEDONIA																																													
INDIA																																													
INDONESIA	JATSC	JATSC	60	COMSOFT / PRISMA	Main	PSR+Mode A/C+Mode S+ADS-B	Yes	AFTN	Flight Message Processing+ Life Cycle Management+ SSR Code Management+Sec Manage&Posting Comput	Paper	Yes	SSR code+24-bit Address+ACID	Yes	Basic+Aircraft Intention	Yes	Yes	Yes	Yes	Yes	QNH	CPDLC	Offline	Basic	Yes	Basic	Monitor	Yes	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Track Fusion	None	Yes	tegated Tower System+A-SMG	flight data+ operational setting data	No		
	MATSC	MATSC	46	THALES / TOPSKY	Main	PSR+Mode A/C+Mode S+ADS-B	Yes	AFTN	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	None	None	Yes	Integrated Tower System	flight data	Yes			
JAPAN																																													
KIRIBATI																																													
LAO PEOPLE'S DEMOCRATIC REPUBLIC	Vientiane FIR	Vientiane ACC	25	Thales Topsky (EUROCAT-C)	Main	PSR+Mode A/C+Mode S+ADS-B	No	AFTN+AMHS	SSR Code Management	Paper	Yes	SSR code+24-bit Address	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC	Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings	None	Yes	Integrated Tower System	flight data+ operational setting data	Yes			
	Vientiane FIR	Vientiane ACC	25	Thales Topsky (EUROCAT-C)	Backup	Mode A/C+Mode S+ADS-B	No	AFTN+AMHS	SSR Code Management	Paper	Yes	SSR code+24-bit Address	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC	Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings	None	Yes	Integrated Tower System	flight data+ operational setting data	Yes			
MALAYSIA	KL FIR	KL ACC/Kuala Lumpur	50	Leonardo SpA	Main	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC+DC L	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DMAN	Yes	Integrated Tower System+ASMGCS+ Tower Electronic Strip System	flight data+ operational setting data	Yes				
	KL FIR	KL ACC/Kuala Lumpur	34	Leonardo SpA	Backup	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC+DC L	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DMAN	Yes	Integrated Tower System+ASMGCS+ Tower Electronic Strip System	flight data+ operational setting data	Yes				
	KL FIR	KL ACC/Kuala Lumpur	29	Leonardo SpA	Emergency	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	None	None	Paper+ Electronic	No	SSR code+24-bit Address+ACID	Yes	NO	No	No	No	No	No	mono-radar	None	Online+Offline	None	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	No	No	No	No	No	None	None	Yes	Integrated Tower System	flight data+ operational setting data	Yes					
	KKFIR	KK ACC/ Kota Kinabalu		THALES	Main	PSR+Mode A/C+Mode S+ADS-B	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR Code+24-bit Address+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC+DC L	Online + Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DMAN	Yes	Integrated Tower System+ASMGCS+ Tower Electronic Strip System	flight data+ operational setting data	Yes					
	KKFIR	KCH ACC/ Kuching	63	THALES	Backup	PSR+Mode A/C+Mode S+ADS-B	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR Code+24-bit Address+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC+DC L	Online + Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DMAN	Yes	Integrated Tower System+ASMGCS+ Tower Electronic Strip System	flight data+ operational setting data	Yes				
			47																																										
MALDIVES																																													
MARSHALL ISLANDS																																													

ATM Automation System Repository in APAC Region

State/Administrati on	FIR	ATS Unit / Location	Number of ATS positions	Manufacturer / Brand / Version	System Status	Surveillance Data Processing Function (SDP)	Bypass Surveillan ce Data Processin g (BSDP)	Flight Data Communicati on Network	Flight Data Processing Function (FDP)	Flight Strip	Mode S conspic uity code identific ation	Correlation of surveillance and flight data	Safety Net Function								Extended Alerts and Warning													Downlink Aircraft Parameters Processing and Display	Integrated Technology	System Log Manage ment	Interoperability	Operational Data Synchronizatio n Function	Statistics and Analysis Function	Remarks																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
													Emergenc y code warning (7500,760 0,7700)	Short Term Conflict Alert (STCA)	Minimi m Safe Altitude Warnin g (MSA W)	Area Proximi ty Warni ng (APW)	Approac h Path Monitori ng (APM) Warning	Route Adhere nce Monitori ng (RAM)	Cleared Level Adhere nce Monitori ng (CLAM)	Meteorological Information Processing	Air Ground Data Link Function (AGDL)	System Parameter Management Function	ATS Inter- facility Data Communicati on Function (AIDC)	Human Machine Interface Function (HMI)	Recordin g and Playback Function	System Monitori ng and Control Function	GNSS Time Synchroni zation	Departur e No TRANSG RESSION Zone (DTZ)	No Transgre ssion Zone (NTZ)	Medium Term Conflict Detection Warning (MTCD)	Simila r Callsig n Advisory (SCA)	Reduce Vertical Separation Minimum (RVSM) Warning	Position Report Monitoring (PMON) Warning								Last Known Position Display	SSR Inconsist ency Warning	PBN Capabi lity Indicati on																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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New Zealand	FIR 1	ACC1/City1	40	INDRA Aircon 2100	Main	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	ADS-C+CPDLC+DL C	Online+Offline	Basic	Yes	Basic+Enhancement	Monitor+Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DMAN+PST	Yes	Integated Tower System+ASMGCS+ Tower Electronic Strip System	flight data+ operational setting data	Yes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	NZZC	All/Christchurch+ Auckland	132	Leidos Sky-X	Main	PSR+Mode A/C+Mode S+ADS-B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electronic	Yes	SSR code+24-bit Address+ACID	Yes	Basic+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar+GRIB	CPDLC+DCL	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	Yes	No	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Track Fusion+Related Warnings	AMAN	Yes	Tower Electronic Strip System	flight data+ operational setting data	Yes	Current ATMS Live Nov 2023																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	NZZO	AKL Oceanic ACC/ Auckland	2	Adacel OCS	Main		No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electronic	No	Yes	Yes	No	No	No	No	No	No	GRIB	FANS1/A CPDLC + ADS-C	Online+Offline	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	Yes	No	Yes	OCS is an automated procedural Oceanic system with appropriate functionality for this function. Functionality includes: Long Term Conflict Detection (LTCD), Procedural Conformance Monitoring (Route, Level, and time), display and correlation of pre-processed PSR,SSR, ADS-B, WAM track data, 4D profile calculation appropriate to a procedural environment including upper lower level, and lateral deviation protection. The new Asia/Pac ATMAS IGD and this document does not adequately cover the requirements for procedural based oceanic control ATM.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
PAKISTAN	OPKR	ACC/KARACHI	18 SDD	INDRA Aircon 2100	Main	PSR+Mode A/C+Mode S	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+Electronic	No	SSR code+ACID	Yes	Basic+ATC practices	Yes	Yes	No	Yes	Yes	QNH+mono-radar	None	Online+Offline	Basic+Handover+Coordination	Yes	Basic	Monitor+Control	Yes	No	No	Yes	Yes	Yes	No	No	Yes	No	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	None	None	No	7 - ADS-B data could not be integrated with ATM in Asterix Category-21. MLAT is not available at ACC JIAP. 8 - No safety alerts in Bypass SDP 21 - Auto GRIB support n/a 22- ADS-C and CPDLC are not available at ACC JIAP 26 - Synchronized Replay of multiple CWP is not available. Screen capture file format is not supported by non-proprietary softwares. The video recording data is NOT available common video formats. Synchronized replay mode does not support change in replay speed, forward, etc. 27 - Export of logs by time on USB or on any other media is not available , however, print option is available. 38 - Resolution Advisory (RA) alert indication NOT AVAILABLE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	OPLR	ACC Lahore	21	INDRA Aircon 2100	Main	PSR+Mode A/C+Mode S	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+Electronic	No	SSR code+ACID	Yes	Basic+ATC practices	Yes	Yes	No	Yes	Yes	QNH+mono-radar	None	Online+Offline	Basic+Handover+Coordination	Yes	Basic	Monitor+Control	Yes	No	No	Yes	No	Yes	No	No	Yes	No	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	None	None	No	For Downlink Aircraft Parameters Processing and Display Limited DAP Related Warnings capability exist i.e. 24 Bit Code and Call Sign Mismatch Warnings																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		ACC IAP	21	SIATM	Main	PSR+Mode A/C+Mode S+ADS-B	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+Electronic	Yes	SSR code+ACID	Yes	Basic+Aircraft Intention+ATC practices	Yes	Yes	Yes	Yes	Yes	QNH+mono-radar	CPDLC	Online+Offline	Basic+Handover+Coordination	Yes	Basic+Enhancement	Monitor+Control	Yes	No	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AODB / ACDM	Yes	Integated Tower System+Tower Electronic Strip System	None	No	MSAW is not implemented due operational limitation.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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ATM Automation System Repository in APAC Region																																													
State/Administrati on	FIR	ATS Unit / Location	Number of ATS positions	Manufacturer / Brand / Version	System Status	Surveillance Data Processing Function (SDP)	Bypass Surveillan ce Data Processin g (BSDP)	Flight Data Communicatio n Network	Flight Data Processing Function (FDP)	Flight Strip	Mode S conspicu ity code identifica tion	Correlation of surveillance and flight data	Safety Net Function								Meteorological Information Processing	Air Ground Data Link Function (AGDL)	System Parameter Management Function	ATS Inter- facility Data Communicati on Function (AIDC)	Human Machine Interface Function (HMI)	Recordin g and Playback Function	System Monitori ng and Control Function	GNSS Time Synchroni zation	Extended Alerts and Warning										Downlink Aircraft Parameters Processing and Display	Integrated Technology	System Log Manage ment	Interoperability	Operational Data Synchroniza tion Function	Statistics and Analysis Function	Remarks
													Emergenc y code warning (7500,760 0,7700)	Short Term Conflict Alert (STCA)	Minimu m Safe Altitude Warnin g (MSA W)	Area Proximi ty Warni ng (APW)	Approac h Path Monitori ng (APM) Warning	Route Adhere nce Monitori ng (RAM)	Cleared Level Adhere nce Monitori ng (CLAM)	Departur e No TRANS GRESSION Zone (DTZ)									No Transgre ssion Zone (NTZ)	Medium Term Conflict Detection Warning (MTCD)	Simila r Call sign Advisory (SCA)	Reduce Vertical Separation Minimum (RVSM) Warning	Position Report Monitoring (PMON) Warning	Last Known Position Display	SSR Inconsist ency Warning	PBN Capabi lity Indication									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44		
THAILAND	BANGK OK	BAPP / Suvarnabhumi	27	Thales / TopSky- ATC / V22.2.13.0/TopSky- Tower	Main	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic+Hando ver+Coordinat ion	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	PSR+Mode A/C+Mode S+ADS-B	
	BANGK OK	BAPP / Suvarnabhumi	21	Thales / TopSky- ATC / V22.2.13.0/TopSky- Tower	Emerg ency	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic		Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic+Hando ver+Coordinat ion	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	PSR+Mode A/C+Mode S+ADS-B	
	BANGK OK	CMAP / Chiangmai	14	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Main	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	CMAP / Chiangmai	5	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Emerg ency	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic		Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B
	BANGK OK	PUAP / Phuket	14	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Main	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	PUAP / Phuket	5	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Emerg ency	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	HYAP / HatYai	13	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Emerg ency	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic		Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	HYAP / HatYai	5	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Emerg ency	PSR+Mode A/C+Mode S+ADS B+WAM	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	AMAN+DM AN+PST	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	STRT / Suratthanee	5	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Main	PSR+Mode A/C+Mode S+ADS B+WAM	No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	KSRT / Koh Samui	5	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Main	PSR+Mode A/C+Mode S+ADS B+WAM	No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	UDRT-/ Udonrathane		Thales-/TopSky- Tower	Main					Electro nic	No												Basic	Yes	Enhance ment											Yes			Integrated-Tower-System+A- SMGCS						
	BANGK OK	DMRT / Donmuang	10	Thales /TopSky- ATC/V22.2.13.0/TopSky- Tower	Main	PSR+Mode A/C+Mode S+ADS B+WAM	No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	Basic	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	Integrated Tower System+A- SMGCS	None	Yes	Mode A/C+Mode S+ADS-B	
	BANGK OK	BAPP-/ Suvarnabhumi		Thales-/TopSky- Tower	Main					Electro nic													Basic	Yes						No	Yes		Yes	Yes	Yes	Yes	Track-Fusion+Related- Warnings+Downlink-Data- Window	AMAN+DM AN+PST	Yes	Integrated-Tower-System					
	BANGK OK	BAPP-/ Suvarnabhumi		Thales-/TopSky- Tower	Emerg ency					Electro nic													Basic	Yes						No	Yes		Yes	Yes	Yes	Yes	Track-Fusion+Related- Warnings+Downlink-Data- Window	-	Yes	Integrated-Tower-System+A- SMGCS--Tower-Electronic- Strip-System					
	BANGK OK	CRRT / Chiangrai	4	Thales / TopSky- ATC / V 22.2.13.0	Main	PSR+Mode A/C+Mode S+ADS B+WAM	No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	None	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	Tower Electronic Strip System	None	Yes	Mode A/C+Mode S+ADS-B
	BANGK OK	KRRT / Krabi	4	Thales / TopSky- ATC / V 22.2.13.0	Main	PSR+Mode A/C+Mode S+ADS B+WAM	No	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Electro nic	No	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	Yes	QNH	ADS- C+CPDLC+DC L	Online+Offlin e	None	Yes	Basic+En hanceme nt	Monitor +Contro l	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Track Fusion+Related Warnings+Downlink Data Window	None	Yes	Tower Electronic Strip System	None	Yes	Mode A/C+Mode S+ADS-B	
TIMOR LESTE																																													
TONGA																																													
TUVALU																																													
VANUATU																																													
UNITED STATES	Anchor age Oceani c	Anchorage, Alaska	10	Cisco C220 M4	Main		Yes	AFTN+NAS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electro nic	Yes	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH+mono- radar+GRIB	ADS-C+CPDLC	Online+Offlin e	Basic+Hando ver+Coordinat ion	Yes	Yes	Monitor +Contro l	Yes			Yes	Yes	Yes	Yes	Yes	Yes	No			Yes (synchronized redundant channel is available)	Yes					
	Oaklan d Oceani c	Oakland, California	20	Cisco C220 M4	Main		Yes	AFTN+NAS	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper+ Electro nic	Yes	SSR code+24-bit Address+ACID	Yes	Basic	Yes	Yes	Yes	Yes	Yes	QNH+mono- radar+GRIB	ADS-C+CPDLC	Online+Offlin e	Basic+Hando ver+Coordinat ion	Yes	Yes	Monitor +Contro l	Yes			Yes	Yes	Yes	Yes	Yes	Yes	No			Yes (synchronized redundant channel is available)	Yes					
UNITED STATES																																													
VIETNAM	HANOI FIR	ATCC HAN	10	Leonardo SpA	Main	PSR+Mode A/C+Mode S+ADS B	Yes	AFTN+AMHS	Flight Message Processing+ Life Cycle Management+ SSR Code Management+Sec Manage&Posting Comput	Paper	Yes	SSR code+24-bit Address+ACID	Yes	YES	Yes	Yes	Yes	Yes																											

ATM Automation System Repository in APAC Region																																												
State/Administrati on	FIR	ATS Unit / Location	Number of ATS positions	Manufacturer / Brand / Version	System Status	Surveillance Data Processing Function (SDP)	Bypass Surveillance Data Processing (BSDP)	Flight Data Communicati on Network	Flight Data Processing Function (FDF)	Flight Strip	Mode S conspicu ity code identific ation	Correlation of surveillance and flight data	Safety Net Function							Meteorological Information Processing	Air Ground Data Link (AGDL) (AGDL)	System Parameter Management Function	ATS Inter- facility Data Communicati on Function (AIDC)	Human Machine Interface Function (HMI)	Recording and Playback Function	System Monitoring and Control Function	GNSS Time Synchroni zation	Extended Alerts and Warning										Downlink Aircraft Parameters Processing and Display	Integrated Technology	System Log Manage ment	Interoperability	Operational Data Synchroniza tion Function	Statistics and Analysis Function	Remarks
													Emergency code warning (7500, 7600, 7700)	Short Term Conflict Alert (STCA)	Minimum Safe Altitude Warning (MSAW)	Area Proximity Warning (APW)	Approach Path Monitoring (APM) Warning	Route Adherence Monitoring (RAM)	Cleared Level Adherence Monitoring (CLAM)									Departure No TRANSGRESSION Zone (DTZ)	No Transgression Zone (NTZ)	Medium Term Conflict Detection Warning (MTCD)	Similar Callsign Advisory (SCA)	Reduce Vertical Separation Minimum (RVSM) Warning	Position Report Monitoring (PMON) Warning	Last Known Position Display	SSR Inconsistency Warning	PBN Capability Indication								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
	HCM FIR	AACC HCM	12	THALES/EUROCA TX	Main	PSR+Mode A/C+Mode S+ADSB	Yes	AFTN	Flight Message Processing+ Life Cycle Management+ 4D Profile Trajectory+ SSR Code Management+Sec Manage&Posting Comput	Paper	Yes	SSR code+24-bit Address+ACID	Yes	YES	Yes	Yes	Yes	Yes	Yes	QNH+mono- radar+GRIB	ADS-C+CPDLC	Offline	Basic+Hando ver+Coordin ation	Yes	Basic	Monitor +Contro l	Yes	No	No	no	yes	Yes	no	Yes	Yes	Yes	None	None	Yes	Integated Tower System	flight data	Yes		

ATMAS/TF 7
Appendix A to the Report

State/Administration	Last updated	Meeting	History
Afghanistan			
Australia			
Bangladesh	6/2/2025	ATMAS TF/6	
Brunei Darussalam			
Bhutan			
Cambodia	6/29/2023	ATMAS TF/4	
China	6/13/2025	ATMAS TF/5	
Hong Kong, China	6/9/2022	ATMAS TF/3	
Macau China			
Cook Islands			
Democratic People's Republic of Korea			
France (New Caledonia, French Polynesia, and Wallis & Futuna)			
Fiji	12/16/2022	AP139/22 (CNS)	
India			
Indonesia	6/13/2024	ATMAS TF/5	
Lao PDR	6/11/2024	ATMAS TF/5	3/7/2023
Japan			
Kiribati			
Malaysia	4/3/2023	AP139/22 (CNS)	
Maldives			
Marshall Islands			
Micronesia (Federated States of)			
Mongolia			
Myanmar			
Nauru			
Nepal			
New Zealand	2/11/2026		2/22/2023 2/28/2024 2/26/2025
Pakistan	11/29/2022	AP139/22 (CNS)	
Papua New Guinea			
Palau			
Philippines	6/29/2023	ATMAS TF/4	
Republic of Korea	1/19/2023	AP139/22 (CNS)	
Samoa			
Solomon Islands			
Singapore	6/2/2022	ATMAS TF/3	
Sri Lanka	6/1/2025	ATMAS TF/6	2/28/2023 - AP139/22 (CNS)
Tonga			
Thailand	6/1/2025	ATMAS TF/6	3/3/2023 5/31/2023-AP139/22 (CNS)
Tuvalu			
Timor LESTE			
United States	6/17/2024	ATMAS TF/5	
Vanuatu			
Viet Nam	5/31/2025	ATMAS TF/6	

TABLE OF ATS INTER-FACILITY DATA COMMUNICATION (AIDC) IMPLEMENTATION STATUS IN APAC REGION			
Explanation of the Table			
Column	Element	Explanation	Reason
1	State/Administration	Name of the State/Administration	
2	AIDC Implementation Status (Implemented or not)	AIDC has been implemented in the State/Administration or not (States have the technical capability implemented and at least one bilateral connection with adjacent ATS units in operational use will be regarded as implemented)	
3	Location of AIDC System ATSU1	the location of the AIDC end system under the supervision of State/Administration identified in column 1	
4	ATM Automation System	Make/Model of the ATM automation system used in this ATSU	
5	ATSU2 /Correspondent State/Administration – the correspondent AIDC System	ATSU2 – location of the correspondent AIDC end system Correspondent State/Administration – the name of the State/Administration responsible for management of the correspondent AIDC end system A “/” is placed between the ATSU2 and State/Administration	
6	Intraregional/Interregional	the connection is intraregional (inside APAC) or interregional	
7	Transmission Means	the transmission means used for the AIDC messages exchanged between the corresponding AIDC pair, AFTN, AMHS, etc.	The carriage of AIDC messages is facilitated through existing communication network (e.g. AFTN, AMHS, etc.). The type of network that will be used for AIDC message exchange will need to be defined, including the appropriate recovery/ contingency actions that will be adopted in abnormal situations
8	Frequency of Use (days in a week)	days of AIDC used in a week	to indicate how frequently the AIDC interface has been used
9	Main/Backup Circuit	the circuit is main or backup AIDC connection	if there is two circuits between the two ATSUs, it’s better to identify which is main or backup
10	Communication Signal Speed	the communication signal speed for the AIDC messages exchanged (bps)	According to Pan Regional Interface Control Document (PAN ICD) for ATS Inter-facility Data Communications (AIDC) chapter 3.3.2.3, the communication signal speed between ATS systems using AFTN/AMHS should be greater than 2400 bps
11	Average Transmission Delay (One Trip Time Seconds)	the average transmission delay for exchanging AIDC messages	According to Pan Regional Interface Control Document (PAN ICD) for ATS Inter-facility Data Communications (AIDC), Average Transmission Delay (seconds) will influence the AIDC performance. In order to effectively use the AIDC application for the interchange of ATC coordination data, ATSUs should monitor the performance of the communication links to ensure the required performance is achieved. This monitoring should measure the latency of the AIDC message traffic between ATS systems in terms of the time measured between message transmission at the originating ATS system and receipt of the message at the receiving ATS system. The performance of the communications links should be such that 95% of all messages should be received within 12 seconds of transmission and 99.9% of all messages should be received within 30 seconds of transmission. In bilateral agreements, ATSUs, may agree on different performance requirements
12	Implementation Date or Target Date	date of implementation of the AIDC end system in the form of xQyyyy(quarter year), MON yyyy (Month) or yyyy	
13	Interface Status	the AIDC interface status, including Operational (already implemented), Testing (under progressing), Planned (under plan), No plan	
14	Interface Protocol /Version (OLDI or AIDC Version)	the AIDC service between the corresponding ATSUs	to show which AIDC version used and supported between two ATSUs and refer to Reason under Item 15

TABLE OF ATS INTER-FACILITY DATA COMMUNICATION (AIDC) IMPLEMENTATION STATUS IN APAC REGION			
Explanation of the Table			
15	List of AIDC Messages Applicable between the Two ATSUs	the AIDC messages can be exchanged between the two ATSUs, including ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS	According to Asia/Pacific Seamless ANS Plan V3.0, PASL Phase II (expected implementation by 07 November 2019) and APANPIRG/24 CONCLUSION 24/16, ATS systems should enable AIDC (version 3 or later), or an alternative process that achieves at least the same level of performance as AIDC, between en-route ATC units and terminal ATC units where transfers of control are conducted consistent with FICE-B0/1, unless alternate means of automated communication of ATM system track and flight plan data are employed (Priority 1). As far as practicable, the following AIDC messages types should be implemented: • Advanced Boundary Information (ABI); • Coordinate Estimate (EST); • Acceptance (ACP); • TOC; and • Assumption of Control (AOC). Note: States should note the necessity to utilise Logical Acknowledgement Message processing (LAM) when implementing AIDC
16	Coordination by CDN or Voice	the method used in coordination phase	to show if the AIDC process a totally automatic or not
17	Automatic or Manual EST	the EST is sent out automatically or manually	to evaluate the automatic level of AIDC
18	A Warning Message to Controller in Case of AIDC Failure	the warning message for AIDC failure is capable or not	According to Pan Regional Interface Control Document (PAN ICD) for ATS Interfacility Data Communications (AIDC), failure to receive an operational response within timeout period Top should result in a warning message being displayed to the controller. Non receipt of a response to an ASM may indicate either a communication link failure or an ATC system failure. If an ATSU that has sent an ASM message does not receive an application response within a specified time, a warning message should be displayed at an appropriate position so that local contingency procedures can be executed
19	Remarks	any additional information describing the AIDC connection, including issues faced if any, mitigation, and limitation	

State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSU1	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
AFGHANISTAN	non-implemented	Kabul ACC		Kabul ACC /Afghanistan	Intraregional	AMHS												
				Karachi ACC/Pakistan	Intraregional	AFTN												
AUSTRALIA	Implemented	Brisbane ACC	Thales ATM system	Oakland ARTCC /USA	Interregional	AFTN	7					Operational	ICD V.X.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, CDN, REJ, MAC, CPL	CDN	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Auckland ACC /New Zealand	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, CDN, REJ, MAC, CPL, PAC	CDN	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Melbourne ACC /Australia	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, ACP, AOC, EST, LAM, LRM, MAC, PAC, TOC	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Ujung Pandang ACC /Indonesia	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, ACP, AOC, EST, LAM, LRM, MAC, TOC	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Nadi ACC /Fiji	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, CDN, REJ, MAC, CPL, PAC	CDN	Automatic		Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Port Moresby/PNG	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Brisbane ACC /Australia	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, ACP, AOC, EST, LAM, LRM, MAC, PAC, TOC	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Colombo ACC / Sri Lanka	Intraregional	AFTN	N/A							N/A				Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Jakarta ACC /Indonesia	Intraregional	AFTN	N/A							N/A				Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.

State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSU1	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
		Melbourne ACC	Thales ATM system	Johannesburg ACC / South Africa	Interregional	AFTN	7					Operational	ICD V.X.0	EST, ACP, LAM, LRM	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Male ACC / Maldives	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, ACP, EST, LAM, LRM	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Mauritius ACC /Mauritius	Interregional	AFTN	7					Operational	ICD V.X.0	ABI, ACP, AOC, CPL, EST, LAM, PAC, TOC, LRM	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
				Auckland ACC /New Zealand	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	Up- and down conversion of AMHS and AFTN required as connection between Australian ATM system and national Message Transfer Agent is X25/AFTN.
BANGLADESH	non-implemented	Dhaka ACC	Thales ATM system (TopSky ATC)	Kolkata ACC /India	Intraregional	AMHS	7				4Q2025	Planned	ICD V.1.0	ABI, SEP, EST, LAM	Voice	Automatic	yes	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 in last quarter of 2025.
				Yangon ACC /Myanmar	Intraregional	AMHS	7				4Q2025	Testing	ICD V.1.0	ABI, SEP, EST, LAM	Voice	Automatic	yes	
BHUTAN	non-implemented																	Currently not applicable. If required in the future, will decide after CRV implementation.
BRUNEI DARUSSALAM	non-implemented																	
CAMBODIA	Implemented	Phnom Penh ACC	THALES	Bangkok ACC /Thailand	Intraregional	AMHS	7	Main	64000		4Q2020	Operational	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Vientiane ACC/Laos PDR	Intraregional	AMHS	7	Main	5Mbps		1Q2020	Operational	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Ho Chi Minh ACC/Viet Nam	Intraregional	AFTN						Testing	ICD V.1.0	EST, ACP, TOC, AOC, LRM, LAM				Technical Trial was completed
		Beijing ACC	THALES	Ulaanbaatar ACC/Mongolia	Interregional	AFTN					4Q2023	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
		Harbin ACC	AirNet	Khabarovsk/Russia	Intraregional						4Q2024	Testing	OLDI					
		Sanya ACC	BEST/AirNet	Hong Kong ACC / CHINA, HONG KONG	Intraregional	AFTN					4Q2007	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
				Hanoi ACC/Vietnam	Intraregional	AFTN					2Q2024	Operational		EST, ACP, TOC, AOC, LRM, LAM				
				Ho Chi Minh ACC/Viet Nam	Intraregional	AFTN					4Q2023	Testing	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
		Kunming ACC	NUMEN	Vientiane ACC/Laos PDR	Interregional						1Q2021	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
				Hanoi ACC/Vietnam	Intraregional	AFTN						Testing	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
				Yangon ACC /Myanmar	Intraregional	AFTN						Planned		EST, ACP, TOC, AOC, LRM, LAM				

State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSUI	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
CHINA	Implemented	Lanzhou ACC	NUMEN	Ulaanbaatar ACC/Mongolia	Intraregional	AFTN					4Q2023	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
		Lhasa ACC		Kathmandu ACC/Nepal	Interregional	AFTN												
		Guangzhou ACC	THALES	Taipei ACC /China	Intraregional						1Q2013	Cancel	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
				Hong Kong ACC / CHINA, HONG KONG	Intraregional	AFTN					2Q2018	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
		Taipei ACC		Hong Kong ACC / CHINA, HONG KONG	Intraregional	AFTN						Operational	ICD V.3.0					
				Fukuoka ATMC/Japan	Interregional	AFTN						Operational						
				Manila ACC/Philippines	Interregional	AFTN												
		Shenyang ACC	NUMEN	Khabarovsk/Russia	Interregional						4Q2019	Operational	OLDI	ABI, ACT, MAC, HOP, ACP, LAM, and LRM		Automatic	yes	
		Urumqi ACC	NUMEN	Lahore ACC /Pakistan	Intraregional	AMHS					2Q2024							
			NUMEN	Alma-Ata/Kazakhstan								Testing						
			NUMEN	Bishkek ACC/Kyrgyzstan	Intraregional						4Q2024	Planned						
		Nanning ACC	NUMEN	Hanoi ACC/Vietnam	Intraregional	AMHS					4Q2023	Operational						
		Dalian ACC	NUMEN	Incheon ACC /Republic of Korea	Interregional						4Q2016	Operational	V.3.0 (trial opera	ABI, EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
			NUMEN	Khabarovsk/Russia	Intraregional						4Q2024	Testing						
		Xiamen	NUMEN	Hong Kong ACC /Hong Kong China	Intraregional	AFTN					2Q2024	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM				
		Shanghai ACC	THALES/NUMEN	Hong Kong ACC /Hong Kong China	Intraregional	AFTN					2Q2024	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM				
				Taipei ACC /China	Intraregional						1Q2013	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LRM, LAM		Automatic	yes	
CHINA, HONG KONG	Implemented	Hong Kong ACC	Raytheon ATM system	Guangzhou ACC /China	Intraregional	AFTN	7	Main	2400	4	2Q2018	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Sanya ACC /China	Intraregional	AFTN	7	Main	2400	4	1Q2007	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Manila ACC /Philippines	Intraregional	AMHS	7	Main	up to 2M on CRV	1	2Q2019	Operational	ICD V.3.0	EST, ACP, LAM, LRM	Voice	Automatic	yes	
				Taipei ACC /China	Intraregional	AMHS	7	Main	up to 2M on CRV	1	4Q2012	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Shanghai ACC / China	Intraregional	AMHS	7	Main	up to 2M on CRV	1	2Q2024	Operational	ICD V.3.0	EST, ACP, LAM, LRM	Voice	Automatic	yes	
				Xiamen ATMS / China	Intraregional	AMHS	7	Main	up to 2M on CRV	1	2Q2024	Operational	ICD V.3.0	EST, ACP, LAM, LRM	Voice	Automatic	yes	
CHINA, MACAO	non-implemented	Macao ATZ																Not applicable because Macao, China has ATZ only
COOK ISLANDS	non-implemented																	
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	non-implemented											Planned						
FIJI	Implemented	Nadi ACC	Adacel ATM system	Auckland ACC /New Zealand	Intraregional	AFTN						Operational	ICD V. 2.0	ABI, EST, ACP, TOC, AOC, CDN, CPL				
				Brisbane ACC /Australia	Intraregional	AFTN						Operational	ICD V.1.0	ABI, EST, ACP, TOC, AOC, CDN, CPL				
				Oakland ARTCC /USA	Intraregional	AFTN						Operational	ICD V. 2.0	ABI, EST, ACP, TOC, AOC, CDN, CPL				
FRENCH POLYNESIA	Implemented	Papeete ACC	THALES EUROCAT	Auckland ACC /New Zealand	Intraregional	AFTN					1Q2009	Operational	ICD V.3.0					
				Oakland ARTCC /USA	Intraregional	AFTN					1Q2009	Operational	ICD V.3.0					
		Tahiti ACC		Auckland ACC /New Zealand	Intraregional													
				Chile/Chile	Interregional													
				Brisbane ACC /Australia	Intraregional													
		Ahmedabad ACC	INDRA Aircon 2100	Karachi ACC /Pakistan	Intraregional	AFTN						Testing		ABI, EST				

State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSU1	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
INDIA	Implemented	Chennai ACC	Raytheon Auto track-III +	Colombo ACC / Sri Lanka	Intraregional	AMHS					4Q2025	Testing	ICD V.3.0					
				Jakarta ACC /Indonesia	Intraregional	AFTN					4Q2019	Planned						
				Kuala Lumpur ACC / Malaysia	Intraregional	AFTN					1Q2021	Operational	ICD V.3.0	ABI, EST, TOC, AOC	Voice			
				Male ACC /Maldives	Intraregional	AFTN					3Q2021	Operational						
				Yangon ACC /Myanmar	Intraregional	AFTN						Testing	ICD V.2.0					
		Delhi ACC	INDRA Aircon	Karachi ACC /Pakistan	Intraregional	AFTN					1Q2019							
				Lahore ACC /Pakistan	Intraregional	AFTN						Testing						
		Kolkata ACC	INDRA Aircon	Dhaka ACC /Bangladesh	Intraregional	AMHS					4Q2025	Planned						ATMS at Dhaka is being installed, AIDC trial operation will start once ATMS of Dhaka is ready
				Yangon ACC /Myanmar							4Q2018	Testing	ICD V.2.0					
				Kathmandu ACC /Nepal														
		Mumbai ACC	Raytheon Auto track-III	Karachi ACC /Pakistan	Intraregional	AMHS					1Q2019	Planned						The AIDC with Karachi is currently non-opertional. The last test conducted during 2020. The link is not tested since Covid period, as the response is not received for other end.
				Male ACC /Maldives							4Q2021	Operational						
				Mogadishu ACC/Somalia	Interregional							Testing						
				Muscat ACC /Oman	Interregional	AFTN						Testing						
				Seychelles ACC / Mauritius	Interregional	AFTN												
		Trivandrum ACC	INDRA Aircon 2100	Male ACC/Maldives	Intraregional	AFTN					3Q2018							
		Varanasi ACC	INDRA Aircon 2100	Kathmandu ACC /Nepal	Intraregional	AFTN						Planned						
INDONESIA	Implemented	Jakarta ACC		Melbourne/Australia	Intraregional	AFTN					1Q2025	Testing						
				Colombo ACC/Srilanka	Intraregional	AFTN					2026/2027	Planned						due to upgrade the ATMAS in Jakarta ACC
				SingaporeACC/Singapore	Intraregional	AFTN					1Q2025	Testing	ICD V.3.0					
				Kuala Lumpur ACC/Malaysia	Intraregional	AFTN					2026/2027	Planned	ICD V.3.0					due to upgrade the ATMAS in Jakarta ACC
				Kota Kinabalu ACC/Malaysia	Intraregional	AFTN					2026/2027	Planned						due to upgrade the ATMAS in Jakarta ACC
		Ujung Pandang ACC		Brisbane ACC/ Australia	Intraregional	AMHS	7	Main	9600		1Q2027	Operational	ICD V.3.0	ABI,EST,ACP,TOC,AOC,LAM,LRM	Voice	Automatic	Yes	
				Oakland ARTCC/USA	Intraregional	AMHS	7	Main	9600		2Q2023	Planned	ICD V.3.0	ABI,EST,ACP,TOC,AOC,LAM,LRM	CDN	Automatic	Yes	
				Por Moresby ACC/PNG	Intraregional	AFTN	7	Main	9600		2Q2021		ICD V.3.0	ABI,EST,ACP,TOC,AOC,LAM,LRM	Voice	Automatic	Yes	
				Kota Kinabalu ACC/Malaysia	Intraregional	AFTN	7	Main	9600			Testing	ICD V.3.0	ABI,EST,ACP,TOC,AOC,LAM,LRM	Voice	Automatic	Yes	
				Jakarta ACC/Indonesia	Intraregional	AFTN	7	Main	19200		3Q2022	Testing	ICD V.3.0	ABI,EST,ACP,TOC,AOC,LAM,LRM	Voice	Automatic	Yes	
JAPAN		Fukuoka ATMC	JCAB/ADEX-19	Manila ACC /Philippines	Intraregional							Planned						
				Anchorage ACC /USA	Intraregional	AMHS	7	Main	64000		1Q2005	Operational	ICD V.2.0		CDN	Automatic	yes	
				Incheon ACC /Republic of Korea	Intraregional		7	Main	64000		2Q2009	Operational	ICD V.1.0	EST,ACP,TOC,AOC,LAM,LRM,CPL	CDN	Automatic	yes	
				Oakland ARTCC /USA	Intraregional	AMHS	7	Main	64000		2Q2017	Operational	ICD V.2.0		CDN	Automatic	yes	
				Shanghai ACC /China	Intraregional	AFTN						Planned						
				Taibei ACC / China	Intraregional		7	Main	64000		1Q2012	Operational	ICD V.3.0	ABI,EST,ACP,LAM,LRM,MAC	CDN	Automatic	yes	

State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSUI	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	Implemented	Tokyo ACC	JCAB/ADEX-19	Incheon ACC /Republic of Korea	Intraregional		7	Main	64000		1Q2010	Operational	ICD V1.0	EST,ACP,TOC,AOC,LAM,LRM,CPL	CDN	Automatic	yes		
		Kobe ACC	JCAB/ADEX-19	Incheon ACC /Republic of Korea	Intraregional	AFTN	7	Main	64000		1Q2012	Operational	ICD V.3.0						
KIRIBATI	non-implemented																		
LAO PEOPLE'S DEMOCRATIC REPUBLIC	Implemented	Vientiane ACC	THALES TOPSKY (EUROCAT-C)	Bangkok ACC /Thailand	Intraregional	AMHS	7	Main	9600		3Q2020	Operational	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	no		
				Hanoi ACC /Veitnam	Intraregional	AFTN	7	Main	9600		1Q2025	Operational	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM					
				Phnom Penh ACC /Cambodia	Intraregional	AFTN	7	Main	9600		1Q2020	Operational	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	no		
				Yangoon/ Myanmar	Intraregional	AFTN	7	Main	9600		1Q2026	Planned	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM					
				Kunming ACC /China	Intraregional	AFTN	7	Main	9600		4Q2023	Operational	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	no		
				Ho Chi Minh ACC/Viet Nam	Intraregional	AFTN	7	Main	9600		3Q2025	Planned	ICD V.2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM					
MALAYSIA	Implemented	Kuala Lumpur ACC	LEONARDO	Bangkok ACC /Thailand	Intraregional	AMHS	7	Main	9600	7	1Q2020	Operational	ICD V.3.0	EST, ACP, LAM, LRM	Voice	Automatic	yes		
				Singapore ACC /Singapore	Intraregional	AMHS	7	Main	9600	7	4Q2019	Operational	ICD V.3.0	EST, ACP, LAM, LRM	Voice	Automatic	yes		
											1Q2025	Testing	ICD V.3.0	TOC, AOC	Voice	Automatic	yes		
				Chennai ACC /India	Intraregional	AMHS	7	Main	9600	7	2Q2020	Operational	ICD V.3.0	ABI, EST, ACP, LAM, LRM, CDN, REJ,MAC,TOC,AOC	CDN	Automatic	yes		
				Ho Chi Minh ACC/Viet Nam	Intraregional	AMHS	7	Main	TBA	TBA	1Q2026	Planned	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes		
				Jakarta ACC /Indonesia	Intraregional	AMHS	7	Main	TBA	TBA	1Q2026	Planned	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes		
		Kota Kinabalu ACC	THALES	Ujung Pandang ACC /Indonesia	Intraregional	AMHS	7	Main	TBA	TBA	1Q2025	Testing	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes		
				Manila ACC /Philippines	Intraregional	AMHS	7	Main	TBA	TBA	1Q2024	Operational	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes		
				Singapore ACC /Singapore	Intraregional	AMHS	7	Main	9600	1	3Q2021	Operational	ICD V.3.0	EST, ACP, LAM, LRM	Voice	Automatic	yes		
				1Q2025	Testing	ICD V.3.0	TOC, AOC	Voice	Automatic	yes									
		Jakarta ACC /Indonesia	Intraregional	AMHS	7	Main	TBA	TBA	1Q2026	Planned	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes				
		Kuching ACC	THALES	Singapore ACC /Singapore	Intraregional	AMHS	7	Main	9600	1				ICD V.3.0	EST, ACP, LAM, LRM	Voice	Automatic	yes	No longer applicable due to the Jakarta FIR realignment (Testing TOC AOC Message)
				Jakarta ACC /Indonesia	Intraregional	AMHS	7	Main	TBA	TBA	1Q2026	Planned	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes		
MALDIVES	Implemented	Male ACC	LEONARDO	Mumbai ACC / India	Intraregional	AFTN	7	Main			3Q2021	Operational	ICD V.3.0	ABI, EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes		
				Chennai ACC /India	Intraregional	AFTN	7	Main			3Q2021	Operational	ICD V.3.0	ABI, EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic			
				Mauritius ACC/Mauritius	Interregional	AFTN													
				Melbourne ACC /Australia	Intraregional	AFTN	7	Main			2025	Operational	ICD V.3.0	ABI, EST	Voice			Melbourne has not officially confirmed the use of AIDC messages for live operations. Nevertheless, we have activated AIDC messaging for Melbourne and are currently exchanging ABI and EST messages. waiting for written confirmation of status from Melbourne’s Technical Personnel	
				Colombo ACC/Sri Lanka	Intraregional	AFTN		Main	64K		TBA	Testing	ICD V.3.0		Voice			Colombo AIDC connection temporarily disabled due to request from VCCC	
				Trivandrum ACC/India	Intraregional	AFTN	7	Main			3Q2021	Operational	ICD V.3.0	ABI, EST, ACP, LAM, LRM, TOC, AOC	Voice				
MARSHALL ISLANDS	non-implemented																		
MICRONESIA (FEDERATED STATE OF)	non-implemented																		

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
MONGOLIA	Implemented	Ulaanbaatar ACC	INDRA Aircon-2100	Irkutsk ACC/Russia	Interregional	FMTF	7	Main/Backup	4800	Less than a second	2Q2017	Operational	OLDI Ver. 4.2	ABI, ACT, LAM, REV, PAC, MAC		Auto		
				Krasnoyarsk ACC/Russia	Interregional	FMTF	7	Main/Backup	4800	Less than a second	4Q2018	Operational	OLDI Ver. 4.3	ABI, ACT, LAM, REV, PAC, MAC		Auto		
				Beijing ACC/China	Intraregional	Dedicated line	7	Main/Backup	4800	6	4Q2023	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LAM, LRM, PAC, MAC		Auto		
				Lanzhou ACC/China	Intraregional	Dedicated line	7	Main/Backup	4800	7.4	4Q2023	Operational	ICD V.3.0	EST, ACP, TOC, AOC, LAM, LRM, PAC, MAC		Auto		
MYANMAR	Testing	Yangon ACC	THALES Automation system (Topsky ATC)	Bangkok ACC /Thailand	Intraregional	AMHS					4Q2020	Testing	ICD V.2.0					
				Kolkata ACC /India	Intraregional	AFTN					4Q2018	Testing	ICD V.2.0					Existing ATM system are likely to be upgraded in Lahore and Karachi ACC.
				Chennai ACC /India	Intraregional	AFTN					4Q2018	Testing	ICD V.2.0					
				Kunming ACC /China	Intraregional	AFTN						Planned	ICD V.2.0					Yangon ACC tested a pre-interoperability test with Kunming ACC in March of 2017. And then we both postponed the test because of the system mismatch of ABI messages and discussed the ATC Automation system manufacturer. At present,Yangon ACC can start the AIDC test again with Kunming ACC.
				Vientianne ACC /Lao PDR	Intraregional	AFTN					4Q2018	Testing	ICD V.2.0					
				Dhaka ACC /Bangladesh	Intraregional	AFTN					4Q2018		ICD V.2.0					
NAURU	non-implemented																	
NEPAL	non-implemented	Kathmandu ACC	ATM system from NEC	Kolkata ACC /India	Intraregional	AFTN												
				Varanasi ACC/India	Intraregional	AFTN												
				Lhasa ACC /China	Intraregional	AFTN												
NEW ZEALAND	Implemented	Auckland ACC	ADACEL OCS (Oceanic Control System)	Brisbane ACC /Australia	Intraregional	AFTN	7	Backup				Operational		ABI, CDN, EST, PAC, ACP, REJ, MAC, MIS, TOC, AOC, LAM, LRM	CDN	Automatic		
						AMHS	7	Main	IP?	1.5		Operational		ABI, CDN, EST, PAC, ACP, REJ, MAC, MIS, TOC, AOC, LAM, LRM	CDN	Automatic		
				Nadi ACC /Fiji	Intraregional	AFTN	7	Backup				Operational		ABI, CPL, CDN, PAC, ACP, REJ, MAC, MIS, TOC, AOC, LAM, LRM	CDN	Automatic		
						AMHS	7	Main	IP?	1		Operational		ABI, CPL, CDN, PAC, ACP, REJ, MAC, MIS, TOC, AOC, LAM, LRM	CDN	Automatic		
				Oakland ARTCC /USA	Intraregional	AFTN	7	Backup				Operational		ABI, CPL, CDN, PAC, ACP, REJ, MAC, MIS, LAM, LRM	CDN	Automatic		
						AMHS	7	Main	IP?	1		Operational		ABI, CPL, CDN, PAC, ACP, REJ, MAC, MIS, LAM, LRM	CDN	Automatic		
				Papeete ACC /French Polynesia	Intraregional	AFTN	7	Main	64k	5		Operational		ABI, CPL, CDN, PAC, ACP, REJ, MAC, MIS, TOC, AOC, LAM, LRM	CDN	Automatic		
				Chile/Chile	Interregional	AFTN	7	Backup				Operational		EST, ACP	Voice	Automatic		
						AMHS	7	Main	IP/??			Operational		EST, ACP	Voice	Automatic		
				Melbourne ACC /Australia	Intraregional	AFTN	7					Operational	ICD V.X.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Tahiti ACC /French Polynesia	Intraregional													

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PAKISTAN	Testing	Karachi ACC	Indra AIRCON 2100	Mumbai ACC /India	Intraregional	AMHS	7	Main	128 & 64Kbps		2Q2027	Planned	ICD Version 2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	*Trial run between Karachi and Mumbai was remained unsuccessful due to integration problems. *AIDC is not fully functional with neighbouring FIRs due to difference in AIDC version. AIDC will be fully functional up to June, 2027 after replacement of ATM System at Karachi & Lahore ACCs.
				Muscat ACC /Oman	Interregional	AFTN	7	Main	64Kbps		2Q2027		ICD Version 2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	*AIDC is not fully functional with neighbouring FIRs due to difference in AIDC version. AIDC will be fully functional up to June, 2027 after replacement of ATM System at Karachi & Lahore ACCs.
				Tehran ACC /Iran	Interregional	AFTN	7	Main	1 Mbps		2Q2027		ICD Version 2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	*AIDC is not fully functional with neighbouring FIRs due to difference in AIDC version. AIDC will be fully functional up to June, 2027 after replacement of ATM System at Karachi & Lahore ACCs.
				Ahmadabad ACC /India	Intraregional	AMHS	7	Main	Via Mumbai AMHS		2Q2027	Testing	ICD Version 2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	*Trial run carried out between Karachi and Ahmedabad. Partial connectivity between both systems is observed and Some issues regarding the auto acceptance of EST messages in Karachi ATM need to be addressed. *AIDC is not fully functional with neighbouring FIRs due to difference in AIDC version. AIDC will be fully functional up to June, 2027 after replacement of ATM System at Karachi & Lahore ACCs.
				Kabul ACC /Afghanistan	Intraregional	AFTN	7	Main	1Mbps		2Q2027		ICD Version 2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	*AIDC is not fully functional with neighbouring FIRs due to difference in AIDC version. AIDC will be fully functional up to June, 2027 after replacement of ATM System at Karachi & Lahore ACCs.

State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSU1	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
		Lahore ACC	Indra AIRCON 2100	Delhi ACC /India	Intraregional	AMHS	7	Main	VIA Mumbai AHMS		2Q2027	Testing	ICD Version 2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	*Trial run carried out between Lahore and Delhi ACCs in March 2021. Delhi ATM system rejects the ABI messages due to adding double space in FPL by Lahore ATM system (East bound Flights). Lahore ATM does not generate ACP message in response to ABI message sent by Delhi ATM system (West Bound). *AIDC is not fully functional with neighbouring FIRs due to difference in AIDC version. AIDC will be fully functional up to June, 2027 after replacement of ATM System at Karachi & Lahore ACCs.
				Kabul ACC /Afghanistan	Intraregional	AFTN	7	Main	1 Mbps via Karachi AMHS		2Q2027		ICD Version 2.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	*AIDC is not fully functional with neighbouring FIRs due to difference in AIDC version. AIDC will be fully functional up to June, 2027 after replacement of ATM System at Karachi & Lahore ACCs.
		Islamabad ACC	Si ATM	Kabul ACC /Afghanistan	Intraregional	AFTN	7	Main	1 Mbps via Karachi AMHS				ICD Version 3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	
				Urumqui ACC /China	Intraregional	AFTN	7	Main	Via Beijing AFTN				ICD Version 3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	
				Tajakistan ACC /Tajakistan	Interregional	AFTN	7	Main	Via Tehran AFTN				ICD Version 3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC	Voice	Automatic	Yes	
PALAU	non-implemented																	
PAPUA NEW GUINEA	Implemented	Port Moresby	Thales (TopSky-ATC)	Brisbane ACC/Australia	Intraregional	AMHS	7	Main	640Kbps (VSAT) 10Mbps (MPLS)	500+ms / 20ms	2019	Operational	ICD V.3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Ujung Pandang ACC/Indonesia	Intraregional	AFTN	7	Main	640Kbps (VSAT) 10Mbps (MPLS)	500+ms / 20ms	2020	Operational	ICD V.3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM, MAC	Voice	Automatic	yes	
				Oakland ARTCC /USA	Intraregional	AFTN	7	Main	640Kbps (VSAT) 10Mbps (MPLS)	500+ms / 20ms	2019	Operational	ICD V.3.0	ABI, EST, ACP, LAM, LRM,	Voice	Automatic	yes	
PHILIPPINES	Implemented	Manila ACC	THALES	Hong Kong ACC / HONG KONG	Intraregional	AMHS	7	Main		74ms/15ms	2Q2019	Operational		EST, ACP, LAM, LRM	Voice	Automatic		
				Singapore ACC /Singapore	Intraregional	AMHS	7	Main		25ms/18ms	4Q2020			EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic		
				Taipei ACC/China	Intraregional	AMHS	7	Main		21ms/17ms	4Q2019	Operational		EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic		
				Kota Kinabalu ACC /Malaysia	Intraregional	AMHS	7	Main		24ms/19ms	2Q2024	Operational		EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic		
				Ho Chi Minh ACC/Viet Nam	Intraregional	AMHS						Planned						
				Oakland ARTCC /USA	Intraregional	AMHS	7	Main		194ms/17m	4Q2022	Operational		ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic		
				Fukoka ATMC /Japan	Intraregional	AMHS						Planned						

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State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSU1	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
				Ujung Pandang ACC /Indonesia	Intraregional	AMHS	7	Main		22ms/18ms	4Q2020	Operational		EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic		
REPUBLIC OF KOREA	Implemented	Incheon ACC	Leidos System	Fukuoka ATMC /Japan	Intraregional	Dedicated Lin	7	Main	64000	1	1Q2010	Operational	ICD V.1.0	CPL, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Shanghai ACC/China	Intraregional						3Q2023	Planned						
				Dalian ACC /China	Intraregional	Dedicated Lin	7	Backup	64000	1	4Q2016	Operational	ICD V.3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
		Daegu ACC	Leidos System	Fukuoka ATMC /Japan	Intraregional	Dedicated Lin	7	Backup	64000	1	1Q2010	Operational	ICD V.1.0	CPL, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Shanghai ACC/China	Intraregional						3Q2023	Planned						
				Dalian ACC /China	Intraregional	Dedicated Lin	7	Main	64000	1	4Q2016	Operational	ICD V.3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
SAMOA	non-implemented																	
SINGAPORE	Implemented	Singapore ACC	THALES	Ho Chi Minh ACC/Viet Nam	Intraregional	AMHS	7	Main	9600	1	3Q2014	Operational	ICD V.1.0	EST,ACP,LAM,LRM	Voice	Automatic	yes	
				Manila ACC /Philippines	Intraregional	AMHS	7	Main	9600	1	4Q2019	Operational	ICD V.3.0	EST,ACP,LAM,LRM,TOC,AOC	Voice	Automatic	yes	
				Jakarta ACC /Indonesia	Intraregional	AMHS	0	Main	9600	1		Planned	ICD V.3.0					
				Kuala Lumpur ACC /Malaysia	Intraregional	AMHS	7	Main	64000	20ms	Nov-19	Operational	ICD V.3.0	EST,ACP,LAM,LRM	Voice	Automatic	yes	
				Kota Kinabalu ACC /Malaysia	Intraregional	AMHS	7	Main	64000	55ms	1Q2025	Testing	ICD V.3.0	TOC, AOC	Voice	Automatic	yes	
											Jul-21	Operational	ICD V.3.0	EST,ACP,LAM,LRM	Voice	Automatic	yes	
SOLOMON ISLANDS	non-implemented			Nadi ACC /Fiji	Intraregional													
				Port Moresby ACC/PNG	Intraregional													
				Brisbane ATSC /Australia	Intraregional													
SRI LANKA	Testing	Colombo ACC	INTELCAN	Male ACC /Maldives	Intraregional	AFTN			204800		3Q2025	Testing	ICD V.3.0		Voice	Manual	yes	ABI message is not working during trials.
				Jakarta ACC / Indonesia	Intraregional	AMHS			2048000		3Q2026	Planned	ICD V.3.0		Voice	Manual	yes	
				Melbourne ACC /Australia	Intraregional	AMHS			2048000		1Q2026	Planned	ICD V.3.0		Voice	Manual	yes	
				Chennai ACC /India	Intraregional	AMHS			2048000		3Q2025	Testing	ICD V.3.0		Voice	Manual	yes	
THAILAND	Implemented	Bangkok ACC	THALES	Kuala Lumpur ACC /Malaysia	Intraregional	AMHS	7	Main	1Mbps (CRV)	8	1Q2020	Operational	PAN AIDC ICD V.1.0	EST, ACP, LAM, LRM	Voice	Automatic	yes	CRV shared bandwidth
				Phnom Penh ACC /Cambodia	Intraregional	AMHS	7	Main	1Mbps (CRV)	6	1Q2021	Operational	PAN AIDC ICD V.1.0	ABI, EST, ACP, LAM, LRM	Voice	Automatic	yes	CRV shared bandwidth
				Vientiane ACC /Lao PDR	Intraregional	AMHS	7	Main	64000	7	3Q2020	Operational	PAN AIDC ICD V.1.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Yangon ACC /Myanmar	Intraregional	AMHS						Testing						Continuous operational use still not possible due to system limitation at Yangon ACC(Testing on August 2019)
TIMOR LESTE	non-implemented																	
TONGA	non-implemented																	
				Anchorage ARTCC /United States	Intraregional	AMHS	7	Main	64,000	3	4Q2005	Operational	ICD V.2.0	ABI, CPL, EST, MAC, CDN, ACP, REJ, EMG, MIS, LAM, LRM, PAC	CDN	Automatic	yes	
				Auckland OAC /New Zealand	Intraregional	AMHS	7	Main	64,000	4	4Q2005	Operational	ICD V.2.0	ABI, CPL, MAC, CDN, ACP, REJ, LAM, LRM, PAC	CDN	Automatic	yes	
				Fukuoka ATMC /Japan	Intraregional	AMHS	7	Main	64,000	4	4Q2005	Operational	ICD V.2.0	ABI, ACP, CDN, CPL, LAM, LRM, MAC	CDN	Automatic	yes	
				Nadi ATMC /Fiji	Intraregional	AMHS	7	Main	64,000	5	4Q2005	Operational	ICD V.2.0	ABI, CPL, CDN, PAC, ACP, MAC, REJ, LAM, LRM	CDN	Automatic	yes	
				Brisbane ACC /Australia	Intraregional	AMHS	7	Main	64,000	1	4Q2005	Operational	ICD V.2.0	ABI, EST, ACP, MAC, CDN, LAM, LRM	CDN	Automatic	yes	Full CDN functionality proposed 1-30-2023 via LOA.
				Tahiti ACC /French Polynesia	Intraregional	AMHS	7	Main	64,000	10	4Q2014	Operational	ICD V.2.0	ABI, CPL, CDN, PAC, ACP, MAC, LAM, LRM	CDN	Automatic	yes	

State/Administration	AIDC Implementation Status(Implemented or not)	Location of AIDC System ATSU1	ATM Automation System (Make/Model)	ATSU2 /Correspondent State – Administration	Intraregional/Interregional	Transmission Means	Frequency of Use(days in a week)	Main/Backup Circuit	Communication Signal Speed (bps)	Average Transmission Delay (One Trip Time in Seconds)	Implementation Date or Target Date as MON yyyy or xQyyyy	Interface Status (Operational, Testing, Planned, No plan)	Interface Protocol / Version (OLDI or AIDC Version)	List of AIDC Messages Applicable between the Two ATSUs (ABI, EST, ACP, TOC, AOC, LAM, LRM, PAC, CDN, CPL, REJ, MAC; TRU, EMG, MIS, TDM, ASM, FAN, FCN; ADS)	Coordination by CDN or Voice	Automatic or Manual EST	A Warning Message to Controller in Case of AIDC Failure	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
UNITED STATES	Implemented	Oakland ARTCC	Liedos, ATOP System	Port Moresby/PNG	Intraregional	AMHS	7	Main	64,000	6	4Q2021	Operational	ICD V 2.0	ABI, EST, ACP, LAM, LRM	Voice	Automatic	yes	
				Manila /Philippines	Intraregional	AMHS	7	Main	64,000	5	4Q2022	Planned	ICD V.2.0	ABI, EST, ACP, LAM, LRM	Voice	Automatic	yes	AIDC testing implemented via MOU with verbal verification for 30 days. Pending test results AIDC incorporation permanently via LOA.
				Mazatlan ACC/Mexico	Interregional	AMHS	7	Main	64,000	4	1Q2015	Operational	ICD V.2.0	ABI, ACP, EST, LAM, LRM	Voice	Automatic	yes	
				Ujung Padang/Indonesia	Intraregional	AMHS		Main	64,000		1Q2023	Planned	ICD V 2.0	TBD-ABI, EST, ACP, LAM, LRM	Voice	Automatic	yes	Pending meeting to determine implementation dates in Jan 2023. Initial testing completed, propose additional live testing phase followed by revised LOA.
		Anchorage ARTCC	Liedos, ATOP System	Magadan ACC/Russia	Interregional	AMHS	7	Main	64,000	7	2Q2018	Operational	ICD V.2.0	ABI, CPL, ACP, LAM, LRM	Voice	Automatic	yes	
				Fukuoka ATMC /Japan	Intraregional	AMHS	7	Main	64,000	4	1Q2007	Operational	ICD V.2.0	ABI, ACP, CDN, CPL, LAM, LRM, MAC	CDN	Automatic	yes	
				Oakland ARTCC /United States	Intraregional	AMHS	7	Main	64,000	1	1Q2007	Operational	ICD V.2.0	ABI, CPL, EST, MAC, CDN, ACP, REJ, EMG, MIS, LAM, LRM, PAC	CDN	Automatic	yes	
TUVALU	non-implemented																	
VANUATU	non-implemented																	
VIET NAM	Implemented	Ho Chi Minh ACC	THALES	Sanya ACC /China	Intraregional	AFTN						Testing	ICD V.1.0	EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Phnom Penh ACC /Cambodia	Intraregional	AFTN						Testing	ICD V.1.0	EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Vientiane ACC /Lao PDR	Intraregional	AFTN					3Q2025	Planned						
				Singapore ACC /Singapore	Intraregional	AFTN	7	Main	9600		3Q2014	Operational	ICD V.1.0	EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Manila /Philippines	Intraregional	AFTN						Testing	ICD V.1.0	EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Kuala Lumpur /Malaysia	Intraregional	AFTN					3Q2025	Planned						
		Ha Noi ACC	Selex	Vientiane ACC/Lao PDR	Intraregional	AFTN	7				1Q2025	Operational	ICD V3.0	ABI, EST, ACP, TOC, AOC, LAM, LRM	Voice	Automatic	yes	
				Sanya ACC /China	Intraregional	AFTN	7	Main	9600		4Q2023	Operational	ICD V3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes	
				Naning ACC/China	Intraregional	AFTN	7	Main	9600		4Q2023	Operational	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes	
				KUMING ACC/ CHINA	Intraregional	AFTN	7	Main	9600		1Q2025	Operational	ICD V.3.0	EST, ACP, LAM, LRM, TOC, AOC	Voice	Automatic	yes	

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State/Administration	Last updated	Meeting	History
Afghanistan			
Australia	1/30/2023	AP135/22(CNS)	
Bangladesh	6/2/2025	ATMAS TF/6	
Brunei Darussalam			
Bhutan			
Cambodia	6/29/2023	ATMAS TF/4	
China	6/4/2026	ATMAS TF/7	12/6/2022 3/21/2024-ACSICG/11 4/6/2025 - ATMAS TF/6
Hong Kong, China	6/18/2024	ATMAS TF/5	1/30/2023
Macau China	3/25/2025	ACSICG/12	
Cook Islands			
Democratic People's Republic of Korea			
France (New Caledonia, French Polynesia, and Wallis & Futuna)	6/1/2026	ATMAS TF/7	
Fiji			
India	10/17/2025		
Indonesia	10/15/2025		3/21/2024 - ACSICG/11
Lao PDR	3/27/2025	ACSICG/12	1/24/2023 6/6/2024
Japan	3/29/2024	ACSICG/11	1/16/2023 8/25/2023
Kiribati			
Malaysia	3/26/2025	ACSICG/12	1/9/2023 4/3/2023 4/13/2023 6/29/2023
Maldives	12/16/2025		5/24/2023 - AP135/22(CNS)
Marshall Islands			
Micronesia (Federated States of)			
Mongolia	10/30/2025		8/31/2023 - CNS SG/27
Myanmar	11/11/2025		
Nauru			
Nepal			
New Zealand	6/1/2026	ATMAS TF/7	12/21/2022 8/25/2023 - CNS SG/27
Pakistan	3/25/2025	ACSICG/12	11/29/2022
Papua New Guinea	10/29/2025		
Palau			
Philippines	4/6/2025	ATMAS TF/6	3/20/2025 - ACSICG/12
Republic of Korea	1/31/2023	AP135/22(CNS)	
Samoa			
Solomon Islands			
Singapore	10/14/2025	ACSICG/12	1/6/2023 6/6/2024 3/27/2025 - ACSICG/12
Sri Lanka	4/6/2025	ATMAS TF/6	2/14/2023 - AP135/22 (CNS)
Tonga			
Thailand	4/6/2025	ATMAS TF/6	1/16/2023- AP135/22 (CNS)
Tuvalu			
Timor LESTE			
United States	12/21/2022	AP135/22(CNS)	
Vanuatu			
Viet Nam	4/6/2025	ATMAS TF/6	3/21/2024 - ACSICG/11

LIST OF FOCAL POINT FOR AIDC IMPLEMENTATION

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1.	Afghanistan		
2.	Australia	Mr. Adam Watkin	Tel: Fax: E-mail: Adam.Watkin@AirservicesAustralia.com
3.	Bangladesh	Mr. Abdullah Al Faruk Assistant Director (ATM) Alternate Focal Point	Mobile: +880 1826 107 002 E-mail: mdfaruk3232@gmail.com
4.	Bhutan	Mr. Pema Tashi Superintendent of ANS Bhutan Civil Aviation Authority Paro International Airport Paro	Tel: +975 (8) 271 347 Ext. 107 Mobile: +975 1 762 2702 Fax: +975 (8) 271 944
5.	Brunei Darussalam		
6.	Cambodia	Mr. Sivarak Chutipong Director of Technical Development Cambodia Air Traffic Services Co., Ltd. CATS building, Phnom Penh International Airport, Russian Federation Blvd., Sangkat Kakab, Khan Porsenchey, Phnom Penh, Cambodia	Tel: +855 (16) 771138 Mobile: +855 (23) 866294 E-mail: sivarakc@cats.com.kh
7.	China	Mr. Chen Yukun Senior Electronics Engineer, CNS Division of Air Traffic Management Bureau, CAAC No.12 East Sanhuan Road Chaoyang District Beijing	Tel: +(86) 10877 86974 Mobile: +(86) 18811588863 Email: cykjasen0@gmail.com
8.	Hong Kong, China	Mr. Michael Chu Senior Electronics Engineer (Technical Support) Civil Aviation Department of Hong Kong, China	Tel: +852 2910 6528 Fax: +852 2845 7160 E-mail: mmhchu@cad.gov.hk
9.	Macau China		
10.	Cook Islands		
11.	Democratic People's Republic of Korea		
12.	Fiji		
13.	France: -New Caledonia		

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No.	States	Name/Title/Address	Tel/Fax/E-mail
	-French Polynesia		
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		Mr. Indu Shekhar Joint General Manager (ATM) Airports Authority of India CHQ Rajiv Gandhi Bhawan, New Delhi	Tel: Fax: E-mail: indushekhar@aai.aero
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		Mr. Indra Sudarsono Air Traffic Service Development Specialist Airnav Indonesia. Support Building Jl. Ir. H. Juanda Tangerang 15121	Tel: +6281213518268 E-mail: indra.sudarsono@airnavindonesia.co.id
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17	Kiribati		
18	Lao PDR	Mr. Maity Sylithammavoing Director of ATS Division Lao Air Navigation Services P.O. Box 2985 Wattay International Airport Vientiane	Tel: +856 (21) 512006 Mobile: +8562055414040 Fax: +856(21) 512216 E-mail: maitymt1975@gmail.com
		Mr. Moukphamay Thammavongsa Dy. Director Air Navigation Standards Division, DCA. Souphanouvong Rd. Wattay International Airport Vientiane, Lao PDR P.O Box:119	Tel: +856 21 512163 Fax: +856 21 520237 Mobile: +856 2099649159 Email: moukth@msn.com
19	Malaysia	Sharudin Bin Hashim Principle Assistant Director Civil Aviation Authority of Malaysia Air Navigation Services Technical Division Address: Kuala Lumpur Air Traffic Control Centre Complex Aras 1 West Wing Terminal North Jalan CTA3 (KLIA) Kuala Lumpur International Airport 64000 KLIA, Sepang Selangor, Malaysia	Tel : +603 8529 1208 Fax : +603 8529 1210 E-mail: sharudin@caam.gov.my

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No.	States	Name/Title/Address	Tel/Fax/E-mail
20	Maldives	Mr. Ishag Abdulla Associate General Manager Maldives Airports Co., Ltd Velana International Airport Hulhule 22000	Tel: +960 795 7235 Fax: E-mail: ishag@mnats.aero
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		Ms. Kaniz Fatima Sr. Asst. Director (CNS/ATM) CNS Directorate HQCAA, Karachi	Tele +92-21-99072213 Mobile +92-3456136023 Email kaniz.Fatima@paa.gov.pk

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No.	States	Name/Title/Address	Tel/Fax/E-mail
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30	Papua New Guinea	Mr. Phil Irvine Executive Manager - ATS NiuSky Pacific Limited Papua New Guinea	Tele +675 3121500 Mobile +675 78953027 Email pirvine@niuskypacific.com.pg
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		Mr. Gilmar D Tiro CNS Systems Officer IV Air Navigation Service/ATM Centre Civil Aviation Authority of the Philippines Old Mia Road, Ninoy Aquino Avenue Pasay City, Metro Manila 1300	Tel: +63 (2) 672 7729 Fax: E-mail: gilmar.tiro@gmail.com
32	Republic of Korea	Mr. Kyuchang Jeoung Assistant Director, Air Traffic Management Office, Republic of Korea Maeyeo-ro 1-gil 50-12, Dong-gu, Daegu, 41059	Tel: +82 53 668 0269 Fax: +82 53 668 0278 E-mail: huinari@korea.kr
		Mr. Changsub Lee Assistant Manager, Incheon International Airport Corporation 424beon-gil 47, Gonghang-ro, Jung- gu, Incheon, 22382	Tel: +82 32 741 7091 Fax: +82 32 741 2085 E-mail: csubee96@airport.com
		Mr. Taehwan Kim Manager, Air Navigation Facilities Department, Korea Airport Corporation(KAC) Haneul-gil 78, Gangseo-gu, Seoul, 07505	Tel: +82 2 2660 2868 Fax: E-mail: kth0206@airport.co.kr
33	Samoa		
34	Singapore	Mr. Joe Chua Wee Jui Senior Chief (Ops Tech Planning) Air Traffic Services Division Civil Aviation Authority of Singapore P.O. Box 1	Tel: +65 8518 6300 Fax: E-mail: joe_chua@caas.gov.sg
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No.	States	Name/Title/Address	Tel/Fax/E-mail
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36	Sri Lanka		
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		Miss Rachat Songcharoen Senior Air Traffic Systems Engineer Aeronautical Radio of Thailand Ltd 02 Ngamduplee Tungmahamek Bangkok 10120 Thailand	Tel: +66 (8) 324 86484 Fax: Email: rachat.ra@aerothai.co.th
38	Timor Leste		
39	Tonga		
40	Tuvalu		
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Presentation of the initial proposal:

1. The *Background* and *Comments* are provided in *italic text*.
2. The text of the proposed amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

- | | |
|---|-----------------------------------|
| a) Text to be deleted is shown with a line through it. | text to be deleted |
| b) New text to be inserted is highlighted with grey shading. | new text to be inserted |
| c) Text to be deleted is shown with a line through it followed by the replacement text which is highlighted with grey shading. | new text to replace existing text |

REVISED TERMS OF REFERENCE OF ASIA AND PACIFIC ATM AUTOMATION SYSTEM TASK FORCE (ATMAS/TF)

Consists of objectives and deliverables as follows:

The Objectives of the APAC ATMAS/TF are to:

- 1) *Keep abreast of the latest developments in ATM automation systems and associated technologies to cope with forthcoming development and implementation of ICAO SARPs, the Global Air Navigation Plan (GANP), the Global Aviation Safety Plan (GASP) and Asia/Pacific Seamless Air Navigation Service (ANS) Plan (APSAP);*
- 2) *Facilitate the implementation, enhancements, operation and maintenance of ATM automation systems and services identified in the Aviation System Block Upgrades (ASBU) elements and APSAP elements using the project management principles where appropriate;*
- 3) *Ensure continuous and coherent development of the ATM automation systems that is harmonized with adjacent regions to enhance systems robustness, resilience, interoperability and cybersecurity; and*
- 4) *Review, identify and address major issues in technical, operational, safety and regulatory aspects to facilitate the implementation or provision of safe, efficient and orderly ATM services;*
- 5) *Encourage collaboration among ANSPs in implementing ATM automation systems so as to reduce operating costs and enable quick implementation of new requirements to cope with new challenges;*
- 6) *Follow up, oversee and share experiences of the AIDC implementation and provide a coordination framework among States for wider and effective implementation of AIDC across the APAC region.*
- 7) *Facilitate transition planning to and technical interoperability between legacy systems and SWIM-enabled capabilities such as FF-ICE and TBO.*

Deliverables to meet the Objectives:

- 1) To submit progress report to the ICAO CNS Sub-group while keeping ATM Sub-group informed of addressing the APAC ATMAS/TF deliverables (listed in 2 to 7 below);*
- 2) To support the ICAO in making specific recommendations and developing guidance materials, such as minimum functional/performance requirements and additional/local requirements, which aim at facilitating the implementation or provision of robust, safe, efficient and orderly ATM services by the use of existing and/or new procedures, facilities and technologies in relation to ATM automation systems;*
- 3) To review outcome of the AN-Conf., DGCA Conference, APANPIRG, CNS Sub-group, ATM Sub-group, RASMAG, and SURICG related to ATM automation systems, revise and update a tasks list and action items for the ATMAS/TF;*
- 4) To study and identify applicable applications, share experience, and recommend the best industry practice in the Asia and Pacific Regions considering:*
 - Systems planning and design
 - Open / Service Oriented Architecture
 - HMI adaptation, data synchronization and operational enhancements
 - Safety nets
 - ICAO roadmap in the GANP / ASBU
 - Systems interoperability
 - Standardization of information exchange
 - AIDC Implementation
 - Operation and maintenance practice
 - Acceptance and certification
 - Flight inspection
 - Cybersecurity
 - Safety assessment
 - Training
 - Transition
- 5) To encourage research and development, trials and demonstrations of applications and technologies, and, as necessary, facilitate ~~steer for~~ the sharing of this information and expertise between States/Administrations through organizing educational seminars and symposia to educate States/Administrations and airspace users;*
- 6) To formulate draft Conclusions and Decisions relating to matters in the field of ATM automation systems that come within the scope of the APANPIRG, CNS Sub-group, ATM Sub-group, and RASMAG work plan; and*
- 7) To collaborate with relevant international organizations (such as EuroControl) for harmonization of ATM system requirements.*
- 8) To provide guidance materials to assist States in facilitating the integration of ATM automation systems (ATMAS) into the SWIM environment, which includes defining the operational requirements and interface specifications for ATMAS to operate within a SWIM-enabled environment and promoting the harmonization of communication infrastructure and protocols.*
- 9) To identify and share transition considerations, including milestones, timelines and dependencies, related to the evolution of ATMAS towards future operational concepts.*

10) To consolidate implementation materials from the various expert groups that impact the design considerations for ATM Automation Systems, of the following but not limited to:

- SWIM implementation guidance material which includes service registry
- FF-ICE ad-hoc group implementation guidance material and regional decisions, such as FIXM formats and their extension, harmonized rules, and interpretation of FF-ICE responses
- AAITF updates on materials relating to DNOTAM/DORIS
- ATFM Concept of Operations updates

11) To report on States' timelines for automation system enhancement to support such enablers as SWIM, FF-ICE, and DNOTAM.

12) To review and assess the need to harmonize existing definitions/terms used by the various ATMAS, (e.g. ATM automation systems, Air Traffic Flow Management Systems, etc.) to address potential mismatch of information during data exchanges.

Timeframe for Deliverables:

For deliverable item 2 on guidance materials, with the ATMAS TF having created the *Air Traffic Management Automation System Implementation and Operations Guidance Document*, such document it is anticipated that a first draft could be made available in 3 years after establishment of the Task Force for seeking endorsement by CNS Sub-group, after which the guidance materials would be updated/enhanced on an on-going basis. For other deliverable items 3-712, they will be made available as appropriate subject to review by the Task Force. The life time of the Task Force would be subject to review after endorsement of the first edition of the guidance materials. The Task Force should study and share technical considerations related to the evolution of ATM automation systems in support of future concepts of operation (ConOps), such as FF-ICE and TBO, and identify potential future work areas as regional needs evolve.

Meeting:

The APAC ATMAS/TF shall convene annually with at least one face-to-face meeting per year, which is supplemented by teleconference meetings (e.g. WebEx) as appropriate.

Membership:

All APAC member States/Administrations providing air navigation services in the Asia and Pacific Regions. APAC members should nominate Subject Matter Experts from Civil Aviation Authorities, ANSPs, and other organizations with strong background in engineering and operation in relation to ATM automation systems to participate in the Task Force. The Task Force would also invite representatives of International Organizations recognized by the ICAO Council as representing important civil aviation interests to participate in its work in a consultative capacity.

ATMAS TF/7
Appendix E to the Report

Action Item	Subject	Forum Raised	Status / Target Date	Action Party	Status
1-1	Develop a table to list the current ATMAS status of all states	ATMAS TF/1	ATMAS TF/2	Member States, ICAO Secretariat	Closed
1-2	Develop check list for ATMAS project management from the scratch of planning, requirement definition, bidding, implementation to operational transition.	ATMAS TF/1	ATMAS TF/3	Member States, ICAO Secretariat	Closed
1-3	Develop APAC Office ATMAS IGD	ATMAS TF/1	ATMAS TF/2	Ad hoc group led by China. Members: Hong Kong China, India, Indonesia, Japan, Malaysia, Myanmar, Nepal, Philippines, Singapore, Thailand and Vietnam	Closed
1-4	Propose states to share the current interoperation technology or protocol applied between ATMAS of all states. (e.g. AIDC, OLDI, other protocol, etc.)	ATMAS TF/1	ATMAS TF/2	Member States, ICAO Secretariat	Closed
1-5	Propose states to share the current redundancy mechanism at ATMAS level in the same location, such as main, backup, and emergency system.	ATMAS TF/1	ATMAS TF/2	Member States, ICAO Secretariat	Closed
1-6	Propose states to elaborate the backup or contingency strategy of ATMAS in different location.	ATMAS TF/1	ATMAS TF/2	Member States, ICAO Secretariat	Closed
1-7	Study the feasibility to expand APRD function to cover ATM AS issues	ATMAS TF/1	ATMAS TF/2	Hong kong China	Closed
2-1	Host a webinar about ATM Automation System in 2022.	ATMAS TF/2	ATMAS TF/3	Member States, ICAO Secretariat	Closed
2-2	Consider the suggestions discussed in the meeting and work out a revised version of the table to list the current ATMAS status of all states in order to build the ATMAS regional repository	ATMAS TF/2	ATMAS TF/3	Ad-hoc group led by Indonesia Members: China, Hong Kong China, Republic of Korea, Singapore, ICAO Secretariat	Closed
2-3	Further progress the development of ATMAS PRD and consider to include AIDC as well.	ATMAS TF/2	ATMAS TF/3	Ad-hoc group Members: China, Hong Kong China, Indonesia, ICAO Secretariat	Closed
2-4	Translate the information on MH/T 4029.3 into English first for better understanding by other Member States/Administrations	ATMAS TF/2	ATMAS TF/3	China	Closed
2-5	State Letter to circulate the advanced draft of ATMAS IGD to seek further comments and inputs from States and the States/Administrations should provide feedback in one month after receiving the State Letter.	ATMAS TF/2	ATMAS TF/3	Member States, ICAO Secretariat	Closed
2-6	Consolidate APA/TF action item list into ATMAS/TF action item list in ATMAS TF/3	ATMAS TF/2	ATMAS TF/3	Member States, ICAO Secretariat	Closed
3-1	The ICAO Secretariat will issue a State Letter to circulate the table of the ATMAS Status in APAC region to collect information from Member States in order to build the repository of the ATM automation systems for APAC Region.	ATMAS TF/3	ATMAS TF/4	Member States, ICAO Secretariat	Closed
3-2	The ICAO Secretariat will issue a State Letter to circulate the table of AIDC Implementation Status in APAC region with the current status to States/Administrations for supplements and validation.	ATMAS TF/3	ATMAS TF/4	Member States, ICAO Secretariat	Closed
3-3	For each group of common issues, identify in 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);	APA TF/1	January to June 2016	by the Task Force	Closed

ATMAS TF/7
Appendix E to the Report

Action Item	Subject	Forum Raised	Status / Target Date	Action Party	Status
3-4	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.	APA TF/4		by the Task Force	Closed
4-1	Member States/Administrations are requested to bring their latest data to future task force meetings in order to keep the AIDC and ATMAS Repositories up-to-date.	ATMAS TF/4		Member States, ICAO Secretariat	Closed
4-2	The meeting invited Member States/Administrations to review provisional agenda for next ATMAS TF meeting and provide comments or suggestions to the ICAO Secretariat within 2 months.	ATMAS TF/4	Aug-23	Member States, ICAO Secretariat	Closed
5-1	Nominate/recommend experts, engage industry for required expertise, and share experiences with ATMAS TF.	ATMAS TF/5		Member States, ICAO Secretariat	Closed
5-2	Consider incorporating the relevant design considerations of an Integrated Arrival and Departure Manager into the ATMAS IGD after implementation and verification.	ATMAS TF/5		Concerned States, ICAO Secretariat	Closed
5-3	review and update the information contained in the ATMAS Repository	ATMAS TF/5		Member States, ICAO Secretariat	Closed
5-4	Form an expert group within ATMAS TF to review the core AIDC messages in the IGD (Members: China, Hong Kong China, Malaysia, Pakistan, Philippines and Singapore(led)), which will work in offline mode and conduct online meeting when necessary.	ATMAS TF/5		China, Hong Kong China, Malaysia, Pakistan, Philippines and Singapore(led)	Closed
6-1	New Zealand suggested adding the South Pacific States to the charts and updating the status related to them. New Zealand offered to do internal coordination and collate the required information for the future to include the South Pacific States.	ATMAS TF/6		Singapore, New Zealand, ICAO Secretariat	Closed
6-2	ICAO Secretariat will coordinate internally and check if the RASMAG Meeting updates the list of hotspots, if there are critical changes required to be reflected in the chart, and inform ATMAS TF	ATMAS TF/6		ICAO Secretariat	Closed
6-3	The Co-Chair encouraged States/Administrations to share their assessments of the required ATMAS capability enhancements to support future operations, particularly SWIM and FF-ICE, at a future meeting of the ATMAS TF	ATMAS TF/6		Member States, ICAO Secretariat	Closed
6-4	India informed that the new ATMAS is under installation and is likely to be commissioned by December 2025. It was added that AIDC Trials between Mumbai and Muscat can only be commenced after the commissioning of the new ATMAS. India will update the status and present a WP/IP regarding the same in the next TF Meeting	ATMAS TF/6		India	Closed
6-5	Sri Lanka requested the Meeting to share experiences about AIDC's implementation at boundaries. New Zealand informed that it has good experience handling AIDC implementation issues at boundaries, and it will share New Zealand's point of contact information with Sri Lanka	ATMAS TF/6		New Zealand	Closed
6-6	The Meeting reviewed the current ToR and agreed on the need to modify it further to accommodate the latest needs of ATMAS TF, such as accommodating FF-ICE and SWIM requirements. An ad-hoc group consisting of Hong Kong China, India, New Zealand, Singapore, Thailand, and the USA was formed to review the ToR. The revised draft ToR will be presented by the ad-hoc group in the ATMAS TF/7 Meeting	ATMAS TF/6		ICAO Secretariat, Hong Kong China, India, New Zealand, Singapore, Thailand, and the USA	Closed
7-1	States and Administrations are encouraged to monitor the progress of ICAO work on Performance-Based Surveillance (PBS), assess the implications of surveillance performance requirements on ATM automation systems, particularly in relation to surveillance data processing, and share relevant studies or experiences at the next ATMAS TF meeting.	ATMAS TF/7		Member States, ICAO Secretariat	Open
7-2	The Meeting further noted the progress of ATMAS implementation across the region, including a number of ongoing modernization projects. States/Administrations were urged to review the repository and promptly notify the Secretariat of any significant changes.	ATMAS TF/7		Member States, ICAO Secretariat	Open

ATMAS TF/7
Appendix E to the Report

Action Item	Subject	Forum Raised	Status / Target Date	Action Party	Status
7-3	The Meeting supported the proposal to incorporate the runway inconsistency warning function into the APAC ATMAS IGD and present to the next meeting for approval.	ATMAS TF/7		ATMAS IGD Ad Hoc Group	Open
7-4	The Secretariat reminded States/Administrations to review the ATMAS IGD Ad Hoc Group focal point list and provide any necessary updates to ensure the contact information remains current.	ATMAS TF/7	15-Jun-26	Member States, ICAO Secretariat	Open
7-5	China informed the Meeting that the Safety Protection System Based on Speech Recognition trial was continuing and that further evaluation was being conducted for more complex operational scenarios. The Chair encouraged States, including China, to share future implementation experiences and lessons learned as the technology matured.	ATMAS TF/7		China, Concerned States, ICAO Secretariat	Open
7-6	The Meeting encouraged States to further verify the accuracy of their AIDC implementation status and other operational details, and to provide any necessary updates to the Secretariat.	ATMAS TF/7		Member States, ICAO Secretariat	Open

Attachment 1 to the Report

Seventh Meeting of the Asia/Pacific Air Traffic Management Automation System Task Force (ATMAS TF/7)

(Bangkok, THAILAND 2-4 Jun 2026)

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**The Seventh Meeting of the Asia/Pacific
Air Traffic Management Automation System Task Force (APAC ATMAS TF/7)**

(Bangkok, Thailand, 2 – 4 June 2026)

LIST OF WORKING, INFORMATION PAPERS

WP/IP No.	Agenda	Subject	Presented by
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WORKING PAPERS

WP/01	1	Provisional Agenda	Secretariat
WP/02	2	Review of Relevant ICAO Meetings	Secretariat
WP/03	2	Outcomes of the Eleventh Meeting of the Surveillance Implementation Coordination Group (SURICG/11)	Secretariat
WP/04	2	Outcomes of the Thirteenth Meeting of Aeronautical Communication Services Implementation Coordination Group of APANPIRG (ACSICG/13)	Secretariat
WP/05	4	Repository of the ATMAS in APAC	Secretariat
WP/06	5	Upgrade of ATM Automation System for FF-ICE	China
WP/07	7	Repository of AIDC Implementation Status in APAC	Secretariat
WP/08	8	Review of ToR and Task List	Secretariat
WP/09	5	Progress of TBO Pathfinder Development in the Asia Pacific Region	New Zealand
WP/10	4.5	End to End Systems Integration Testing to Improve Interoperability	Singapore
WP/11	4.6	Runway Inconsistent Warning Function in Air Traffic Management Automation System	China

INFORMATION PAPERS

IP/01	-	Meeting Bulletin	Secretariat
IP/02	2	Update on the Surveillance Performance Requirements Manual and its Relevance to ATM Automation Systems	Thailand and Singapore
IP/03	4.1	Current Developments in ATM Automation Systems in Sri Lanka	Sri Lanka
IP/04	4.5	Space-Based ADS-B Trial in Thailand ATM Automation System	Thailand
IP/05	4.4	Smartised Maintenance in Large-scale Air Traffic	China

WP/IP No.	Agenda	Subject	Presented by
		Control Automation System	
IP/06	4.5	Design And Application of Output Standards for Integrated Monitoring Information in ATMAS	China
IP/07	4.5	Research and Application of Air-Ground Data Link-Based Landing Information Interaction Technology for Inbound Flights	China
IP/08	4.6	A Safety Protection System Based on Speech Recognition	China
IP/09	4.6	ATMAS Testing and Evaluation Cloud Platform Integrating Virtualization, Hyper-Convergence, and Cloud Desktop Technologies	China
IP/10	4.6	Operation Experience Sharing of Light Guidance Function of A-SMGCS	China
IP/11	4.6	The Rationale for Requiring PL Alert Despite the Existence of MTCD	China
IP/12	5	Multiple ATM Automation System Data Collaboration and Sharing	China
IP/13	7.2	Operational Experience With AIDC Coordination And Transfer Messages Between Singapore And Malaysia	Singapore
IP/14	7.2	Updates on The Development of Global Guidance Material for AIDC	Singapore
IP/15	4.3	Enhancing Cybersecurity Posture for Singapore ATMAS	Singapore
IP/16	4.2	ATM Automation System Full-Business-Chain Operation and Maintenance	China
IP/17	2	Outcomes of SWIM TF/11	Secretariat
IP/18	4	Modernization of Indonesia's Air Traffic Management Automation System	

LIST OF PRESENTATIONS

SP/01	4.3	Enhancing Cybersecurity Posture for Singapore ATMAS	China
SP/02	4.4	Smartised Maintenance in Large-scale Air Traffic Control Automation System	China
SP/03	4.5	End to End Systems Integration Testing to Improve Interoperability	Singapore
SP/04	4.5	Research and Application of Air-Ground Data Link-	China

WP/IP No.	Agenda	Subject	Presented by
		Based Landing Information Interaction Technology for Inbound Flights	
SP/05	5	Progress of TBO Pathfinder Development in the Asia Pacific Region	New Zealand
SP/06	5	Multiple ATM Automation System Data Collaboration and Sharing	China
