



*International Civil Aviation Organization*

**The Sixth Meeting of the APANPIRG ATM Sub-Group  
(ATM/SG/6)**

Hong Kong, China, 30 July – 03 August 2018

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**Agenda Item 6: AOP, MET, AIM, SAR**

**AIS – AIM IMPLEMENTATION TASK FORCE OUTCOMES**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the outcomes of the Thirteenth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force.

**1. INTRODUCTION**

1.1 The Thirteenth Meeting of the ICAO Aeronautical Information Services (AIS) – Aeronautical Information Management (AIM) Implementation Task Force (AAITF/13) was held in Bangkok, Thailand from 04 to 08 June 2018. The meeting was attended by 83 participants from Australia, Bangladesh, Cambodia, China, Hong Kong China, DPR Korea, India, Indonesia, Japan, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, IATA, IFAIMA, Industry Partners and ICAO.

1.2 Continuing the practice of AAITF meetings in recent years, an AIM seminar was held on the first day of the meeting. The seminar and the meeting plenary discussed 17 working papers (WPs), 17 Information papers (IPs), 13 presentations and one flimsy.

1.3 A key outcome of the meeting was the finalization of Version 1.0 of the Asia/Pacific Regional Plan for Collaborative AIM.

**2. DISCUSSION**

AIS-AIM Related Air Navigation Deficiencies

2.1 Three AIS-AIM-related ANS Deficiencies were identified in the list appended to the AAITF/13 report:

- WGS-84 not implemented (12 States);
- AIP Format (two States); and
- Quality Management System not implemented (23 States).

2.2 The current AIS-AIM-related ANS Deficiencies are listed in ATM/AIM/SAR Deficiencies List appended to ATM/SG/6 WP44.

2.3 The meeting noted the ongoing and rising concern about poor quality management of aeronautical information in the APAC Region, and the apparent lack of organizational priority for this safety-critical requirement.

Advance Notification for Publication of NOTAM to Support Effective Airspace Management

2.4 Singapore presented information emphasizing the importance of adhering to the existing Annex 15 *Aeronautical Information Services* standard that required at least seven days' notice for the activation of temporary airspace restrictions, in the interests of air navigation safety through effective airspace management. The information provided also included discussion of new provisions in this regard, applicable from 08 November 2018.

2.5 This paper was discussed at length, with particular reference to the migration of (current) Annex 15 paragraph 5.1.14 into the new Procedures for Air Navigation Services – AIM (PANS-AIMM paragraph 6.1.4.3, applicable from 08 November 2018, reproduced in **Table 1**.

Annex 15 Para 5.1.14

At least seven days' advance notice **shall** be given of the activation of established danger, restricted or prohibited areas and of activities requiring temporary airspace restrictions other than for emergency operations.

PANS-AIM Para 6.1.4.3

At least seven days' advance notice **should** be given of the activation of established danger, restricted or prohibited areas and of activities requiring temporary airspace restrictions other than for emergency operations.

**Table 1:** Annex 15 5.1.14 and PANS-AIM 6.1.4.3

2.6 There were three main themes of the discussion:

1. the advance notification period;
2. the draft conclusion proposed by Singapore; and
3. the need for Regional application of a *shall* provision, as in current Annex 15, as opposed to the *should* provision of PANS-AIM

2.7 Several States informed the meeting that their regulations stipulated 7 days' advance notification, while others had either regulated for, or supported, a reduced notification requirement, including cases of 72 hours and 48 hours.

2.8 While the meeting noted that the cooperation of military authorities would be more likely if the optional *should* provision was applied and a reduced period of advance notification used, the general consensus was that there was a preference to retain the *shall* provision, and that 7 days' notice remained the most desirable advance notification. However, it was also acknowledged that there would remain cases of non-cooperative military authorities failing to provide this, and in some cases, any, advance notification.

2.9 The meeting also noted that different periods of advance notification may be applied for different purposes of airspace activation or restriction. It was also noted that there was a need for clarification of the different meanings of *shall* and *should* in the Annex and the PANS.

2.10 The meeting was informed that, while a Conclusion of the ATM Sub-Group of APANPIRG, or of APANPIRG itself, may urge States to apply a particular advance notification requirement, only regional air navigation agreement for a procedure to be included in ICAO Doc 7030 – *Regional Supplementary Procedures* was binding upon States. The likelihood, or otherwise, of reaching regional air navigation agreement on matters such as this should be taken into account.

2.11 Further noting that the meeting was generally restricted to AIS/AIM experts, and that the issue being discussed would need to be further discussed by the broader ATM community, particularly including civil-military cooperation experts, the meeting agreed to the following Draft Conclusion for consideration and further discussion by ATM/SG:

| Draft Conclusion AATF/13-1: Advance Notification of Activities Requiring the Activation of Special Use Airspace or Temporary Airspace Restrictions                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| What:                                                                                                                                                                                                                                                                                   |  | That, noting:                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 1. current Annex 15 paragraph 5.1.14 stipulates that at least seven days’ advance notice <i>shall</i> be given of the activation of established danger, restricted or prohibited areas and of activities requiring temporary airspace restrictions other than for emergency operations; |  | Expected impact:                                                                                                                                                                                                                                                                                                                                                                                               |  |
| 2. Annex 15 paragraph 5.1.14 will be migrated into the new ICAO Doc 10066 Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM), applicable from 08 November 2018; and                                                                                |  | <input type="checkbox"/> Political / Global                                                                                                                                                                                                                                                                                                                                                                    |  |
| 3. PANS-AIM paragraph 6.1.4.3 will stipulate that at least seven days’ advance notice <i>should</i> be given;                                                                                                                                                                           |  | <input type="checkbox"/> Inter-regional                                                                                                                                                                                                                                                                                                                                                                        |  |
| States are urged to ensure that:                                                                                                                                                                                                                                                        |  | <input type="checkbox"/> Economic                                                                                                                                                                                                                                                                                                                                                                              |  |
| a) at least seven days’ advance notice be provided to the AIS of the planned activation of established danger, restricted or prohibited areas and of planned activities requiring temporary airspace restrictions other than for emergency operations; and                              |  | <input type="checkbox"/> Environmental                                                                                                                                                                                                                                                                                                                                                                         |  |
| b) where any planned activity requires coordination among States for the activation of special use airspace or temporary airspace restrictions other than for emergency operations, the advance notification period applied takes into account the needs of States involved.            |  | <input checked="" type="checkbox"/> Ops/Technical                                                                                                                                                                                                                                                                                                                                                              |  |
| Why:                                                                                                                                                                                                                                                                                    |  | Late notification to publish NOTAM for temporary airspace restrictions amounts to change in the ATS operating environment which may require adjustments to air traffic flow and introduction of mitigation measures. Compliance to the Annex 15 requirement allows the ATS authority to carry out the necessary assessment and put in the appropriate mitigation measures to ensure safety is not compromised. |  |
| Follow-up:                                                                                                                                                                                                                                                                              |  | <input checked="" type="checkbox"/> Required from States                                                                                                                                                                                                                                                                                                                                                       |  |
| When:                                                                                                                                                                                                                                                                                   |  | 3-Aug-18                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Status:                                                                                                                                                                                                                                                                                 |  | Draft to be adopted by Subgroup                                                                                                                                                                                                                                                                                                                                                                                |  |
| Who:                                                                                                                                                                                                                                                                                    |  | <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:                                                                                                                                                                                                          |  |

#### Aeronautical Information and Aeronautical Charts

2.12 Singapore provided observations on aeronautical charts provided by States compared to those provided by commercial chart providers. While charts made available by States in accordance with Annex 15 Chapter 4 were required to comply with the Standards and Recommended Practices (SARPS) in Annex 4 Aeronautical Charts, the charts provided by commercial chart providers were not subject to State regulatory oversight.

2.13 There had been occasions when Singapore AIS had received feedback from aircraft operators seeking clarification of information on aeronautical charts produced by commercial chart providers. In some instances, aircraft incidents had been attributed to discrepancies or lack of information in the charts used by pilots and aircraft operators. In most cases the commercially provided chart did not omit information provided by the AIS, but it was sometimes presented in a different format or layout, resulting in perceptions that a discrepancy existed between the commercially provided product and that provided by the AIS.

2.14 The meeting was informed of Australia's example, where commercial chart providers must be certified by the regulator, and the certification required that chart providers meet a requirement to include error notification and rectification processes, including the notification of errors and omissions by the chart provider to the AIS.

2.15 IATA agreed to take action to remind member airlines that feedback on omissions from or errors in commercial providers' charts should be communicated directly to the provider, rather than the AIS.

2.16 The meeting further discussed the relationship between commercial chart providers and the State AIS, noting that relationships were often established with a specific point of contact in the AIS. It was also mentioned that the AIS frequently had difficulty in getting a response from the originators of aeronautical data when an error or omission in data provided was detected. The Secretariat reminded the meeting that Annex 15 required that the Aeronautical Information Publication (AIP) of each State include contact details for the notification of errors and omissions, and that the use of personal email contacts may leave gaps in the feedback process. The meeting was further reminded that regulators were obliged to ensure the compliance of aeronautical data originators.

#### Regional AIM Transition Progress and Progress Reporting

2.17 The meeting was informed of AIM transition progress in the APAC Region, as reported to the ICAO Asia/Pacific Regional Office since AAITF/12 in June 2017. Progress was measured against the transition steps outlined in the ICAO Roadmap for Transition from AIS to AIM, was recorded in the AIM Transition Table, available on the Regional Office website at:

<http://www.icao.int/APAC/Pages/edocs.aspx>

2.18 The meeting was reminded of **Conclusion APANPIRG/22/2 – AIM Transition Table**, and of **Conclusion APANPIRG/25-15: Aeronautical Information Management (AIM) Transition Reporting** which, inter alia urged States to update the information in the AIM Transition Table at least once annually, by April 30 each year.

2.19 States that had provided no information at any time were:

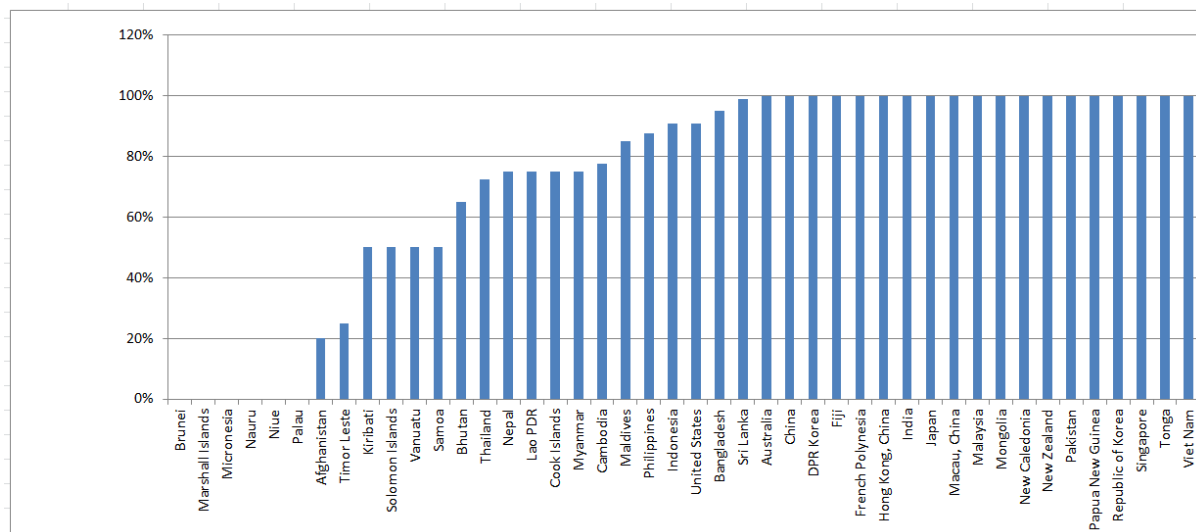
Brunei Darussalam, Marshall Islands, Micronesia, Nauru, Palau.

2.20 13 Administrations had provided updated information in the period since AAITF/12. This compared poorly with the AAITF/12 report of updated information on 22 Administrations, which included 16 direct reports and 6 reports received indirectly through other sources.

2.21 Administrations reporting progress since AAITF/12 were Australia, Bangladesh, DPR Korea, Hong Kong China, India, Indonesia Maldives, Nepal, Pakistan, Singapore, Sri Lanka, the United States of America, Viet Nam. The latest update of the AIM Transition Table is available on the ICAO Asia/Pacific Regional Office eDocuments web-page at:

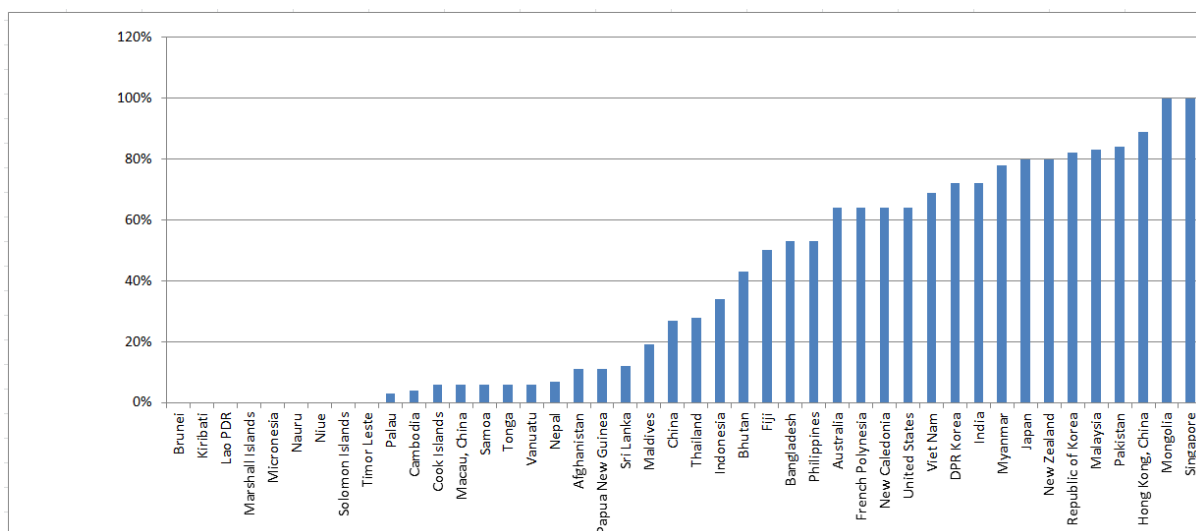
<https://www.icao.int/APAC/Pages/edocs.aspx>

2.22 **Figure 1** illustrates the overall Regional Implementation of Phase 1 of the Roadmap for Transition from AIS to AIM; approximately 73%, compared to 71% at AAITF/12. This indicates that there has been, in general region-wide terms, little further progress in the last year.



**Figure 1: Regional Phase 1 Implementation Progress.**

2.23 **Figure 2** illustrates the overall Regional Implementation of Phase 2 of the Roadmap for Transition from AIS to AIM – approximately 37%, compared to 34% at AAITF/12, reflecting minimal progress in region-wide terms.



**Figure 2: Regional Phase 2 Implementation Progress.**

2.24 Overall Regional implementation of Phases 1 and 2 of the Roadmap was approximately 48%, compared to approximately 44% at AAITF/12.

2.25 The meeting was again reminded that the implementation steps of Phase 1 of the Roadmap were consolidation steps, i.e. the SARPS for these four steps had been published in Annex 15 many years before the need for transition to AIM arose. The failure of many States to implement these fundamental requirements for the correct functioning of an AIS was a particular concern.

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Regional USOAP-Audited AIS/AIM Status Update

2.26 The Secretariat presented information on the known AIS/AIM compliance status of Asia/Pacific Administrations measured against the Universal Safety Oversight Audit Program (USOAP) protocol questions (PQs) related to AIS/AIM capability. Analysis in May 2018 of the results of 36 USOAP AIS and Charts-related PQs for the Asia/Pacific Region indicated that the overall Effective Implementation (EI) was 62%, which was a 3% increase compared with the analysis reported to AAITF/12.

2.27 The analysis indicated that the major areas of weakness were:

- AIS data quality and resolution - Annex 15 and 4;
- effective State oversight of service provision; and
- training of both inspectors and the staff that provide the AIS & CHARTS services.

Asia/Pacific Region ICARD Status and Procedures

2.28 ICAO provided an update on the International Codes and Route Designators (ICARD) application and participation by Asia/Pacific States, and on procedural issues related to the allocation of waypoint names for flight procedures and ATS routes.

2.29 ICARD is the sole global source of unique, pronounceable five-letter name codes (5LNCs) marking significant points (i.e. ATS route waypoints) not associated with the location of a radio-navigation aid. The purpose of ICARD is to ensure that the global allocation of 5LNC complies with Annex 11 *Air Traffic Services* sections 3.1 to 3.5.

2.30 In order to access 5-letter name codes through ICARD it is necessary for States to ensure that nominated persons are registered as ICARD\_5LNC\_PLANNERS for the State. The following States had no ICARD\_5LNC\_PLANNER registered: Marshall Islands, Micronesia, Palau.

2.31 The meeting was informed of ICAO State Letter AN 11/45.5-17/101, distributed in August 2017 requesting States to provide information on all 5LNCs published in AIP, in order to then commence registering all published 5LNCs in ICARD, and detailing the rules to be used in the global resolution of duplicated 5LNC. The meeting was informed that the global registration of all 5LNC was required, regardless of whether they were located in a terminal or en-route airspace environment, as was the global elimination of any and all duplicated 5LNC. It was noted that this would require significant effort by States and ICAO, and that States must ensure that appropriate safety management processes were applied.

2.32 In response to a query, the meeting was reminded that Annex 11 stipulated the significant points that must be marked by a 5LNC, summarized as being any significant point not marked by a radio navigation aid that ATC may need to use in clearances issued to aircraft. The design of instrument flight procedures included the identification of points determined by ATC for this purpose. Other points marked by alphanumeric codes, as specified in ICAO Doc 8168 *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS) were those that were not used in ATC-pilot communications for clearance purposes, and therefore did not need to be marked by a 5LNC.

Five-Letter Name Code Duplicates within 1,000 NM in APAC Region

2.33 The Secretariat provided information on the need for resolution of duplicated 5LNC, with the initial priority being applied to duplicates that were separated by less than 1,000 NM due to the increased risks involved. A list of such duplicates that required resolution action by APAC States is provided in **Attachment A**.

2.34 The meeting was informed that ICARD\_5LNC\_MANAGERS (i.e. ICAO Regional Offices) were coordinating with States concerned. States that were required to replace 5LNCs under the duplicate resolution rules specified in ICAO State Letter AN 11/45.5-17/101 must register replacement 5LNCs from ICARD. States were reminded that the management of 5LNC and updating of information in ICARD was not a one-time-only task, and that all States must comply with Annex 11 Chapter 2.15, Annex 11 Appendix 2 sections 1 and 3, and Annex 15 ENR 4.4 and ENR 3.

2.35 It was noted that the task of identifying duplicates was ongoing, and that States other than those listed may expect to be contacted by ICAO in due course. Duplicated 5LNC separated by more than 1,000 NM would also be addressed in the near future.

2.36 The meeting noted that, while AIS had a critical interest in the matter due to the need for AIP amendment, the AIS was not always responsible for the allocation of 5LNC. The Secretariat reminded participants of their obligation to report AAITF discussion back to their organization, and to ensure that AAITF outcomes were communicated to the appropriate organizations or sections in their State. ATM/SG/6 participants are also requested to ensure their organizations are fully aware of the work that must be undertaken to ensure the global uniqueness of 5LNC, and the impact upon ATC, AIS and other relevant parties.

Amended Annex 15 and New PANS-AIM

2.37 The meeting was provided with a brief update on progress of the amendment to Annex 15 and the new PANS-AIM. ICAO State Letter AN 2/2.1.1017/22, issued on 21 April 2017, circulated for comment by States a proposal for amendment the of Annex 15 Aeronautical Information Services and a new Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM) document, together with consequential amendments to a number of other publications.

2.38 ICAO State Letter AN 2/2.5-18/22, issued on 03 April 2018, announced the adoption of Amendment 40 to Annex 15 by the Council of ICAO. Amendment 40 to Annex 15 became effective on 16 July 2018, and applicable on 8 November 2018.

2.39 At the time of the meeting, the new PANS-AIM was expected to be approved by the Council of ICAO within the next few weeks. It was also expected that the amended ICAO Doc 8126 – AIS Manual, also planned for applicability on 8 November 2018, would be approved in the near term.

### Transition Planning for RNP Approach Chart Identification

2.40 The Secretariat presented information on ICAO’s new strategy for the transition of RNP APCH chart identification from RNAV to RNP, issued in Electronic Bulletin (EB) 2018/11 and Circular 353<sup>1</sup>, and arising from Amendment 6 to PANS-OPS Volume II. The information provided included a summary of RNP APCH implementation status in each State and proposed the development of regional and State transition plans according to AIS and aeronautical data service provider capacity.

2.41 ICAO Headquarters would coordinate the allocation of Regional transition slots, sequencing them with due consideration of the duration needed by the Region.

2.42 The Fifth Meeting of the Asia/Pacific Performance-Based Navigation (PBN) Implementation Coordination Group (PBNICG/5, Nadi, Fiji, 02 to 04 May 2018) had discussed this topic, and asked States to begin internal coordination on the State transition plan and to provide information on their situation including planned and published RNP APCH procedures and their desired time slot in the global and regional transition plan. A questionnaire in this regard was circulated in State Letter AP 051/18 (RSO) as the first step in formulating an Asia/Pacific Regional transition plan.

2.43 Stakeholders include State regulatory authorities, air navigation service providers, airspace users, training organizations, airport authorities, military service providers, charting houses, database providers, instrument procedure design organizations, regional operational and technical consultation/coordination groups, other regional agencies and organizations and adjoining ICAO regions.

2.44 Circular 353 includes a summary of the potential impact of key elements to be considered in transition (**Table 2**).

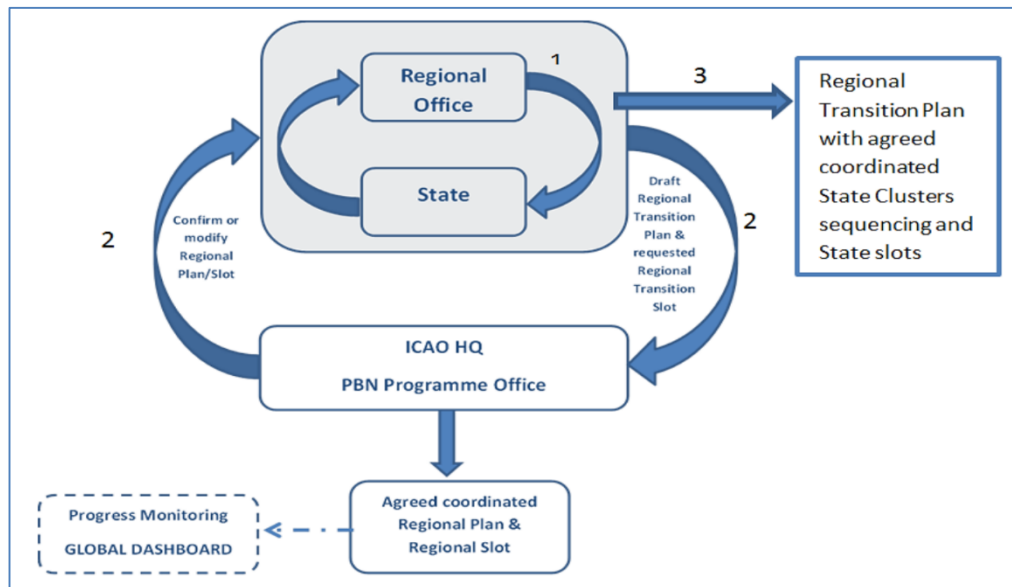
| Items                                    | Potential impact                                                                                                         |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Chart identification/PBN requirement box | (Re-) publication of charts in AIP, Possible changes to automation software                                              |
| Pilot procedures                         | Knowledge and training (e.g. pilot bulletins, simulator training, CBT)                                                   |
| ATC procedures (APP, TWR, FIS)           | Knowledge and training (e.g. ATCO bulletins and training) prior to chart change                                          |
| Procedure design software                | Software adaptation                                                                                                      |
| Charting house                           | Re-issue of charts closely coordinated between the State’s AIS and charting house. Possible software adaptation required |
| Aircraft flight manual (AFM)             | Amendment of AFM by air operators, if applicable. Regulator may have to issue clarification                              |

<sup>1</sup> Circular 353 – Transition Planning for Change to Instrument Flight Procedure Approach Chart Identification from RNAV to RNP provides guidance regarding the transition from area navigation (RNAV) global navigation satellite system (GNSS) RWY XX approach naming convention to Required Navigation Performance (RNP) RWY XX, in accordance with Amendment 6 to ICAO Doc 8168 – *Procedures for Air Navigation Services – Aircraft Operations* (PANS-OPS) Volume II. The Circular is currently available in unedited form for advance notification, and is expected to be finalized in the near future.

| Items                                                                  | Potential impact                                                                                                                                                    |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Changes to on board the multi-function control and display unit (MCDU) | Possible FMS changes to reflect the change from RNAV to RNP, which cause economic impact. If not changed, discrepancy between display and ATC clearance will happen |

**Table 2:** Potential Impact from the Transition of PBN APCH Chart Identification

2.45 **Figure 3** illustrated the global, regional and State coordination process.



**Figure 3:** Global, regional and State RNP APCH Chart Transition Coordination Process

2.46 The meeting was informed that a brief survey had revealed there were 1364 GNSS-based approach procedures implemented by 39 Asia/Pacific Administrations, for approaches to 714 aerodromes. Of these, 1207 had chart identifications RNAV (GNSS), RNAV (GPS), GPS RNAV(GNSS) or GPS, and 131 procedures have RNAV(RNP) chart identification. Each of these would need to be transitioned to the new chart identification RNP RWY XX by 30 November 2022.

2.47 The meeting was informed of **Draft Conclusion PBNICG 05/04 – Transition Planning for RNP APCH Chart Identification from RNAV to RNP**, which would be considered by the Communications, Navigation and Surveillance Sub-Group of APANPIRG (CNS SG) at its next meeting in July 2018.

2.48 In discussion, the meeting was informed that the capacity of one major aeronautical navigational data provider present to change the chart identifiers was in the order of 180 charts per AIRAC cycle. None of the States present at the meeting were able to provide information on the capacity of the State AIS charting services to make bulk amendments to approach chart identifications, or on which States may form clusters for the purpose of common transition planning. The active participation of all States in the transition planning activity was strongly recommended.

2.49 In response to a query on whether the change was simply a chart identifier change with no operational impact, the meeting was informed that while this was the original intent, the operational ramifications were dependent on State regulations. In States where aircraft system alerts to the pilot of loss of or reduction in navigational integrity, for example loss of Receiver Autonomous Integrity Monitoring (RAIM), were mandated, the transition to the new chart identifiers may exclude some aircraft from the use of the procedure, with a resultant impact on both flight operations and ATC.

2.50 ATM/SG/6 is invited to note the demands that the RNP APCH chart transition will place on stakeholders identified in **Table 2**, above, and others.

#### NOTAM for Flexible Use of Airspace

2.51 Japan presented a proposal for sample NOTAM for the Flexible Use of Airspace (FUA) with a view to harmonization within the Asia/Pacific Region. The paper responded to the outcomes of ATM/SG/5, which proposed that States that issue such NOTAM engage in offline coordination and present a proposal to AAITF/13. The matter is discussed under a separate paper submitted to ATM/SG/6.

#### Transition from AIS to AIM – Hong Kong, China (WP/16)

2.52 Hong Kong, China provided an update on the progress of AIS to AIM transition, and highlighted three areas where challenges had been identified. These included ICARD and the resolution of duplicated 5LNC, the production of electronic AIP (eAIP), and issues relating to Phase 3 of the ICAO Roadmap for Transition from AIS to AIM Information Management, particularly with reference to AIXM version interoperability, interoperability with meteorological products (AIM Transition Roadmap Step P-19), electronic aeronautical charts (P-20), and digital NOTAMs (P21).

2.53 In this regard, Hong Kong, China urged ICAO to provide guidance on:

- the establishment of eAIP implementation support teams, training and data handling, provide guidance and coordinate with system suppliers to address the incompatibility between AIXM versions 4.5 and 5.1; and
- provide guidance material on aeronautical information exchange and on the implementation of Roadmap Phase 3 steps P-19, P-20 and P-21.

2.54 In response to the specific action items proposed, the meeting was informed that:

- guidance on the establishment of an eAIP implementation support team could be taken into consideration by the AIM SG, but further information would be needed on what type of guidance was needed;
- The Aeronautical Information Exchange Model (AIXM) was not a standard, and was not an ICAO product. Any issues relating to AIXM version compatibility would need to be conveyed to the AIXM Change Control Board (CCB);
- Volume 4 of the updated Doc 8126 would be dedicated to aeronautical information exchange, and serve as a means of compliance with the provisions of PANS-AIM, including examples of rules for interoperability, business rules and coding rules;
- AIM SG had decided at its April 2018 meeting to form an expert group to develop a new Roadmap for Transition from AIS to AIM that was aligned with the latest version of the Global Air Navigation Plan (GANP) noting that Phase 3 was the

section of the roadmap that most required significant update.

2.55 The meeting was also reminded of **Conclusion APANPIRG/28/9: AIM-specific Working Group to Finalize ICAO Guidance Material**, drafted by AAITF/12, which had contributed to the decision to form the AIM SG, tasked to *inter alia* accelerate the completion of AIS/AIM guidance documents.

2.56 The meeting also discussed the need for finalization of guidance material for electronic terrain and obstacle databases (eTOD), noting that the current version of Doc 9881 *Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information* remained subject to disclaimer notifying users that it was an unedited advance version approved in principle by the Secretary General of ICAO, but may still be subject to alteration. The implementation of eTOD was presenting a considerable challenge to States. This matter was followed up by the Secretariat, with the following response received post-meeting from ICAO Headquarters:

*The whole manual needs to be revised and updated. This work has been included in the AIM project 9<sup>1</sup>, on digital data sets.*

2.57 The meeting agreed to the following Draft Conclusion:

| Draft Conclusion AAITF/13-2: ICAO Action to Provide Support and Guidance Material to Facilitate AIS – AIM Transition                                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| What: That, ICAO is urged to:<br>1. provide guidance on the best practice on the establishment of a support team, training and handling of data inconsistencies to facilitate digital eAIP implementation; and<br>2. provide guidance on best practices for implementing AIM Roadmap Phase 3 Steps P-19, P-20 and P-21. |  | Expected impact:<br><input type="checkbox"/> Political / Global<br><input type="checkbox"/> Inter-regional<br><input type="checkbox"/> Economic<br><input type="checkbox"/> Environmental<br><input checked="" type="checkbox"/> Ops/Technical |  |
| Why: To respond to State concerns on the lack of guidance material for aeronautical information exchange and the need for advice on best practices in implementing AIM Roadmap Phase 3 transition steps.                                                                                                                |  | Follow-up: <input checked="" type="checkbox"/> Required from States                                                                                                                                                                            |  |
| When: 3-Aug-18                                                                                                                                                                                                                                                                                                          |  | Status: Draft to be adopted by Subgroup                                                                                                                                                                                                        |  |
| Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input checked="" type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:                                                                                                   |  |                                                                                                                                                                                                                                                |  |

#### NOTAM Containing Information of Permanent Validity (WP/5)

2.58 Viet Nam provided information on the continuing existence of NOTAM containing information of permanent validity that had not been transferred to AIP or AIP Supplement (AIP SUP) in a timely manner, overloading pilots with too-long Pre-flight Information Bulletin (PIB). The relevant SARPS in Annex 15 and guidance provided in Doc 8126 *AIS Manual* were highlighted, as was the guidance provided in the Guidance Manual for AIS in the Asia/Pacific Region.

2.59 Examples provided including a NOTAM with permanent validity that was issued in 2011, and a NOTAM with permanent validity informing of the deferment of airport works until a date in 2015, that remained current. The meeting was informed that, for instance, a PIB (route-type bulleting) for a flight from Ho Chi Minh City/Tan Son Nhat International Airport to London/Gatwick

<sup>1</sup> AIM projects to be undertaken by the AIM Steering Group were in the process of being finalized.

consisted of 100 pages including more than 700 NOTAMs, many of permanent validity and that had been current for up to four years.

2.60 Any attempts by Aerodrome Reporting Office (ARO) or AIS staff to create PIB excluding long term permanent NOTAM incurred safety risks. The large size of the PIB would result in the risk of pilots overlooking relevant information.

2.61 Viet Nam's NOTAM Office (NOF) had contacted the States concerned, but had received information that was not cooperative or not informative, or had not received any response at all.

2.62 IFAIMA informed the meeting that the new PANS-AIM included provision for permanent information in NOTAM to be included in AIP within three months from the date of issue of the NOTAM, and that temporary information of long duration be included in AIP SUP within three months from the date of issue.

| <b>Draft Conclusion AAITF/13-3: Management of NOTAMs</b> |                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |                                                                                                                                                                                                                            |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What:                                                    | That, States are urged to take immediate action to reduce the large numbers of permanent, long duration NOTAMs by:<br>1. conducting a full review of all NOTAMs issued by the State;<br>2. expediting the transfer of valid permanent NOTAM information into AIP;<br>3. expediting the transfer of valid temporary NOTAM information of long duration into AIP SUP; and<br>4. cancelling the NOTAMs accordingly. | Expected impact: | <input type="checkbox"/> Political / Global<br><input type="checkbox"/> Inter-regional<br><input type="checkbox"/> Economic<br><input type="checkbox"/> Environmental<br><input checked="" type="checkbox"/> Ops/Technical |
| Why:                                                     | To reduce the risks associated with the proliferation of PERM NOTAM and temporary NOTAM of long duration that have not yet been migrated into AIP.                                                                                                                                                                                                                                                               | Follow-up:       | <input checked="" type="checkbox"/> Required from States                                                                                                                                                                   |
| When:                                                    | 3-Aug-18                                                                                                                                                                                                                                                                                                                                                                                                         | Status:          | Draft to be adopted by Subgroup                                                                                                                                                                                            |
| Who:                                                     | <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:                                                                                                                                                                                                            |                  |                                                                                                                                                                                                                            |

2.63 The meeting agreed that periodic sampling should be undertaken by AAITF, with a view to direct engagement with States responsible for permanent, long duration NOTAM and subsequent reporting to APANPIRG through the Air Navigation Deficiencies list.

#### Regional Plan for Collaborative AIM

2.64 The Draft Regional Plan for Collaborative AIM was presented to the meeting for discussion and review. The meeting was reminded that AAITF had agreed, under **Decision AAITF/11/4 – Regional Collaborative AIM Plan**, to develop a Regional Plan for Collaborative AIM.

2.65 It was agreed by AAITF/13 that Version 1 of the Asia/Pacific Regional Plan for Collaborative AIM be finalized, noting that the information included in the document had been rationalized to take account of the recently increased effort to finalize global guidance, and to avoid any inadvertent divergence.

2.66 The ATM/SG/6 meeting is invited to note that, in common with other Regional plans such as the Regional Framework for Collaborative ATFM, the Regional SAR Plan, and the Regional

ATM Contingency Plan, the Collaborative AIM Plan includes performance expectations aligned with and supporting the performance objectives of the Asia/Pacific Seamless ATM Plan.

2.67 The AAITF/13 meeting agreed to the following Draft Conclusion:

| <b>Draft Conclusion AAITF/13-4: Asia/Pacific Regional Plan for Collaborative AIM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>What:</b> That,<br>1. the Asia/Pacific Regional Plan for Collaborative AIM Version 1.0 at <b>Attachment B</b> , be adopted and uploaded to the ICAO Asia/Pacific Regional Office eDocuments web-page;<br>2. the Regional AIM Implementation Status Reporting Form, provided at Appendix D to the AIM Plan, be separately uploaded to the Regional Office eDocuments web-page; and<br>3. Asia/Pacific Administrations utilize the Regional AIM Implementation Status Reporting Form to report their AIM implementation status at least once annually, by not later than 30 April each year. |  | <b>Expected impact:</b><br><input type="checkbox"/> Political / Global<br><input type="checkbox"/> Inter-regional<br><input type="checkbox"/> Economic<br><input type="checkbox"/> Environmental<br><input checked="" type="checkbox"/> Ops/Technical |  |
| <b>Why:</b> To provide a Regional AIM implementation plan together with guidance on priority aspects of AIM implementation, and information on processes for the management of Regional aeronautical data.                                                                                                                                                                                                                                                                                                                                                                                    |  | <b>Follow-up:</b> <input type="checkbox"/> Required from States                                                                                                                                                                                       |  |
| <b>When:</b> 3-Aug-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>Status:</b> Draft to be adopted by Subgroup                                                                                                                                                                                                        |  |
| <b>Who:</b> <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                       |  |

Summary of Information Papers Provided to the AAITF/13 Meeting

2.68 Information papers provided to the meeting are summarized as follows:

- Implementation of WGS-84 Reference Data Frame in Thailand;
- AIS Quality Management System Implementation in Thailand;
- Implementation of Quality Management System in AIS Field in Indonesia;
- AIM Implementation Myanmar – Completion of Transition;
- AIS to AIM Update – Philippines;
- Thailand AIS Regulatory Framework;
- Lao PDR Progress in Implementing AIS – AIM;
- AIS to AIM Transition Status Update – Indonesia;
- Action by India to Update ICARD Database and Resolution of Duplicated 5LNCs;
- DPR Korea AIM Implementation Progress (six IPs)

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) note the continuing poor progress in AIM transition, particularly as related to Phase 1 of the Roadmap for Transition from AIS to AIM (Consolidation phase);
- c) note the major areas of weakness in AIS/AIM revealed in USOAP audit results;
- d) ensure that all relevant sections of AIS and ATM organizations actively participate in the global project to register all 5LNC in ICARD and resolve all duplicated 5LNC;
- e) note the amended Annex 15, new PANS-AIM and expected amended AIS Manual, applicable from 8 November 2018;
- f) ensure that all stakeholders in the transition of RNP Approach Chart identification are fully engaged, and that the questionnaire circulated by State Letter is completed and returned promptly to the Regional Office;
- g) discuss the **Draft Conclusions**:
  - i) **AAITF/13-1 – Advance Notification of Activities Requiring the Activation of Special Use Airspace or Temporary Airspace Restrictions;**
  - ii) **AAITF/13-2: ICAO to Provide Support and Guidance Material to Facilitate AIS – AIM Transition;**
  - iii) **AAITF/13-3: Management of NOTAMs;**
  - iv) **AAITF/13-4: Asia/Pacific Regional Plan for Collaborative AIM;** and
- h) discuss any relevant matters as appropriate.

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**ATTACHMENT A:** List of 5LNCs Separated by Less than 1000 NM (as known at 25 May 2018)

Action required by APAC Administrations highlighted **yellow**

| 5LNC  | Published in AIP                                                                                                                                                | Registered in ICARD                     | Priority Administrations         |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------|
| ALPHA | China<br>India<br>Italy<br>Lao People's Democratic Republic<br>Russian Federation<br>Spain<br>Turkey<br>United Kingdom (2)<br>UK (Falkland Islands),<br>Vanuatu | Lao People's Democratic Republic        | Lao People's Democratic Republic |
| ANGEL | Colombia/Ecuador (FIR boundary)<br>Honduras (COCESNA)<br>Japan<br>Philippines<br>Thailand                                                                       | Colombia/Ecuador,<br>Honduras (COCESNA) | Colombia/Ecuador                 |
| AREMA | Indonesia<br>Kenya/United Republic of Tanzania (FIR boundary)<br>Mali<br>Liberia                                                                                | Mali                                    | Mali                             |
| BACON | Brazil<br>China<br>Japan<br>Philippines<br>United States of America                                                                                             | Brazil,<br>United States of America     | United States of America         |
| BAKER | Australia<br>China<br>Hong Kong SAR of China<br>United Kingdom                                                                                                  | United Kingdom                          | United Kingdom                   |
| BEACH | Fiji<br>Japan<br>Republic of Korea<br>United States of America                                                                                                  | Fiji,<br>United States of America       | United States of America         |
| BISON | Australia<br>China<br>Indonesia<br>United States of America<br>Viet Nam                                                                                         | United States of America                | United States of America         |
| BRAVO | Brazil<br>China<br>India<br>Italy<br>Syrian Arab Republic<br>United Kingdom<br>United Kingdom (Falkland Islands)                                                | Brazil                                  | Brazil                           |

| 5LNC  | Published in AIP                                                                                                                             | Registered in ICARD                         | Priority Administrations |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------|
| CORAL | Australia<br>Brazil<br>China<br>Hong Kong SAR of China<br>Cuba<br>France (French Polynesia)<br>Honduras (COCESNA)<br>Japan<br>Mexico         | Brazil, Bermuda (UK),<br>Honduras (COCESNA) | Brazil                   |
| CHALI | China<br>Hong Kong SAR of China<br>United States of America                                                                                  | United States of America                    | United States of America |
| CRANE | Australia<br>Brazil<br>Japan<br>Republic of Korea<br>United States of America                                                                | United States of America, Brazil            | United States of America |
| DECOY | China<br>Republic of Korea<br>United States of America                                                                                       | United States of America                    | United States of America |
| DELTA | Bhutan<br>India<br>Italy<br>Japan<br>Lao People's Democratic Republic<br>Liberia<br>Sri Lanka<br>Suriname<br>Syrian Arab Republic<br>Vanuatu | Suriname                                    | Suriname                 |
| GARZA | Costa Rica (COCESNA)<br>Republic of Korea<br>Peru<br>United States of America<br>Venezuela                                                   | United States of America                    | United States of America |
| HANKY | Australia<br>China<br>Republic of Korea<br>United Kingdom<br>United States of America                                                        | United States of America,<br>United Kingdom | United Kingdom           |
| HOTEL | Canada<br>China<br>Thailand<br>Viet Nam                                                                                                      | Canada                                      | Canada                   |
| IKUMI | Japan<br>Malaysia<br>Singapore                                                                                                               | Malaysia                                    | Malaysia                 |

| 5LNC  | Published in AIP                                                                                                       | Registered in ICARD                                                           | Priority Administrations                                |
|-------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------|
| JEWEL | Australia<br>Japan<br>Republic of Korea                                                                                | Japan                                                                         | Japan                                                   |
| KALNA | India<br>Japan<br>Pakistan                                                                                             | Japan                                                                         | Japan                                                   |
| KARAN | China<br>Indonesia<br>Viet Nam                                                                                         | Viet Nam                                                                      | Viet Nam                                                |
| KIRIN | China<br>Japan<br>Thailand                                                                                             | NO                                                                            | To be determined by the 5LNC Duplicate Resolution Rules |
| KOLOK | Central African Republic<br>Congo<br>Thailand                                                                          | NO                                                                            | To be determined by the 5LNC Duplicate Resolution Rules |
| LAGER | China<br>Japan<br>Republic of Korea<br>United Kingdom                                                                  | United Kingdom                                                                | United Kingdom                                          |
| LEMON | Hong Kong SAR of China<br>Italy<br>Japan<br>Republic of Korea<br>Thailand<br>United States of America                  | United States of America                                                      | United States of America                                |
| LENTO | China<br>Japan<br>Thailand                                                                                             | Japan                                                                         | Japan                                                   |
| LUCAS | Australia<br>Brazil<br>China<br>Costa Rica<br>Mexico<br>Netherlands Antilles (Netherlands)<br>Philippines<br>Venezuela | Costa Rica,<br>Venezuela,<br>Brazil<br>Netherlands Antilles (the Netherlands) | Venezuela                                               |
| MAGDA | Australia<br>Bolivia<br>Brazil                                                                                         | Brazil                                                                        | Brazil                                                  |
| MALAY | China<br>Myanmar<br>Philippines<br>United States of America<br>Viet Nam                                                | United States of America                                                      | United States of America                                |
| MANGA | Colombia<br>New Zealand<br>Philippines<br>Viet Nam                                                                     | Colombia                                                                      | Colombia                                                |

| 5LNC  | Published in AIP                                                                             | Registered in ICARD                                           | Priority Administrations                                |
|-------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------|
| MARIA | Argentina/Bolivia (FIR boundary)<br>Brazil<br>Japan<br>Thailand<br>United States of America  | United States of America,<br>Argentina/Bolivia (FIR boundary) | United States of America                                |
| MAZDA | China<br>Japan<br>United States of America                                                   | United States of America                                      | United States of America                                |
| MONKY | Japan<br>Republic of Korea<br>United States of America                                       | United States of America                                      | United States of America                                |
| MONTA | Hong Kong SAR of China<br>Japan<br>Philippines                                               | NO                                                            | To be determined by the 5LNC Duplicate Resolution Rules |
| NORAN | Jamaica<br>Japan<br>Republic of Korea                                                        | Reserved in block for Jamaica                                 | To be determined by the 5LNC Duplicate Resolution Rules |
| ORION | China<br>Italy<br>Japan<br>Peru<br>Philippines<br>Spain<br>Tonga<br>United States of America | United States of America<br>Peru<br>Spain                     | United States of America                                |
| OLIVE | China<br>Japan<br>Thailand<br>United Kingdom<br>United States of America (American Samoa)    | American Samoa,<br>United Kingdom                             | United Kingdom                                          |
| PANDA | Brazil<br>China<br>Indonesia<br>Japan<br>Philippines<br>United States of America             | United States of America                                      | United States of America                                |
| PANDI | Brazil,<br>Indonesia,<br>Indonesia/Viet Nam (FIR boundary)                                   | Brazil                                                        | Brazil                                                  |
| PAROT | India (2)<br>Indonesia<br>Iran (Islamic Republic of)<br>Republic of Korea                    | Iran (Islamic Republic of), Republic of Korea                 | Iran (Islamic Republic of)                              |
| PEARL | China<br>Japan<br>United States of America                                                   | United States of America                                      | United States of America                                |
| PRADA | Canada<br>Japan<br>Republic of Korea<br>Spain                                                | Canada                                                        | Canada                                                  |

| 5LNC  | Published in AIP                                                                                 | Registered in ICARD                      | Priority Administrations |
|-------|--------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------|
| RASKI | India/Oman (FIR boundary)<br>Iraq<br>Saudi Arabia                                                | India/Oman                               | India/Oman               |
| ROBIN | Australia<br>China<br>Hong Kong SAR of China<br>Japan<br>Mexico                                  | Japan                                    | Japan                    |
| ROCKY | China<br>Hong Kong SAR of China<br>Japan<br>New Zealand<br>United States of America<br>Venezuela | United States of America                 | United States of America |
| SAMBO | Cambodia<br>Japan<br>Viet Nam                                                                    | Viet Nam                                 | Viet Nam                 |
| SANDY | Australia<br>China<br>New Zealand<br>Philippines<br>Republic of Korea<br>United Kingdom          | New Zealand                              | New Zealand              |
| SCOTT | Australia<br>Japan<br>Republic of Korea<br>United States of America                              | Australia                                | Australia                |
| SEPIA | China<br>Japan<br>Republic of Korea                                                              | Japan                                    | Japan                    |
| SERVE | Australia<br>China<br>Japan<br>United States of America                                          | United States of America                 | United States of America |
| SHELY | Hong Kong SAR of China<br>Japan,<br>Philippines<br>United States                                 | United States of America                 | United States of America |
| SHINE | Japan<br>Republic of Korea<br>United states of America                                           | United States of America                 | United States of America |
| SIMEL | Brazil<br>Indonesia<br>Peru                                                                      | Brazil                                   | Brazil                   |
| SKATE | Hong Kong SAR of China<br>Libya<br>Philippines<br>United States of America                       | Philippines,<br>United States of America | United States of America |

| 5LNC  | Published in AIP                                                                                                                     | Registered in ICARD                                                                            | Priority Administrations                                |
|-------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| SNAKE | Japan<br>Republic of Korea<br>United states of America                                                                               | United States of America                                                                       | United States of America                                |
| SPICA | Canada<br>China<br>Japan                                                                                                             | Canada                                                                                         | Canada                                                  |
| STELA | Hong Kong SAR of China<br>Japan<br>Russian Federation<br>United States of America                                                    | United States of America,<br>Russian Federation                                                | Russian Federation                                      |
| SUNNY | Australia<br>Japan<br>Republic of Korea<br>United States of America                                                                  | United States of America                                                                       | United States of America                                |
| TAMBA | Indonesia (2)<br>Japan<br>Liberia<br>Mexico                                                                                          | Mexico                                                                                         | Mexico                                                  |
| TANGO | India<br>Lao People's Democratic Republic<br>Pakistan<br>Spain<br>Syrian Arab Republic<br>Thailand<br>Viet Nam                       | Spain, Canada                                                                                  | Spain                                                   |
| TANON | Cameroon<br>Nigeria<br>Thailand                                                                                                      | Cameroon                                                                                       | Cameroon                                                |
| THARA | Cambodia<br>Nepal<br>Thailand                                                                                                        | NO                                                                                             | To be determined by the 5LNC Duplicate Resolution Rules |
| TIGER | Japan<br>Lao People's Democratic Republic<br>Pakistan/India (FIR boundary)<br>Thailand<br>United Kingdom<br>United States of America | Thailand,<br>Pakistan/<br>India (FIR boundary),<br>United Kingdom,<br>United States of America | United Kingdom                                          |
| VARIN | Cambodia<br>Thailand<br>United States of America                                                                                     | NO                                                                                             | To be determined by the 5LNC Duplicate Resolution Rules |
| WHITE | Canada<br>Japan<br>United States of America,                                                                                         | Canada,<br>United States of America                                                            | United States of America                                |
| WOODY | Australia<br>Belgium/Netherlands (FIR boundary)<br>China<br>Japan                                                                    | Belgium/Netherlands                                                                            | Belgium/Netherlands                                     |

# INTERNATIONAL CIVIL AVIATION ORGANIZATION



## ASIA/PACIFIC REGIONAL PLAN FOR COLLABORATIVE AERONAUTICAL INFORMATION MANAGEMENT

Version 1.0 August, 2018

This Plan was developed by the Asia/Pacific AIS-AIM Implementation Task Force  
(AAITF)

Approved by the ATM Sub-Group of APANPIRG (ATM/SG/6) and published by the  
ICAO Asia and Pacific Office, Bangkok

Asia/Pacific Plan for Collaborative AIM

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**CONTENTS**

|                                                                                         |           |
|-----------------------------------------------------------------------------------------|-----------|
| <b>SCOPE OF THE PLAN .....</b>                                                          | <b>1</b>  |
| <b>PLAN OBJECTIVES .....</b>                                                            | <b>5</b>  |
| <b>EXECUTIVE SUMMARY .....</b>                                                          | <b>6</b>  |
| <b>ABBREVIATIONS AND ACRONYMS.....</b>                                                  | <b>8</b>  |
| <b>BACKGROUND INFORMATION .....</b>                                                     | <b>11</b> |
| Interim AIM Transition Guidance .....                                                   | 13        |
| AIM Information Sharing Website .....                                                   | 13        |
| Quality Management Guidance.....                                                        | 13        |
| Selection and Training Guidelines for AIS .....                                         | 14        |
| Operating Procedures for AIS Dynamic Data (OPADD).....                                  | 14        |
| Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services..... | 14        |
| ICAO Location Indicators.....                                                           | 14        |
| International Codes and Routes Designators.....                                         | 15        |
| Implementation Status Monitoring.....                                                   | 15        |
| <b>CURRENT SITUATION .....</b>                                                          | <b>16</b> |
| <b>PERFORMANCE IMPROVEMENT PLAN.....</b>                                                | <b>20</b> |

Asia/Pacific Plan for Collaborative AIM

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**LIST OF APPENDICES**

|             |                                                                    |     |
|-------------|--------------------------------------------------------------------|-----|
| Appendix A: | APAC Regional AIM Principles .....                                 | A-1 |
| Appendix B: | Template: Formal Agreements between Data Originators and AIS ..... | B-1 |
| Appendix C: | ICARD Procedures .....                                             | C-1 |
| Appendix D: | Implementation Status Reporting Form .....                         | D-1 |
|             | .....                                                              |     |

## Asia/Pacific Plan for Collaborative AIM

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### SCOPE OF THE PLAN

#### Asia/Pacific Regional AIM Planning and Guidance

1.1 Asia/Pacific (APAC) Regional requirements and existing guidance material for aeronautical information management (AIM) are found in the following documents:

- *Asia/Pacific Air Navigation Plan*, (APAC ANP) providing agreed regional requirements considered to be the minimum necessary for effective planning and implementation of Aeronautical Information Services (AIS) and AIM.
- *Asia/Pacific Seamless ATM Plan*, providing background information, analyses and performance objectives to facilitate seamless ATM operations in the APAC Region; and
- *Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region*, providing guidance on AIS quality management systems, AIS Training and Competency, guidance for priority AIM transition steps, and the Asia/Pacific Region Operating Procedures for Aeronautical Dynamic Data (OPADD).

*Note: The APAC ANP, Seamless ATM Plan and Guidance Manual for AIS in the Asia/Pacific Region are available on the ICAO APAC Regional Office eDocuments web-page.*

#### Asia/Pacific Air Navigation Plan

1.2 The Asia/Pacific Air Navigation Plan (APAC ANP) provides for the planning and implementation of air navigation systems, in accordance with the agreed global and regional planning framework. They are developed to meet those needs of specific areas not covered in the worldwide provisions. The development and maintenance of the ANP is undertaken by the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) with the assistance of the ICAO Secretariat.

1.3 The ANPs are used as a repository Document for the assignment of responsibilities to States for the provision of air navigation facilities and services within a specified area in accordance with Article 28 of the *Convention on International Civil Aviation* (Doc 7300), and contain requirements related to the facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.4 The APAC ANP Volume 1 includes general regional requirements for States relating to the provision of aeronautical data and aeronautical information within their territory and those areas over the high seas for which it is responsible for the provision of air traffic services.

1.5 APAC ANP Volume II includes dynamic plan elements related to the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services, and mandatory requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.6 APAC ANP Volume II Part VII assigns responsibility for the provision of AIS/AIM facilities and services in the Asia/Pacific Region, and for the production of sheets of the World Aeronautical Chart or Aeronautical Chart. It also includes the following specific regional requirements, proposed by AAITF, agreed by APANPIRG and formalized by regional air navigation agreement:

## Asia/Pacific Plan for Collaborative AIM

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### Volume II Part VII Section 3.

- 3.1 The priority regional requirements for AIM implementation are:
- a) Establishment of AIS either as a separate entity within or, ideally, separated from the civil aviation administration in accordance with the guidance provided in ICAO Doc 8126 – AIS Manual Chapter 3.
  - b) Implementation of Quality Management Systems for aeronautical information;
  - c) Establishment of formal agreements between AIS providers and aeronautical data originators specifying the content, quality, maintenance and timing of provision of aeronautical data that is required to be promulgated in AIP, and the quality management process that shall be applied.
  - d) Implementation of internet-accessible electronic AIP generated from a digital database of aeronautical information.

*Note: some existing aeronautical information products may not be suitable for migration into digital datasets.*

- e) The taking of all necessary measures to develop and implement AIM training programs for AIS personnel, including training in digital data management, and end-to-end quality management processes.
- f) Provision of full access to the relevant ICAO Annexes and Documents to all personnel having responsibility for the origination, reception, management and/or distribution of aeronautical information and aeronautical data.

1.7 The APAC ANP is available on the ICAO Asia/Pacific Regional Office eDocuments web-page.

### Asia/Pacific Plan for Collaborative AIM

1.8 The 11<sup>th</sup> Meeting of the Asia/Pacific Region AIS-AIM Implementation Task Force (AAITF/11, Bangkok, Thailand 05 to 09 June 2017), identified a near term objective to review and update the quality management guidance and sample quality manual provided in the *Guidance Manual for AIS in the Asia/Pacific Region*. It was noted that while the current information provided in the Guidance Manual remained relevant and valuable to the region, there was a need for the information to be updated to take into account the transition to AIM.

1.9 Following AAITF/11, ICAO established the Aeronautical Information Management Steering Group (AIM SG), to support global implementation of AIM and to accelerate the development and finalization of guidance material including *inter alia* the new quality management manual and AIM training manual.

## Asia/Pacific Plan for Collaborative AIM

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1.10 This document, the Asia/Pacific Plan for Collaborative AIM (the AIM Plan), is intended to provide information, guidance and regional performance objectives supporting improvement of AIS and the transition to AIM. The document is not intended to duplicate or pre-empt guidance that will become available in documents developed by AIM SG.

### AIM Plan Structure

1.11 The AIM Plan forms part of a suite of part of a suite of global and regional air navigation planning documents relevant to the Asia/Pacific Region.

1.12 Global vision and strategy perspectives are provided by the *Global ATM Operational Concept* (Doc 9854), *Global Air Navigation Plan* (GANP, Doc 9750), and *Global Aviation Safety Plan* (GASP, Doc 10004). The GANP includes the Aviation System Block Upgrade (ASBU) framework, its Modules and its associated technology Roadmaps.

1.13 Beneath this level is regional planning primarily provided by the *Asia/Pacific Basic Air Navigation Plan* and the *Asia/Pacific Seamless ATM Plan* which, together with its contributory documents, including this Plan, define goals and the means of meeting State planning objectives.

1.14 The AIM Plan includes background information and general guidance, analysis of the current status of AIS and AIM implementation in the Asia/Pacific Region, and a performance improvement plan. The plan also provides a central repository for information and procedures relating to items of aeronautical information coordinated between States and ICAO, including Proposals for Amendment (PfAs) to the Regional Air Navigation Plan, allocation and implementation of ATS routes that form part of the regional network of ATS routes, registration of 5-letter name codes identifying significant points, ICAO location indicators, and 3-letter and radiotelephony designators for aircraft operating agencies.

### Performance Improvement Plan

1.15 The performance objectives of the Plan are expected to be implemented in phases aligned, where practicable, with those of the Seamless ATM Plan. Having considered a range of performance expectations including those relating ICAO Standards and Recommended Practices (SARPS) that have been applicable for many years, Regional AIM Capability is expected to be implemented in the following phases:

- Phase I, expected to be implemented immediately;
- Phase II, expected to be implemented by 7 November 2019, and
- Phase III, expected to be implemented by 1 December 2022.

1.16 Except where required under State obligations to implement SARPS and relevant regional requirements communicated in the ANP, the phases and performance expectations are not binding any State, but should be considered as a planning framework. The Plan itself is therefore guidance material.

1.17 It is important to note that the AIM Plan's commencement dates are planning targets, and should not be treated as 'hard' implementation dates. However, States should consider the impact of not achieving target implementation dates on the required improvement in the safety and efficiency of international aviation in the region.

Asia/Pacific Plan for Collaborative AIM

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Review

1.18 AAITF noted the adoption by the Council of ICAO of Amendment 40 to Annex 15 – Aeronautical Information Services, the approval of Doc 10066 – PANS-AIM and the expected approval of the revised Doc 8126 AIS Manual, all applicable from 08 November 2018, and the work plan of the AIM SG for development and updating of global guidance material. It was determined that in this fluid environment the Plan would require regular updating to keep current with aviation system changes.

1.19 It is therefore intended that AAITF conducts a complete review of the Plan in 2019, and thence every three years, in alignment with the update cycle of the Seamless ATM Plan. Reviews should examination of relevant new or amended ICAO Annexes, PANS and guidance material to ensure the minimization of duplication, and alignment with global direction.

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## Asia/Pacific Plan for Collaborative AIM

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### PLAN OBJECTIVES

#### Objective of the Plan

2.1 The objective of the Plan is to facilitate the improvement and harmonization of AIS in the APAC Region, and the harmonized implementation of interoperable AIM systems.

2.2 The Plan provides a framework for a transition to a collaborative regional AIM environment, in order to meet current and future global and regional performance requirements.

#### Guidance for the Plan

2.3 The Plan is neither isolated from, nor conflicts with, other global and regional plans or strategies. It takes the availability of the following into account:

##### *Global and Regional Framework*

- Doc 9750 - Global Air Navigation Plan
- Doc 10004 - Global Aviation Safety Plan
- Asia/Pacific Regional Air Navigation Plan
- Asia/Pacific Seamless ATM Plan (Version 2.0, September 2016)
- Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region (endorsed by APANPIRG, First Edition - 2002)

##### *Air Navigation Services*

- Annex 10 Aeronautical Telecommunications
- Annex 11 *Air Traffic Services* (particularly Chapter 2 [2.1 and 2.30], and Attachment C)
- Annex 15 *Aeronautical Information Services*
- Doc 4444 Procedures for Air Navigation Services Air Traffic Management (PANS ATM)
- Doc 10066 – Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM)

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## Asia/Pacific Plan for Collaborative AIM

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### EXECUTIVE SUMMARY

3.1 The Asia and Pacific Region has become the world's largest aviation market in terms of available seat-kilometres (30% of ASK in 2015) and generates the world's second largest share of international revenue passenger-kilometres (28% of international RPK as of 2015).

3.2 Underpinning safe, efficient air transport is the Aeronautical Information Service (AIS) of each State, which collates, maintains and publishes aeronautical information of lasting character essential to air navigation, including details of regulations, procedures and other information pertinent to the operation of aircraft within the area of responsibility of the State.

#### The Need for a Regional Collaborative Plan for AIM

3.3 The AIS of each State, and its transition to the AIM environment, is a key enabler of all current and future air navigation activities. To satisfy new requirements for air navigation in a collaborative decision-making (CDM) environment the transition to AIM will provide aeronautical data and information in a digital format that facilitates graphical display, complies with international standards and agreed, common exchange formats and is accessible system-wide by all stakeholders in real-time.

3.4 This plan, the *Asia/Pacific Plan for Collaborative Aeronautical Information Management*, was developed to guide and assist Asia/Pacific Administrations in meeting the challenges of transitioning to from legacy paper-based AIPs to the digital world of AIM, as envisioned in the GANP and in the *ICAO Roadmap for Transition from AIS to AIM*.

3.5 While noting the need for revision and restructure of the existing Regional AIS guidance manual, this Plan was developed to avoid divergence from, or duplication of, ICAO global guidance material that will be provided in the near to medium term. Such global guidance material is expected to include the updated Doc 8126 – *AIS Manual*, and new Quality Management and AIM Training manuals.

3.6 The plan is also the repository for information and guidance on procedures for Asia/Pacific Administrations relating to Regional aeronautical data managed by the ICAO Regional Office, including:

- Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services (ICAO Doc 8585);
- Location Indicators (ICAO Doc 7910); and
- International Codes and Routes Designators (ICARD).

3.7 Quality-managed, timely aeronautical information is fundamental in supporting current and future aviation systems, supported by collaboration between States to improve the harmonization and interoperability of all processes and systems supporting air navigation. Collaboration in the provision of aeronautical information and data will benefit States facing resource challenges, and benefit the broader Asia/Pacific Region through the overall improvement in the availability, timeliness and quality of aeronautical information. Future development of this document may include Regional planning for multi-State or sub-Regional AIP and, shared aeronautical information databases, and collaborative efforts in AIM training.

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Asia/Pacific Plan for Collaborative AIM

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Performance Improvement Plan

3.8 A key feature of the Plan is the Performance Improvement Plan which, in this version of the Plan, is aligned with Phases 1 and 2 of the ICAO Roadmap for Transition from AIS to AIM, supporting States in the transition to digital databases of aeronautical information and the implementation of electronic AIP (eAIP). The Performance Improvement Plan is arranged in Regional AIM Capability Phases I and II, listing fundamental AIS performance elements expected to be implemented either immediately (Phase I), in the case of elements that have been reflected ICAO SARPs for many years, or by 7 November 2019 (Phase II).

3.9 A third phase of the Performance Improvement Plan, aligned with Roadmap Phase 3 – *Information Management*, will be developed by AAITF and included in a future update of the Plan.

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Asia/Pacific Plan for Collaborative AIM

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**ABBREVIATIONS AND ACRONYMS**

To facilitate readability, abbreviations have been largely omitted throughout the document. Most abbreviations were defined when introduced. The following provides an alphabetic listing of all abbreviations.

|          |                                                                        |
|----------|------------------------------------------------------------------------|
| AAITF    | AIS-AIM Implementation Task Force                                      |
| AATIP    | ASEAN Air Transport Integration Project                                |
| A-CDM    | Airport Collaborative Decision Making                                  |
| ADS-B    | Automatic Dependent Surveillance - Broadcast                           |
| AFTN     | Aeronautical Fixed Telecommunication Network                           |
| AI       | Aeronautical Information                                               |
| AIC      | Aeronautical Information Circular                                      |
| AICM     | Aeronautical Information Conceptual Model                              |
| AIM      | Aeronautical Information Management                                    |
| AIMSG    | Aeronautical Information Management Sub-Group                          |
| AIP      | Aeronautical Information Publication                                   |
| AIRAC    | Aeronautical Information Regulation and Control                        |
| AIS      | Aeronautical Information Service                                       |
| AIXM     | Aeronautical Information eXchange Model                                |
| AMDB     | Aeronautical Mapping Database                                          |
| ANSP     | Air Navigation Service Provider                                        |
| AOC      | Airline Operations Centre                                              |
| APANPIRG | Asia Pacific Air Navigation Planning and Implementation Regional Group |
| ASBU     | Aviation system Block Upgrades                                         |
| ASEAN    | Association of Southeast Asian Nations                                 |
| ATFM     | Air Traffic Flow Management                                            |
| ATC      | Air Traffic Control                                                    |
| ATM      | Air Traffic Management                                                 |

Asia/Pacific Plan for Collaborative AIM

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|           |                                                               |
|-----------|---------------------------------------------------------------|
| ATMRPP    | Air Traffic Management Requirements and Performance Panel     |
| ATSA-SURF | Enhanced Traffic Situational Awareness on the Airport Surface |
| CANSO     | Civil Air Navigation Services Organization                    |
| CARATS    | Collaborative Action for Renovation of Air Transport Systems  |
| CCO       | Continuous Climb Operations                                   |
| CDM       | Collaborative Decision Making                                 |
| CDO       | Continuous Descent Operations                                 |
| CMA       | Continuous Monitoring Approach                                |
| CNS       | Communication, Navigation, Surveillance                       |
| CRC       | Cyclic redundancy check                                       |
| DBMS      | Database Management System                                    |
| DSS       | Decision Support System                                       |
| eAIP      | Electronic Aeronautical Information Publication               |
| EFF       | Electronic Flight Folder                                      |
| EFOD      | Electronic Filing of Differences                              |
| ERAM      | En-Route Automation Modernization                             |
| eTOD      | Electronic Terrain and Obstacle Data                          |
| EUROCAE   | European Council of Aerospace Engineering                     |
| FMS       | Flight Management System                                      |
| GANP      | Global Air Navigation Plan                                    |
| GASP      | Global Aviation Safety Plan                                   |
| IATA      | International Air Transportation Association                  |
| ICAO      | International Civil Aviation Organization                     |
| ICARD     | ICAO Five-Letter Name Code and Route Designator               |
| IFATCA    | International Federation of Air Traffic Control Association   |
| IFAIMA    | International Federation of AIM Associations                  |
| IFR       | Instrument Flight Rules                                       |

Asia/Pacific Plan for Collaborative AIM

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|        |                                                              |
|--------|--------------------------------------------------------------|
| IM     | Information Management                                       |
| IP     | Internet Protocol                                            |
| ISO    | International Standards Organization                         |
| JAP    | Joint Acceptance Plan                                        |
| KPI    | Key Performance Indicator                                    |
| MET    | Meteorological Services                                      |
| METAR  | Aerodrome Routine Meteorological Report                      |
| NAS    | National Airspace System                                     |
| NCLB   | No Country Left Behind                                       |
| NOTAM  | Notice To Airmen                                             |
| PAIMS  | Preferred Aeronautical Information Management Specifications |
| PIB    | Pre-flight Information Bulletin                              |
| PQ     | Protocol Questions                                           |
| QA     | Quality Assurance                                            |
| QMS    | Quality Management System                                    |
| SARP   | Standards And Recommended Practices                          |
| SESAR  | Single European Sky Air Traffic Management Research          |
| SIGMET | Significant meteorological weather phenomena                 |
| SWIM   | System Wide Information Management                           |
| TIS-B  | Traffic Information Services – Broadcast                     |
| TBO    | Trajectory Based Operations                                  |
| USOAP  | Universal Safety Oversight and Audit Programme               |
| WXXM   | Weather eXchange Model                                       |
| XML    | eXtensible Markup Language                                   |
| 5LNC   | 5 Letter Name Code                                           |

## Asia/Pacific Plan for Collaborative AIM

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### BACKGROUND INFORMATION

#### Principles

5.1 This Plan considers four major categories of AIM principles:

Legislation, Policy and Regulation;

Human Performance;

Quality Management;

AIM Systems and Processes;

5.2 AIM principles form the basis for the provision of background guidance information, development of guidance material and identification of performance improvement objectives. The APAC Regional AIM Principles are provided in **Appendix A**.

#### Aviation System Block Upgrades (ASBU)

5.3 At the Global level the ASBU initiative was included in Doc 9750 – *Global Air Navigation Plan* as a programme framework that developed a set of aviation system solutions or upgrades intended to exploit current aircraft equipage, establish a transition plan and enable global interoperability. The ASBU framework is heavily dependent on AIM, which is a critical prerequisite for the implementation of any current or future ATM or air navigation concept that relies on the accuracy, integrity and timeliness of aeronautical data.

5.4 In the AIM field, the main ASBU blocks which are relevant for Seamless ATM are as follows:

- B0-DATM Service Improvement through Digital Aeronautical Information Management (AIM). B1-DATM Service Improvement through Integration of all Digital AIM Information (2019-2025)
- B1-SWIM Performance Improvement through the application of SWIM applications and infrastructure (2019-2025); and
- B2-SWIM Enabling Airborne Participation in Collaborative ATM through SWIM (2025-2031).

#### ICAO Roadmap for Transition from AIS to AIM

5.5 The ICAO Roadmap for Transition from AIS to AIM introduces and develops on the AIM concept and associated performance requirements by providing a basis upon which to manage and facilitate, on a worldwide basis, the transition from AIS to AIM.

5.6 The Roadmap includes a number of project steps for the transition to AIM, arranged into three implementation phases. The three phases and the project steps included in them are ~~provided~~ summarized in **Table 1**.

Asia/Pacific Plan for Collaborative AIM

| ROADMAP PHASE                          | ROADMAP STEPS                                            | Expected Implementation |
|----------------------------------------|----------------------------------------------------------|-------------------------|
| PHASE 1<br><i>Consolidation</i>        | P-03 — AIRAC adherence monitoring                        | November 2010           |
|                                        | P-04 — Monitoring of States' differences to Annex 4 & 15 |                         |
|                                        | P-05 — WGS-84 implementation                             |                         |
|                                        | P-17 — Quality                                           |                         |
| PHASE 2<br><i>Going Digital</i>        | P-01 — Data quality monitoring                           | November 2013           |
|                                        | P-02 — Data integrity monitoring                         |                         |
|                                        | P-06 — Integrated aeronautical information database      |                         |
|                                        | P-07 — Unique identifiers                                |                         |
|                                        | P-08 — Aeronautical information conceptual model         |                         |
|                                        | P-11 — Electronic AIP                                    |                         |
|                                        | P-13 — Terrain                                           |                         |
|                                        | P-14 — Obstacles                                         |                         |
|                                        | P-15 — Aerodrome mapping                                 |                         |
| PHASE 3<br><i>Information Exchange</i> | P-09 — Aeronautical data exchange                        | November 2016           |
|                                        | P-10 — Communication networks                            |                         |
|                                        | P-12 — Aeronautical information briefing                 |                         |
|                                        | P-16 — Training                                          |                         |
|                                        | P-18 — Agreements with data originators                  |                         |
|                                        | P-19 — Interoperability with meteorological products     |                         |
|                                        | P-20 — Electronic aeronautical charts                    |                         |
|                                        | P-21 — Digital NOTAM                                     |                         |

**Table 1:** Phases and Project Steps of the Roadmap for Transition from AIS to AIM.

5.7 Asia/Pacific Regional progress in AIM transition is measured against the implementation of Roadmap steps, reported to the ICAO Asia/Pacific Regional Office at least once each year and recorded in the AIS Transition table, available on the Regional Office website eDocuments web-page at [link]

## Asia/Pacific Plan for Collaborative AIM

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### Interim AIM Transition Guidance

5.8 The Ninth Meeting of the Asia/Pacific Region AIS – AIM Implementation Task Force (AAITF/9, Pattaya, Thailand, 24 – 27 June 2014), recognized that the lack of AIM transition guidance material was a matter of significant concern to Administrations the Region. There had been delays in the production of global ICAO guidance documents, those of most immediate significance being the updated Doc 8126 AIS Manual, the new Doc 9839 Quality Manual and Doc 9991 AIS Training Manual. AAITF/9 agreed to continue to work on Regional AIM transition guidance material for key AIM transition steps from the ICAO Roadmap for Transition from AIS to AIM.

5.9 AAITF/10 updated the *Guidance Manual for AIS in the Asia/Pacific Region* by adding a new appendix, *Interim AIM Transition Guidance*, which emphasizes four priority steps from AIM transition roadmap, they are:

P-17 – Quality,

P-16 – Training,

P-18 – Agreements with data originators, and

P-11 – Electronic AIP.

5.10 Interim AIM Transition Guidance is provided in the *Guidance Manual for Aeronautical AIS in the Asia/Pacific Region*.

### AIM Information Sharing Website

5.11 The Asia/Pacific AIM Information Sharing Website was established to share information on the current status and challenges being faced by Asia/Pacific Administrations implementing, or planning to implement, AIM. The website is available at <http://aim-tracking.org/>.

### Quality Management Guidance

5.12 Global guidance for the quality management of aeronautical information will be provided in ICAO Doc 9839 Quality Manual, being developed by the AIM SG. Interim guidance for quality management may be found in the *Guidance Manual for AIS in the Asia/Pacific Region*.

5.13 A key component of any quality management process for aeronautical information is the establishment of formal agreements between the originators of aeronautical data and the AIS. Such agreements specify the content, quality, maintenance and timing of the provision of aeronautical information or data that is required to be promulgated in AIP, and the quality management processes that shall be applied.

5.14 Originators of aeronautical data may include State regulatory authorities, airport operators, geospatial information agencies, air traffic services units, flight procedure design authorities, military authorities, police or other public safety or emergency service organizations.

5.15 A template for the establishment of formal agreements between originators of aeronautical data and the AIS is provided in **Appendix X**.

## Asia/Pacific Plan for Collaborative AIM

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### Selection and Training Guidelines for AIS

5.16 Global guidance for AIM training will be provided in ICAO Doc 9991 *AIS Training Manual*, being developed by the AIM SG. Interim guidance for the recruitment, competency criteria and development of training for AIS personnel may be found in the *Guidance Manual for AIS in the Asia/Pacific Region*.

### Operating Procedures for AIS Dynamic Data (OPADD)

5.17 The OPADD, based on the EUROCONTROL OPADD and updated periodically by AAITF, provides regional guidance for common procedures for NOTAM. The OPADD for the Asia/Pacific Region may be found in the *Guidance Manual for AIS in the Asia/Pacific Region*.

### Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services

5.18 ICAO Doc 8585 – *Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services* contains the ICAO-approved three-letter designators intended for use on the international aeronautical telecommunications service, and which form part of the Aeronautical Fixed Service (AFS, formerly AFTN) address for connected agencies, authorities and services.

5.19 The allocation, amendment and withdrawal of these designators and the updating of Doc 8585 is managed by ICAO Headquarters through the ICAO 3LD website. This arrangement was communicated to States in State Letter AN 2/16. 1014/72.

5.20 The ICAO 3LD website is located at <https://www4.icao.int/3ld>. A copy of the State Letter may be obtained from the ICAO Asia/Pacific Regional Office.

### ICAO Location Indicators

5.21 ICAO Doc 7910 – *Location Indicators* lists four-letter location indicators, which are assigned by States and checked by ICAO for conformity with the procedures relating to the formulation and assignment of location indicators, as set out in that document. The following process is used to assign location indicators:

1. The State formulates the new four letter location indicator for the location/airport;
2. The State writes to the ICAO Asia/Pacific Regional Director, requesting registration of the location indicator;

*The ICAO Regional Office coordinates with ICAO Headquarters.*

3. The following information is required to be included in the State's request:

- a. location/Airport Name;

*Only provide the airport name if relevant, or if different from the location name, e.g. BANGKOK/DON MUEANG INTL AIRPORT, BRISBANE/BRISBANE INTL, BRISBANE/ARCHERFIELD*

- b. requested Location Indicator (e.g. NTKU);
- c. IATA location identifier code, if any; and
- d. Indication of whether the location is, or is intended to be, connected to the AFS.

## Asia/Pacific Plan for Collaborative AIM

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5.22 ICAO Regional Office will formally notify the State when the location indicator has been registered for inclusion in Doc 7910.

### International Codes and Routes Designators

5.23 Annex 11 – *Air Traffic Services* defines a significant point as a specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes. It further states that significant points shall be established and identified in accordance with the principles set forth in Annex 11 Appendix 2. Where a significant point is required at a position not marked by the site of a radio navigation, and is used for ATC purposes, it shall be designated by a unique five-letter pronounceable name-code. This name-code designator then serves as the name as well as the coded designator of the significant point.

*Rules ensuring the uniqueness of five-letter name-codes (5LNC) are provided in Annex 11 Appendix 2*

5.24 States' requirements for unique five-letter pronounceable name-code designators shall be notified to the Regional Offices of ICAO for coordination.

5.25 The International Codes and Routes Designators (ICARD) application, administered by ICAO and accessible through the ICAO Secure Portal (<https://portallogin.icao.int/>) is the sole repository of 5LNCs ensuring global uniqueness, and is the only means by which the requirements of Annex 11 Appendix 2 paragraph 3.5 may be met.

*The ICARD application is being adapted for the future management of the assignment of ATS Route Designators*

5.26 All States and Administrations with any responsibility for, or involvement in, the design, implementation and/or regulation of ATS routes and instrument flight procedures must have suitable employees registered in ICARD. In all cases where any personnel of a State Regulator or Air Navigation Service Provider are responsible for the allocation of 5LNC for ATS routes, Standard Instrument Departures (SIDs), Standard Terminal Arrival Routes (STARs) or Instrument Approach and Landing (IAL, including RNAV/RNP approaches), at least one person, and preferably two or more, must be registered as an ICARD\_5LNC\_PLANNER.

5.27 ICARD procedures are provided in the *ICARD 5LNC Guidelines*, available on request from the ICAO Asia/Pacific Regional Office. The process for registering as an ICARD\_5LNC\_PLANNER, and a flow-chart of the ICARD process, is provided in **Appendix X**.

5.28 An ICAO-coordinated global project has been established to register all AIP-published 5LNC in ICARD, and to eliminate all duplicated 5LNCs. The details of the project, and the rules applicable to duplicate resolution, were promulgated in State Letter AN 11/45.5-17/101. A copy of the State Letter is also available on request from Regional Office.

### Implementation Status Monitoring

5.29 The Asia/Pacific Regional Plan for Collaborative AIM is one of several important plans that are subsidiary to the Seamless Air Traffic Management (ATM) Plan, namely:

- Asia/Pacific Search and Rescue (SAR) Plan;
- Asia/Pacific Region ATM Contingency Plan; and
- Asia/Pacific Regional Framework for Collaborative ATFM;

## Asia/Pacific Plan for Collaborative AIM

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5.1 States report implementation of the performance expectations of the Seamless ATM Plan using an online reporting form. Monitoring and reporting schemes for subsidiary plans enhance the current Seamless ATM monitoring and reporting scheme.

5.2 The monitoring and reporting scheme for Regional collaborative AIM implementation measures State implementation of the performance expectations specified in Section 7 of this document.

5.3 Asia/Pacific Administrations should report their implementation status to the ICAO Asia/Pacific Regional Office at least once annually, by no later than 30 April each year. Reported implementation status will be examined each year by the AAITF, or other appropriate Regional body designated by APANPIRG, to measure, report and advance Regional implementation progress, and to recommend priority AIM elements to be added to the Seamless ATM monitoring and reporting scheme.

5.4 It is expected that the relevant AIM expert/s in each Administration will be responsible for the detailed reporting in the Regional AIM Monitoring and Reporting form, and that these experts will then liaise closely with their Administration's Seamless ATM reporting point of contact to ensure the accuracy of the higher level reporting and consistency between the separate reporting levels.

5.5 The Regional AIM Monitoring and Reporting Form is provided at **Appendix D**, and is available on the ICAO Asia/Pacific Regional Office eDocuments web-page at <http://www.icao.int/APAC/Pages/edocs.aspx>.

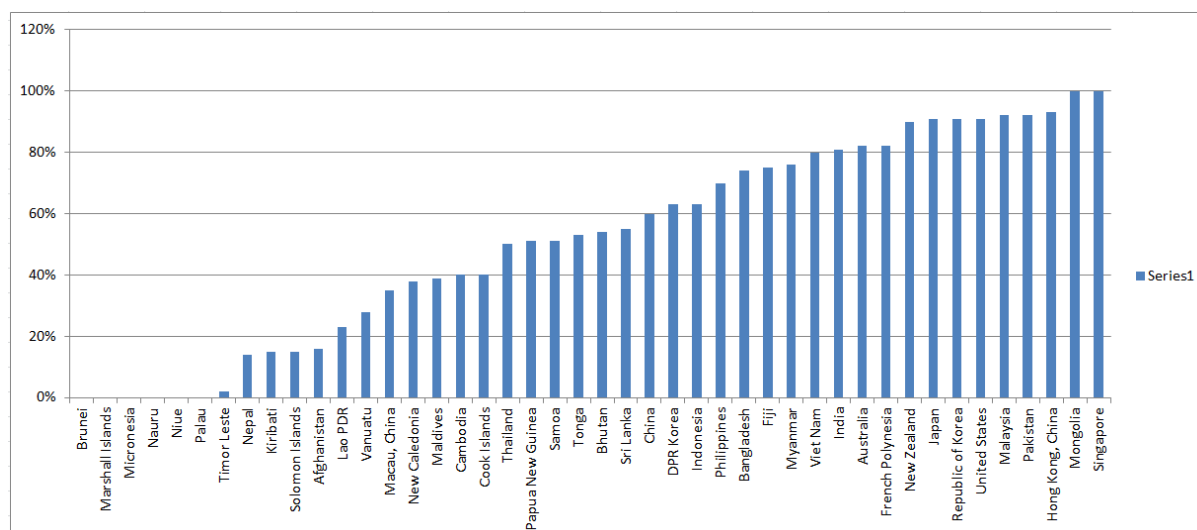
## CURRENT SITUATION

### Current Status of Transition from AIS to AIM

6.1 The performance objectives of the Asia/Pacific Seamless ATM Plan included the expectation that Phases 1 and 2 of the Roadmap for Transition from AIS – AIM would be completed by November 2015. As on 05 June 2018, regional implementation of Phase 1- Consolidation of the Roadmap is summarized as follows: 18 Administrations (43%) had completed implementation, 20 Administrations ( $\approx$  48%) had partly implemented, 6 Administrations ( $\approx$  14%) had not implemented any Phase 1 step, overall regional implementation of Phase 1  $\approx$  72%. Regional implementation of Phase 1 and 2 is summarized as follows: 18 Administrations (43%) have completed more than 50%, 16 Administrations ( $\approx$  38%) have implemented less than 50%, 6 Administrations (14%) have not completed any Phase 1 and 2 step.

6.2 **Figure 1** below indicates that many States are lagging in their implementation for transition from AIS to AIM. (Date last amended on 05 June 2018.)

## Asia/Pacific Plan for Collaborative AIM



**Figure 1: Regional AIM Implementation Status - Phase 1 and 2 Implementation Progress**

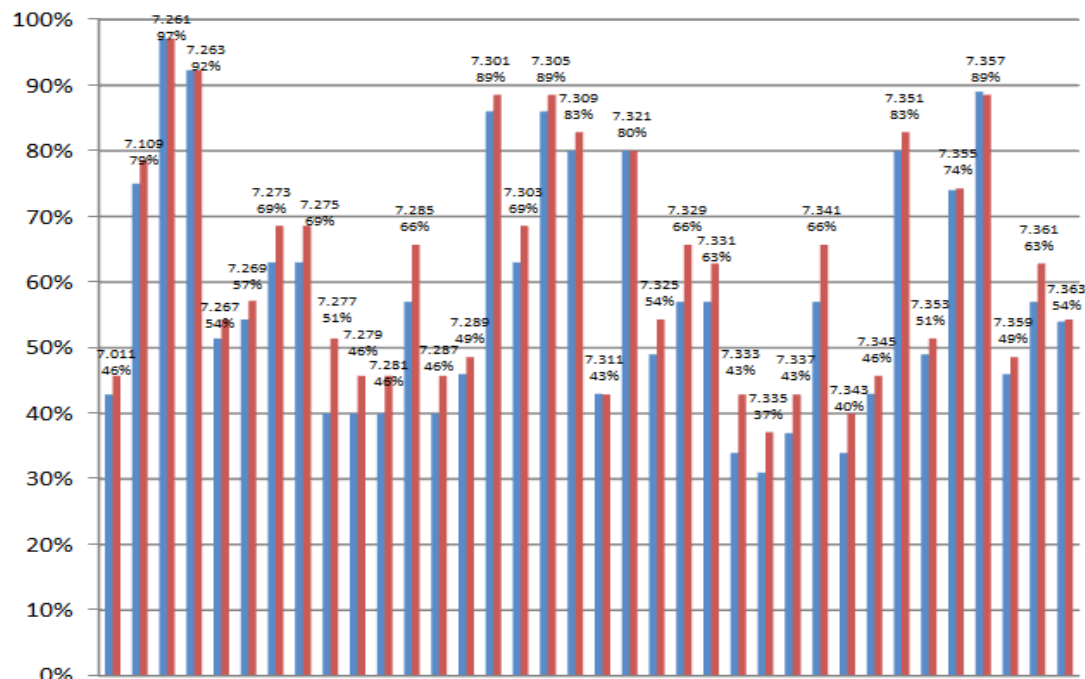
### Asia/Pacific AIM Compliance Analysis

6.3 Protocol Questions (PQs) are the primary tool used in the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) for assessing the effective implementation of ICAO Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS) and ICAO guidance material.

6.4 According to the assessment of Effective Implementation (EI) of AIS-related PQs in May 2018 in APAC Region, an overall EI is **62%**. After analyzing, the EI for 10 AIS-related PQs is below 50% (**Figure 2** refers):

- 37% - Cartographic inspector periodic training plan established;
- 40% - Effective State oversight of service provision (charts);
- 43% - AIS data quality and resolution - Annexes 15 and 4 (AIS);  
Cartographic inspector's formal training programme developed and Implemented;
- 46% - States adoption of International Standards and Procedures ;  
AIS inspector periodic training plan established;  
AIS inspector formal training programme implemented;  
Mechanism for deficiency review and elimination;  
Effective State oversight of service provision (AIS); and
- 49% - AIS data quality and resolution (Annex 15 and 4) (Charts).

## Asia/Pacific Plan for Collaborative AIM



**Figure 2: APAC USOAP CMA ANS PQ Compliance (2017 and 2018 Comparison)**

6.5 Analysis of PQs which are related with the four priority steps from AIM transition roadmap.

- The four priority transition steps are: P - 03 – AIRAC Adherence Monitoring, P - 04 – Monitoring of States’ differences to Annex 4 and Annex 15, P - 05 – WGS-84 implementation, and P - 17 – Quality.
- Analysis of PQs related with the four priority steps above.

**PQ 7.309:** Does the State ensure that the Aeronautical Information Regulation and Control (AIRAC) system is used to notify the establishment, withdraw and premeditated significant changes of circumstances listed in accordance with Chapter 6 and Appendix 4 Part 2 of Annex 15?

- Associated AIM Transition Step: P – 03: AIRAC Adherence Monitoring
- Average Effective Implementation (EI) of PQ 7.309 for APAC region is 83%, which was 80% in 2017.

**PQ 7.011:** Has the State implemented procedures for amending its ANS specific regulations as well as for identifying and notifying differences, taking into consideration ICAO provisions and their amendments?

- Associated AIM Transition Step: P – 04: Monitoring of States’ differences to Annex 4 and Annex 15
- Average Effective Implementation (EI) of PQ 7.011 for APAC region is 46%, which was 42.86% in 2017.

**PQ 7.109:** If the State has initiated the implementation of performance-based navigation (PBN), are the prescribed navigation specifications appropriate to the level of communication, navigation and air traffic services? (Where applicable, review documented

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Asia/Pacific Plan for Collaborative AIM

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evidences that the safety of the system is assured with WGS-84 implementation)

- Associated AIM Transition Step: P – 05: WGS-84 implementation
- Average Effective Implementation (EI) of PQ 7.109 for APAC region is 79%, which was 75% in 2017.

**PQ 7.311:** Has the State established a mechanism to ensure that aeronautical data quality requirements related to publication resolution and data integrity are in accordance with the provisions of Annex 15, Appendix 7, Tables A7-1 to A7-5?

- Associated AIM Transition Step: P – 17: Quality
- Average Effective Implementation (EI) of PQ 7.311 for APAC region is 43%, same as in 2017.

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## Asia/Pacific Plan for Collaborative AIM

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### PERFORMANCE IMPROVEMENT PLAN

#### Structure of the Performance Improvement Plan

7.1 Regional collaborative AIM performance objectives are arranged in *Regional AIM Capability* phases aligned, where practicable, with the implementation phases of the Seamless ATM Plan:

- Regional AIM Capability Phase I, expected to be implemented immediately;
- Regional AIM Capability Phase II, expected to be implemented by 7 November 2019, and
- Regional AIM Capability Phase III, expected to be implemented by 3 November 2022.

7.2 Performance expectations are presented under the following general structure for each Regional AIM Capability phase, where relevant:

- Legislation, Policy and Regulation;
- Human Performance;
- Quality Management;
- AIM Systems and Processes;

#### Asia/Pacific Seamless ATM Plan – Performance Expectations

7.3 The Seamless ATM Plan includes the following performance expectations in the field of AIS/AIM:

#### ***Preferred ATM Service Levels (PASL) Phase I (expected implementation by 12 November 2015)***

7.46 *ATM systems should be supported by digitally-based AIM systems through implementation of Phase 1 and 2 of the AIS-AIM Roadmap in adherence with ICAO and regional AIM planning and guidance material.*

#### ***PASL Phase II (expected implementation by 07 November 2019)***

7.61 *ATM systems should be supported by complete implementation of AIM Phase 3 (using at a minimum, version AIXM 5.1).*

## Asia/Pacific Plan for Collaborative AIM

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### REGIONAL AIM CAPABILITY PHASE I

#### *Expected to be implemented immediately*

##### Legislation, Policy and Regulations

7.4 States should develop policy, and enact primary legislation and supporting regulations for Annex 4 and Annex 15 SARPS including:

- i. Establishment of an organizational structure for the safety oversight of aeronautical information service providers;
- ii. Requirements for aeronautical information/data originators;
- iii. Requirement for AIS quality management systems and processes to be established by all entities in the end-to-end AIS data chain.

7.5 AIS should be established either as a separate entity within or, ideally, separated from the civil aviation administration in accordance with the guidance provided in ICAO Doc 8126 – AIS Manual Chapter 3.

##### Human Performance

7.6 Competency requirements for AIS personnel should be developed, including English language proficiency requirements, supported by a program of regular performance assessment.

7.7 Regular programs of engagement with all stakeholders should be established, including education on:

- i. State, organization and individual obligations under the Chicago Convention;
- ii. State Legislation and State Regulations;
- iii. AIM-related ICAO Annexes to the Chicago Convention, Procedures for Air Navigation Services and guidance material.

##### Quality Management

7.8 Quality management systems for aeronautical information should be developed and implemented.

##### AIM Systems

7.9 Full access to relevant ICAO Annexes and Documents should be provided to all personnel having responsibility for the origination, reception, management, publication and/or distribution of aeronautical information and aeronautical data.

Asia/Pacific Plan for Collaborative AIM

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**REGIONAL AIM CAPABILITY PHASE II**

*Expected to be implemented by 7 November 2019*

Human Performance

7.10 Training, competency development and performance assessment of AIS personnel should be adapted as necessary to the needs of transition to AIM, including aeronautical information exchange, data quality management, e-AIP, electronic charting and digital NOTAM.

Quality Management

7.11 Quality management systems should be implemented and maintained encompassing all functions of an aeronautical information service.

7.12 Formal agreements should be established between AIS providers and aeronautical data originators specifying the content, quality, maintenance and timing of the provision of aeronautical data that is required to be promulgated in AIP, and the quality management process that shall be applied.

AIM Systems

7.13 All Administrations should implement internet-accessible electronic AIP generated from a digital database of aeronautical information

**REGIONAL AIM CAPABILITY PHASE III**

*Expected to be implemented by 1 December 2022*

*To be developed*

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## **APPENDIX A - REGIONAL COLLABORATIVE AIM PLANNING PRINCIPLES**

### **People: Cultural and Political Background**

1. High-level political support (including development of educational information for decision-makers) to support Seamless ATM initiatives, including military cooperation and AIM.

*Source: Asia/Pacific Seamless ATM Plan - Principles*

### **Technology and Information: Aeronautical Data**

2. Early implementation of AIM, including cooperative development of aeronautical databases and SWIM to support interoperable operations.

*Source: Asia/Pacific Seamless ATM Plan - Principles*

### **Legislation, Policy and Regulation**

3. Legislation supporting the signatory State obligations under the Chicago Convention provides the legal basis and compulsion for engagement of all stakeholders in the AIS.
4. Regulations establish requirements for all stakeholders in the AIS including information and data originators, the AIS and its users
5. The role of an AIS regulator (AIS & Charts inspectorate) is not to check and approve every item of aeronautical information promulgated by the AIS.
6. The role of an AIS regulator (AIS & Charts inspectorate) is to oversight the processes of AIS, such as quality management and safety management.

### **Human Performance**

7. Clear accountabilities for the quality and timeliness of aeronautical information should be established.
8. English language proficiency requirements for quality-managed AIS translation of information and data received from originators.
9. Standardization where practicable of English language expressions used in aeronautical information
10. Establishment of competency criteria for information/data originators and AIS personnel, supported by regular performance assessment.
11. Contextual understanding of aeronautical information or data received by AIS, brought about through an appropriate mixture of knowledge, experience and skills among AIS personnel.
12. IT capability to ensure AIM capability.
13. Relationships between all stakeholders are built through consultation, inclusion, and

cooperative education activities.

14. Human factors considerations include training, competency assessment, human-machine interfaces and environment.

Quality Management

15. Quality management applies to the entire aeronautical information/data chain

16. Quality management of aeronautical data requires the establishment of formal agreements between originators of aeronautical information/data and the AIS.

AIM Systems and Processes

17. Maintenance regulations and procedures ensure the regular updating, correction and, when redundant, removal of aeronautical information.

18. The use of contemporary technology to improve the quality and timeliness of aeronautical information, and the efficiency of its publication.

19. Migration of aeronautical information into digital databases requires the establishment of a project team and the application of quality and safety management processes.

20. Integration of safety management and quality management systems

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**APPENDIX B - TEMPLATE**  
**SERVICE LEVEL AGREEMENT**

**BETWEEN**

**{AIS PROVIDER}**

**AND**

**{DATA ORIGINATOR}**

**ON THE SUPPLY OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION FOR  
THE PROVISION OF AERONAUTICAL INFORMATION SERVICES**

**Effective Date : \_\_\_\_\_ {Date of Inception}**

**Document Management**

**TABLE OF CONTENTS**

## Asia/Pacific Plan for Collaborative AIM – Appendix B

| No. | Contents                                                                  | Page |
|-----|---------------------------------------------------------------------------|------|
| 1   | <b>General Overview</b>                                                   |      |
| 1.1 | Objectives                                                                | 3    |
| 1.2 | Scope                                                                     | 3    |
| 1.3 | Reference Documents                                                       | 4    |
| 1.4 | Validity Period                                                           | 4    |
| 2   | <b>Quality Management</b>                                                 |      |
| 2.1 | Overview                                                                  | 5    |
| 2.2 | Data Quality Attributes                                                   | 5    |
| 2.3 | Service Standards of Originator                                           | 5    |
| 2.4 | Service Standards of AIS Provider                                         | 7    |
| 2.5 | Service Level Indicators                                                  | 8    |
| 3   | <b>Amendments and Mediation</b>                                           |      |
| 3.1 | Amendments                                                                | 9    |
| 3.2 | Dispute Management                                                        | 9    |
| 3.3 | Point of Contact                                                          | 9    |
| 4   | <b>Agreement</b>                                                          | 10   |
|     | <b>Annex A</b> – Details of Point of Contact {Effective Date: DD/MM/YYYY} | 11   |

## 1. General Overview

### 1.1 Objectives

1.1.1. This Service Level Agreement {Agreement} between **{AIS Providers}** and **{Data Originator}** aims to achieve the following objectives:

- i. **Strengthen the coordination** on the supply, maintenance and publication of aerodrome aeronautical data and aeronautical information pertaining to the facilities, services and navigation aids provided within **{Name of State}**;
- ii. **Give assurance** on the accuracy, integrity, traceability and timeliness of aerodrome aeronautical data and aeronautical information, in accordance to ICAO Annex 4, Annex 14 and Annex 15 requirements, originating from **{Data Originator}** for publication in the **{Name of State}** aeronautical publications;
- iii. **Establish a framework** for key operational Service Standards and Performance Measurements to meet user's needs;
- iv. **Deliver consistent levels of service** for the provision of aerodrome aeronautical data and aeronautical information; and
- v. **Establish clear roles and responsibility** of the parties in the provision and dissemination of aerodrome aeronautical data and aeronautical information.

### 1.2 Scope

1.2.1 This Agreement documents the agreed provision of service for the supply of aerodrome aeronautical data and aeronautical information by **{Data Originator}** ("Originator") to the **{AIS Provider}** and the agreed standards to which the said information shall be published by the **{AIS Provider}**.

1.2.2 This Agreement shall be in line with the requirements set forth in ICAO Annex 15 paragraph 2.1.5, which states that:

*"Each Contracting State shall ensure that formal arrangements are established between originators of aeronautical data and aeronautical information service in relation to the timely and complete provision of aeronautical data and aeronautical information."*

1.2.3 This Agreement shall be in-line with the requirements set forth in ICAO Annex 14 Volume 1 paragraph 2.13.1, which states that:

*"To ensure that aeronautical information services units obtain information to enable them to provide up-to-date pre-flight information and to meet the need for in-flight information,*

*arrangements shall be made between aeronautical information services and aerodrome authorities responsible for aerodrome services to report to the responsible aeronautical information services unit, with a minimum of delay”.*

### **1.3 Reference Documents**

1.3.1 This Agreement, including the definition of the terms used, is established to fulfil the other relevant requirements in the following ICAO Standards and Recommended Practices (SARPs), manuals and national regulations:

- i. ICAO Annex 15 – Aeronautical Information Services
- ii. ICAO Annex 4 – Aeronautical Charts
- iii. ICAO Annex 14 – Aerodromes
- iv. ICAO Doc 8126 – Manual on Aeronautical Information Services
- v. ICAO Doc 9674 – World Geodetic System – 1984 (WGS-84) Manual

**{States may include additional reference documents for the purpose of this SLA}**

### **1.4 Validity Period**

1.4.1 This Agreement shall be effective from **{Date}** and shall continue to be valid until such time when either party initiates to terminate the Agreement.

1.4.2 This Agreement shall be reviewed every **{Validity Period}** years to ensure compliance to ICAO SARPs and international best practices.

1.4.3 Updates or changes to this Agreement, if required before the periodic review, could be initiated by either party.

1.4.4 The **{Name of the governing, regulatory body or approving authority}** shall be the authority to approve updates, changes and review to this Agreement.

**{States to determine the validity period and the governing, regulatory body or approving authority of this SLA}**

## **2.0 Quality Management**

### **2.1 Overview**

2.1.1 Quality management gives the assurance that the aeronautical data and aeronautical information supplied by the Originator provides the confidence that quality requirements will be fulfilled. This includes establishing the data quality attributes and service standards of the parties to this

Agreement.

**{States to incorporate any other quality management adherence deemed fit for this SLA}**

## 2.2 Data Quality Attributes

2.2.1 The integrity of the aeronautical data shall be maintained throughout the data chain from the Originator to AIS and subsequently to the end users.

2.2.2 Data integrity classifications used within this Agreement are based on ICAO Annex 15, Appendix 7, Tables A7-1 to A7-5.

2.2.3 The validation and verification procedures shall be based on the applicable integrity classifications as follows:

- i. Routine data: avoid corruption throughout the processing of the data. The permitted maximum error rate is 1 in 1000, providing an integrity level of  $1 \times 10^{-3}$  (ICAO Doc 9674).
- ii. Essential data: assure corruption does not occur at any stage of the entire process and include additional processes as needed to address potential risks in the overall system architecture to further assure data integrity at this level. The permitted maximum error rate is 1 in 100,000, providing an integrity level of  $1 \times 10^{-5}$  (ICAO Doc 9674).
- iii. Critical data: assure corruption does not occur at any stage of the entire process and include additional integrity assurance processes to fully mitigate the effects of faults identified by thorough analysis of the overall system architecture as potential data integrity risks. The permitted maximum error rate is 1 in 100,000,000, providing an integrity level of  $1 \times 10^{-8}$  (ICAO Doc 9674).

**{States to incorporate any other data quality attributes deemed necessary for this SLA}**

## 2.3 Service Standards of Originator

2.3.1 The established service standards aim to outline the responsibilities of the originator as part of the quality management process of the aeronautical information data chain. **{Name of Originator}**, as the Originator shall:

- i. Supply, maintain and update **{AIS Provider}** with aerodrome aeronautical data and aeronautical information pertaining to the facilities, services and navigation aids provided within **{Name of Aerodromes}** for which **{Data Originator}** is responsible.
- ii. Provide **{AIS Provider}** with a list of aerodrome aeronautical data and aeronautical information originators within **{Data Originator}** who are authorized to supply, maintain

and update the aerodrome aeronautical data and aeronautical information published in the {Name of State} aeronautical publications {that is, NOTAMs, AIP Supplements {AIP SUP}, AIP Amendments {AMDT}, AIP {Name of State} and Aeronautical Information Circulars {AIC}}.

- iii. Maintain and update the list of subject owners for the aerodrome aeronautical data and aeronautical information to be published and to inform {Name of AIS Provider}, for accountability purpose, whenever there is a change.
- iv. Ensure that regular surveys are conducted by qualified and certified surveyors to determine and / or verify the accuracy and integrity of the aerodrome aeronautical and obstacle / terrain data published in AIP {Name of State}. The surveyed aerodrome aeronautical and obstacle / terrain data, including the WGS-84 coordinates, sent to {Name of AIS Provider} shall comply with the aeronautical data publication resolution and integrity classification stipulated in ICAO Annexes 4, 14 and 15.
- v. Ensure that accurate, updated and complete aerodrome aeronautical data and aeronautical information is provided to {Name of AIS Provider} in sufficient time which comply with the AIRAC cycle cut-off date, where necessary, for timely publication and dissemination to users.
- vi. Ensure that all aerodrome aeronautical data and aeronautical information submitted to {Name of AIS Provider} for publication of AMDT, AIP SUP and AIC must include the name{s} of the originator{s} or subject owner{s} who have vetted and verified the submission, and a declaration that the aerodrome aeronautical data and aeronautical information submitted is accurate, updated and complete.
- vii. Ensure that the submission of draft NOTAM{s} for promulgation to {Name of AIS Provider} includes the name{s} of person who issues, checks and approves, indicating that the information submitted is vetted and verified, and a declaration that the information submitted is accurate, updated and complete.
- viii. Be responsible and accountable for the accuracy and integrity of the aerodrome aeronautical data provided to {Name of AIS Provider}. The aerodrome aeronautical data provided shall be in accordance to the data integrity classification for aeronautical data specified in ICAO Annex 15, Appendix 7, Tables A7-1 to A7-5.
- ix. Conduct a yearly review of the AIP {Name of State} sections under their purview and update {Name of AIS Provider} accordingly and to provide a ‘Nil’ return to {Name of AIS Provider} after each review if no updates were required.
- x. Check for permanent information that needs to be incorporated into AIP {Name of State} from the AIP SUP and NOTAMs submitted to {Name of AIS Provider}.
- xi. Ensure that personnel performing the role of Data Originator and checker are appropriately trained and equipped with the requisite knowledge, skills and abilities to

prepare the draft aeronautical publications and submit NOTAM proposals to **{Name of AIS Provider}** for promulgation within the context of the established quality management system.

**{States to incorporate any other service standards for the Data Originators deemed necessary for this SLA}**

## 2.4 Service Standards of AIS Provider

2.4.1 **{Name of AIS Provider}** is the entity responsible for the provision of aeronautical information services within the **{Name of State}** Flight Information Region {FIR} and areas where air traffic services are provided. The timely availability of accurate, updated and complete aeronautical data and aeronautical information is necessary to ensure the safety, regularity and efficiency of air navigation. **{Name of AIS Provider}** shall:

- i. Publish updates and changes to aerodrome aeronautical data and aeronautical information through the most appropriate means (that is, AMDT, AIP SUP, AIC or NOTAM) taking into consideration the accuracy and timeliness of aerodrome aeronautical data and aeronautical information submitted by **{Data Originator}**.
- ii. Publish permanent changes to AIP **{Name of State}** in accordance to the schedule of AMDT publication dates published in AIP **{Name of State}** and AIC.
- iii. Check the submission date of the aerodrome aeronautical data and aeronautical information against the AMDT publication schedule on receipt of the aerodrome aeronautical data and aeronautical information from **{Data Originator}**. If the aerodrome aeronautical data and aeronautical information is received before the “**Latest date for information to reach AIS**”, the aerodrome aeronautical data and aeronautical information received will be checked for completeness and compliance with the aerodrome aeronautical data and aeronautical information quality requirements for publication resolution, integrity and data classification stipulated in ICAO Annex 15, Appendix 7, Tables A7-1 to A7-5.
- iv. Check the submission date of the aerodrome aeronautical charts against the AMDT publication schedule on receipt of the aerodrome aeronautical charts from **{Data Originator}**. If the aerodrome aeronautical charts are received before the “**Latest date for information to reach AIS**”, the charts received will be checked for compliance with the aerodrome aeronautical chart specifications specified in ICAO Annex 4 and the aerodrome aeronautical data quality requirements for chart resolution of geographical coordinates, integrity and data classification stipulated in ICAO Annex 4, Appendix 6, Tables A6-1 to A6-6.
- v. Track the aerodrome aeronautical data and aeronautical information submitted by **{Data Originator}** for errors and non-adherence to the specified timeline. Results of the tracking will be shared through a formal dialogue with **{Data Originator}** for compliance and to improve subsequent data submissions to **{Name of AIS Provider}**.

## Asia/Pacific Plan for Collaborative AIM – Appendix B

- vi. Review, develop and implement work processes which includes ICAO Annex 15 requirements with **{Data Originator}** on the submissions of aerodrome aeronautical data and aeronautical information for publication.
- vii. Assess the “Requests for NOTAM promulgation” to ensure that they are unambiguous and complete before the NOTAMs are promulgated.

**{States to include any other services provided or requirements of the AIS Provider}**

## 2.5 Service Level Indicators

- 2.5.1 In order to fulfil the requirements for quality management, **{Name of AIS Provider}** shall be tracking errors detected / observed before and after publication of the aerodrome aeronautical data and aeronautical information provided by **{Data Originator}**. These errors shall be communicated to **{Data Originator}** for follow up remedial actions.
- 2.5.2 The **{Name of the governing, regulatory body or approving authority}**, as the authority to monitor the effectiveness of coordination between **{Data Originator}** and **{Name of AIS Provider}**, shall oversee the relevant compliance targets on timeliness and accuracy:

| AERONAUTICAL PUBLICATIONS                                                      | COMPLIANCE TARGET |
|--------------------------------------------------------------------------------|-------------------|
| NOTAM                                                                          |                   |
| Aeronautical Data and Aeronautical Information from Originator to NOTAM Office | 100%              |
| Aeronautical Data and Aeronautical Information from NOTAM Office to End Users  | 100%              |
|                                                                                |                   |
| AMDT/ AIP SUP/ AIP / AIC                                                       |                   |
| Aeronautical Data and Aeronautical Information from Originator to AIS Provider | 100%              |
| Aeronautical Data and Aeronautical Information from AIS Provider to End Users  | 100%              |

**{States to indicate any other compliance targets expected by the Data Originators to comply}**

## 3. Amendments and Mediation

### 3.1 Amendments

- 3.1.2 Either party can propose amendments and modifications to this Agreement through formal notification to the {Name of the governing, regulatory body or approving authority}.
- 3.1.3 The {Name of the governing, regulatory body or approving authority}, shall be the approving authority of such amendments and modifications to this Agreement.

### 3.2 Dispute Management

- 3.2.1 Disputes between the parties relating to this Agreement and its interpretation shall be arbitrated by the {Name of the governing, regulatory body or approving authority}.

### 3.3 Point Of Contact

- 3.3.1 {Data Originator} and {Name of AIS Provider} shall each appoint a point of contact to manage issues pertaining to the provisions in this Agreement.
- 3.3.2 All communications relating to this Agreement shall be jointly coordinated by the appointed point of contact.
- 3.3.3 The details of the appointed point of contact is in **Annex A** of this Agreement. Both parties agree to ensure that the point of contact details are updated. Amendments to the details of the point of contact do not require the review of the overall Agreement.

## 4. Agreement

- 4.1 This Agreement is concluded on {DD MMM of YYYY} by the following signatories:

---

**Name:**

**Designation:**

**Organisation:**

**Date:**

---

**Name:**

**Designation:**

**Organisation:**

**Date:**

{States and Data Originators to indicate the most appropriate officers to be the signatories of this SLA}



**ANNEX A**

**SERVICE LEVEL AGREEMENT**

**BETWEEN**

**{STATE AUTHORITY}**

**AND**

**{DATA ORIGINATOR}**

**ON THE SUPPLY OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION FOR  
THE PROVISION OF AERONAUTICAL INFORMATION SERVICES**

Effective from **{DD MMM of YYYY}**

**Clause 3.2.3.** The details of the appointed point of contact are as follows:

| <b>Organisation</b>                            | <b>Primary Contact</b>                                              | <b>Secondary Contact</b>                                            |
|------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>The AIS provider,<br/>{State Authority}</b> | <b>Name:</b><br><b>Designation:</b><br><b>Email:</b><br><b>Tel:</b> | <b>Name:</b><br><b>Designation:</b><br><b>Email:</b><br><b>Tel:</b> |
| <b>The Originator,<br/>{Data Originator}</b>   | <b>Name:</b><br><b>Designation:</b><br><b>Email:</b><br><b>Tel:</b> | <b>Name:</b><br><b>Designation:</b><br><b>Email:</b><br><b>Tel:</b> |

**{States may indicate details of the Points of Contact in an Annex to eliminate the need to sign again the Service Level Agreement if there changes to the Point of Contact from both parties to this Agreement.**

**APPENDIX C                    - ICARD REGISTRATION PROCEDURE – AUTHORIZED USERS**  
**- ICARD PROCESS FLOW CHART**

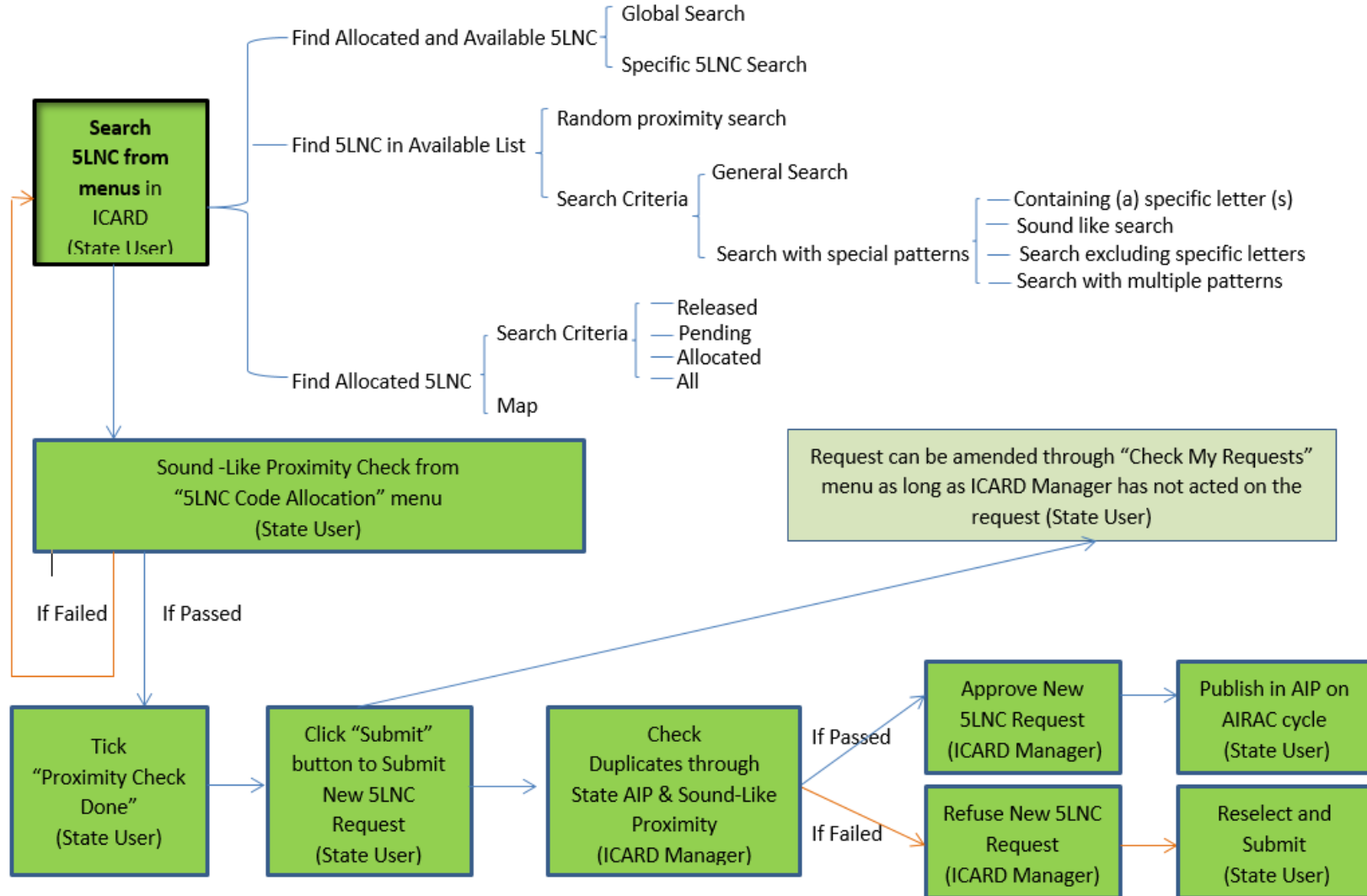
**ICARD REGISTRATION PROCESS**

There are **three** steps to registration as an ICARD 5LNC Planner.

- If you do not yet have user access to the ICAO Secure Portal, complete all three steps.
  - If you already have access to the ICAO Secure Portal but not to ICARD, go to Step 2.
  - If you already have access to ICARD, but are not registered as an ICARD\_5LNC\_PLANNER, go to Step 3.
1. Register for access to the ICAO Secure Portal (you may already have this access. If so, proceed directly to step 2.)
    - i. Go to <http://portal.icao.int/>
    - ii. Click on [Request an account](#)
    - iii. Follow the instructions. You will be notified when your registration for access to the ICAO Secure Portal is approved.
  2. Log in to the ICAO Secure Portal <http://portal.icao.int> with your secure login credentials, then register for ICARD as follows:
    - i. Click on the **PROFILE** link in your Secure Portal home page
    - ii. A new window will open. In the menu on the left of the new window, click on the **GROUP SUBSCRIBE/UNSUBSCRIBE** link.
    - iii. Enter the group name **ICARD** in the **SUBSCRIBE TO** field, and add the justification for your request in the **JUSTIFICATION** field.
    - iv. Click the **SUBMIT CHANGES** button.
  3. Register for ICARD\_5LNC\_PLANNER in the same manner as described in step 2: Log in to the ICAO Secure Portal <http://portal.icao.int> with your secure login credentials, then register for ICARD\_5LNC\_PLANNER as follows:
    - i. Click on the **PROFILE** link in your Secure Portal home page
    - ii. A new window will open. In the menu on the left of the new window, click on the **GROUP SUBSCRIBE/UNSUBSCRIBE** link.
    - iii. Enter the group name **ICARD\_5LNC\_PLANNER** in the **SUBSCRIBE TO** field, and add the justification for your request in the **JUSTIFICATION** field.
    - iv. Click the **SUBMIT CHANGES** button.

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Asia/Pacific Plan for Collaborative AIM – Appendix C



Flow Chart for New 5LNC Request

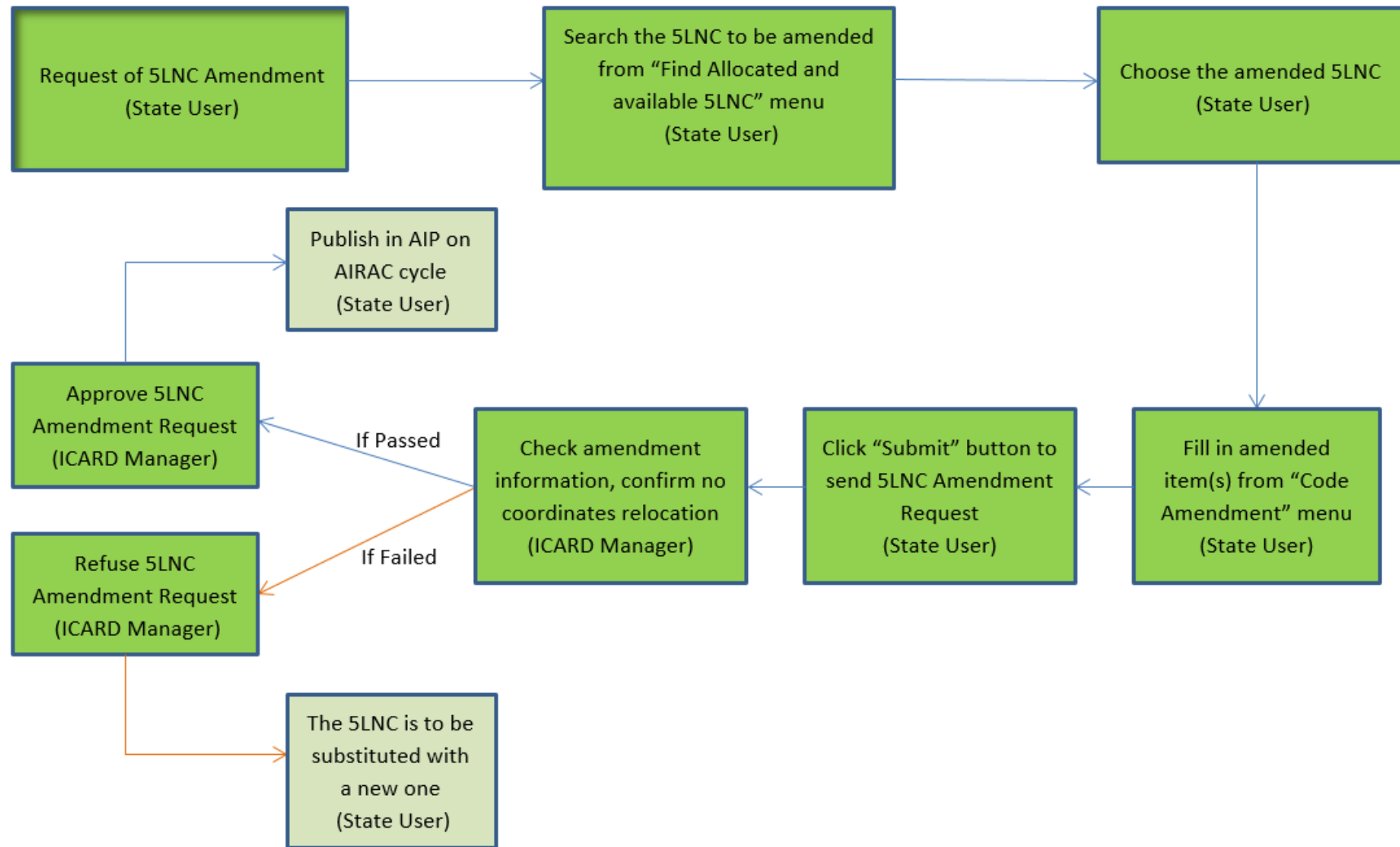
Asia/Pacific Plan for Collaborative AIM – Appendix C

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Notes:

- ❖ In all cases, the coordinates of the requested new 5LNC must be within the territory or any FIR of the requesting State. If this is not the case, the request will be refused.
- ❖ For 5LNCs on FIR boundaries, the requesting State has to coordinate with all State(s) concerned before the new 5LNCs are requested, implemented and published in relevant AIPs, in accordance with the AIRAC cycle and prior notification requirement of Annex 15.
- ❖ After the submission of new 5LNC request, State User's request has been successfully recorded BUT NOT YET approved by ICARD Regional Data Manager. States must wait for Notification of approval by the ICARD Regional Data Manager before proceeding to publication in AIP. If requests are urgent, ICARD Users should inform the ICARD Regional Data Manager by e-mail to expedite processing.

Asia/Pacific Plan for Collaborative AIM – Appendix C



Flow Chart for 5LNC Amendment

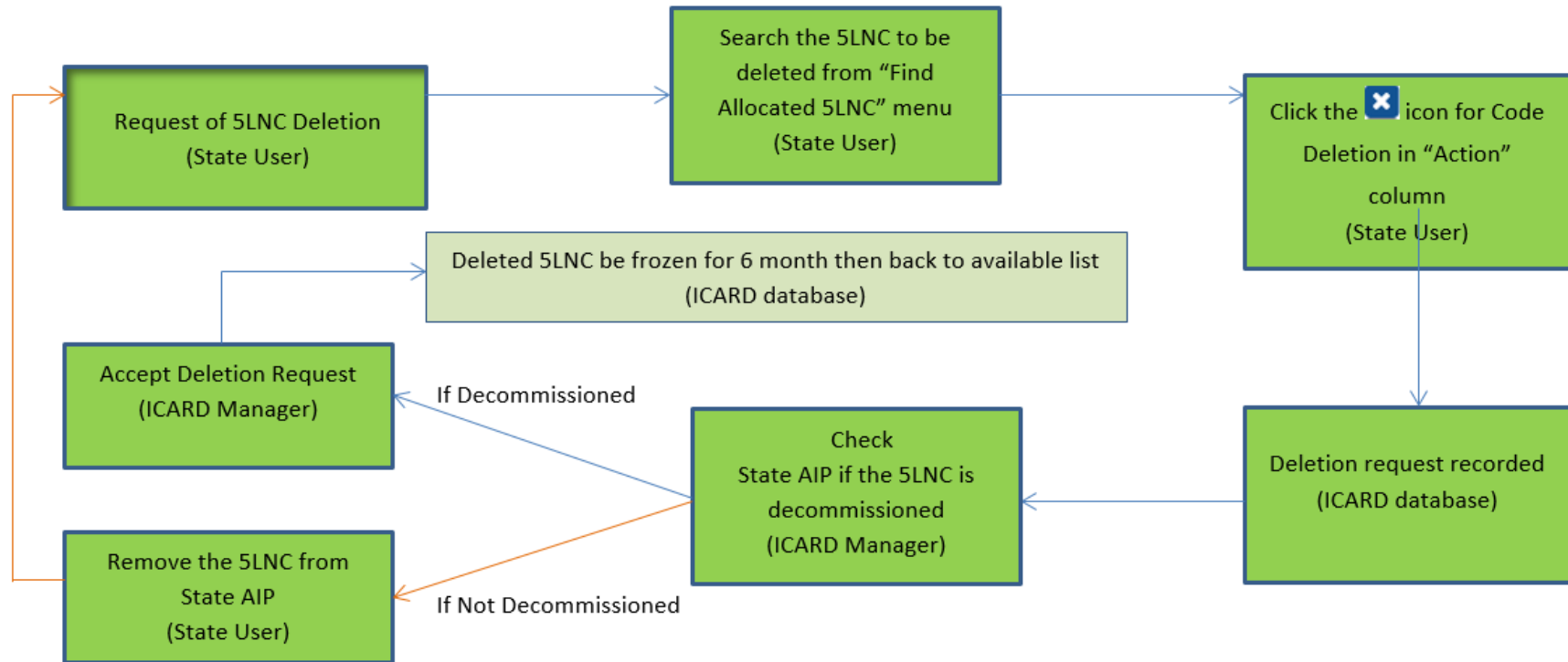
Asia/Pacific Plan for Collaborative AIM – Appendix C

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Notes:

- ❖ There are many types of amendments requested by State users, eg. changes of coordinates, comments, purpose, addition or deletion of coordinating States, etc. It is advised to add reason and purpose of the amendment in the “comment box”.
- ❖ If the request is the change of coordinates not published yet in States AIP, after proximity checking, if the result is fine, the request can be approved.
- ❖ For an implemented 5LNC is to be relocated, it must be substituted with a new 5LNC drawn from ICARD (Annex 11 Appendix 2 paragraph 3.4); and
- ❖ For 5LNCs on FIR boundaries, the State/Administration requesting State must coordinate with the State(s) concerned before the submission of amendment request.

Asia/Pacific Plan for Collaborative AIM – Appendix C



**Flow Chart for 5LNC Deletion**

Note:

Asia/Pacific Plan for Collaborative AIM – Appendix C

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- ❖ Before the submission of a 5LNC deletion request, the 5LNC must be deleted from relevant State AIP(s):
- ❖ For the 5LNC deletion which is at FIR boundary, make sure it has been coordinated between all States concerned and removed from all State AIPs involved; and
- ❖ Deleted 5LNC will remain frozen for a period of 6 months. After that time, it will automatically return to the reserve list of the ICARD database of the same ICAO Region.

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## AIM PERFORMANCE INDICATORS

The following indicators are based on the Performance Improvement Plan of the Asia/Pacific Regional Framework for Collaborative AIM, which should be read in conjunction with this form. The information provided will be used by the relevant Regional bodies to assess individual Administration and overall regional compliance with the AIM Plan and may be used by Administrations to internally evaluate their implementation status.

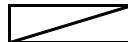
## INSTRUCTIONS

**1. Use the drop-down menu corresponding to each question to respond as follows:**

**Not implemented = 0      Partial implementation = 0.5      Full implementation = 1**

**2. Forward the completed form in MS Excel format to [apac@icao.int](mailto:apac@icao.int).**

*Indicate whether your administration has:*

|    |                                                                                                                                                                     |                                                                                     |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1  | Developed policy and enacted primary legislation and supporting regulations for Annex 14 and Annex 15 SARPS including:                                              |  |
| 1a | Establishment of an organizational structure for the safety oversight of aeronautical information service providers?                                                | 0                                                                                   |
| 1b | Requirements for aeronautical information/data originators;                                                                                                         | 0                                                                                   |
| 1c | Requirement for AIS quality management systems and processes to be established by all entities in the end-to-end AIS data chain                                     | 0                                                                                   |
| 2  | Established AIS either as a separate entity within, or separated from, the civil aviation administration?                                                           | 0                                                                                   |
| 3  | Developed competency requirements for AIS personnel, including English language proficiency requirements, supported by a program of regular performance assessment. | 0                                                                                   |
| 4  | Implemented regular programs of engagement with all stakeholders.                                                                                                   | 0                                                                                   |
| 5  | Developed and implemented quality management systems for aeronautical information.                                                                                  | 0                                                                                   |
| 6  | Provided full access to relevant ICAO Annexes and Documents to all personnel having responsibility for the reception, management,                                   | 0                                                                                   |
| 7  | Adapted competency development and performance assessment of AIS personnel to the needs of transition to AIM.                                                       | 0                                                                                   |
| 8  | Implemented and maintained quality management systems encompassing all functions of the AIS.                                                                        | 0                                                                                   |
| 9  | Established formal agreements between AIS providers and aeronautical data originators.                                                                              | 0                                                                                   |
| 10 | Implemented an internet-accessible electronic AIP generated from a digital database of aeronautical information.                                                    | 0                                                                                   |