



# ICAO

*International Civil Aviation Organization*

**Tenth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/10)**

*Bangkok, Thailand, 24 - 26 May 2023*

Agenda Item 10: Review ToR and update Subject/Tasks List

## **REVIEW TERMS OF REFERENCE OF ACSICG**

(Presented by Thailand and the Secretariat)

### **SUMMARY**

This paper reviews the Terms of Reference Aeronautical Communication Services Implementation Coordination Group.

## **1. INTRODUCTION**

1.1 The Terms of Reference of *Aeronautical Communication Services Implementation Coordination Group – (ACSICG)* was adopted by APANPIRG at its Twenty Fourth meeting through Decision 24/31 in June 2013:

### ***Decision 24/31 - Aeronautical Communication Services Implementation Coordination Group – (ACSICG)***

*That,*

- a) *the name “ATN Implementation Coordination Group” be replaced by “Aeronautical Communication Services Implementation Coordination Group” and*
- b) *the revised TOR of ACSICG provided in **Appendix B** to the Report on Agenda Item 3.4 be adopted.*

1.2 Considering the need to be in line with recommendations of AN Conf/12 on Aeronautical Fixed Service (AFS) and development of System Wide Information Management (SWIM) and requirements to provide communication and information management services for operational needs, APANPIRG agreed on the proposed name change of the group. The Terms of Reference revised for ACSICG is provide in the **Appendix A** to this paper.

## **2. DISCUSSION**

2.1 The ACSICG/1 meeting reviewed the Terms of Reference of ACSICG adopted by APANPIRG/24 meeting and did not identify the need to amend the Terms of Reference.

2.2 Recognizing the general and flexible Terms of Reference for the group, the meeting discussed whether need to propose more precisely to include air/ground data-link service into the terms of reference. The meeting recalled that air/ground data link was a part of the initial concept of Aeronautical Telecommunication Network (ATN) and considered appropriate to review the subject/tasks list and resource available in addressing air/ground data-link service in the work programme of the group.

2.3 The ACSICG/2 meeting noted that ACSICG was expected to review its TOR based on the new project approach once the APANPRIG new structure is adopted by APANPIRG. An Action Item was assigned to all ACSICG members to be ready for review of the TOR at ACSICG/3 meeting.

2.4 In September 2015, APANPIRG/26 noted that following the reorganization of APANPIRG structure and the revised Terms of Terms of the Sub Groups, **it is necessary for the Sub group to review the structure of its Working Groups and Task Forces and their Terms of Reference.** APANPIRG adopted the following Decision.

***Decision APANPIRG/26/66 - Review Terms of Reference of Contributory Bodies under the APANPIRG Sub Groups***

*That, the Secretariat, in consultation with Chairs of the existing Task Forces and Working Groups under the APANPIRG Sub Groups, reviews the TOR as necessary, and submits to the respective Sub Groups and APANPIRG/27 for further review and adoption.*

2.5 In accordance with *Decision APANPIRG/26/66*, the ACSICG/3 meeting held in May 2016 reviewed its TOR and proposed necessary changes. The CNS SG/20 endorsed the revised TORs of ACSICG, PBNICG and SURICG, the APANPIRG adopted the following consolidated Decision (SG/20-D2; SG/20-D6 and SG/20-D16) on the revised TORs of ACSICG, PBNICG and SURICG. The Revised TOR of ACSICG is provided in **Appendix B** for easy reference.

<b>Decision APANPIRG/27/47 : Revised TOR of Aeronautical Communication Services Implementation Coordination Group – (ACSICG); Performance Base Navigation Implementation Coordination Group (PBNICG) and Surveillance Implementation Coordination Group (SURICG).</b>	
That, the Revised Terms of References of ACSICG, PBNICG and SURICG provided in Appendix C to APANPIRG/27-WP/9 are adopted.	Expected impact: <input type="checkbox"/> Political /Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Result of review according to APANPIRG Decision 26/66	
When: 30-Sep-16	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> CAO APAC RO <input type="checkbox"/> CAO HQ <input checked="" type="checkbox"/> APANPIRG <input type="checkbox"/> Other:	

2.6 As the main forum and expert group to deal with Aeronautical Fixed Service (AFS) provision , ACSICG (new name of ATNICG since 2013) has coordinated the implementation of ATN in the Asia and Pacific Regions to satisfy performance requirements and address relevant implementation issues since its establishment, it also introduced the CRV concept in 2013, fostered the creation of SWIM TF in 2016.

2.7 ACSICG has contributed to the CNS Tables of APAC e-ANP Volume II, PART III — Communications, Navigation and Surveillance (CNS), including:

*General Regional Requirements*

Table CNS II-1 — Aeronautical Fixed Telecommunications Network (AFTN) Plan

Table CNS II-2 — Required ATN Infrastructure Routing Plan

Table CNS II-3 — ATS Direct Speech Circuits Plan

*Specific Regional Requirements*

Table CNS II-APAC-1 — ATS Inter-facility Data Communication (AIDC) Implementation Plan

2.8 The ACSICG also promoted and monitored the ATN/AMHS/AIDC implementation, maintained the publication of AFTN/ATSMHS Routining Directory for Asia and Pacific Regions, supported the concept of space based VHF, developed the Aeronautical Mobile Service (AMS) Strategy for the Asia/Pac Region, as well as the Strategy for Implementation of the Air-Ground Data Link in the Asia/Pac Region, supported the development of Asia/Pacific Region AFTN/AMHS-Based Interface Control Document for Air Traffic Flow Management, and exercised every effort to push the States to upgrade AMHS to support IWXXM traffic.

2.9 In APAC, SWIM TF is now separated from AFS domain to information management under CNS SG, CRV Operations Group (CRV OG) is looking after the CRV implementation as the cross-border MPLS G-G communications. ACSICG, as the parent body of CRV OG on the reporting path to APANPIRG through CNS SG, was established with a target to complete implementation of Asia and Pacific (APAC) Aeronautical Telecommunication Network (ATN) and voice/data service to support the evolving ICAO operational requirements for the dynamic exchange and management of aeronautical information, with the rapid change of communications technology to support G-G and A-G solution/application, it is deemed necessary to revisit the ToR of ACSICG to align the tasks and deliverables with the emerging requirements.

2.10 Through a joint effort by Thailand and the Secretariat, a proposed draft of ToR for ACSICG is provided in **Appendix C** to this paper.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) review the proposed TOR of the ACSICG provided in **Appendix C** against the new direction given by APANPIRG in fields of Aeronautical Communications Services; and
- c) discuss any relevant matters as appropriate.

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**REVISED TERMS OF REFERENCE FOR ACSICG**

Name and Terms of Reference

Name: “ATN Implementation Coordination Group (ATNICG)” be replaced by “Aeronautical Communication Services Implementation Co-ordination Group (ACSICG)”

Terms of Reference (TORs)

Complete implementation of Asia and Pacific (APAC) Aeronautical Communication Network (ATN) and ensure the underlying communications backbone continues to support the evolving ICAO operational requirements for the exchange and management of aeronautical information and data.

Composition

The Group will be composed of experts nominated by ICAO member States/Administrations in the Asia and Pacific Regions.

Reporting

The Group will present its report to APANPIRG through the CNS Sub-group.

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**A) Revised TOR of ACSICG**

**REVISED TERMS OF REFERENCE FOR AERONAUTICAL COMMUNICATION SERVICES  
IMPLEMENTATION CO-ORDINATION GROUP (ACSICG)**

Name and Terms of Reference

Name: ~~“ATN Implementation Coordination Group (ATNICG)”~~ be replaced by ~~“Aeronautical Communication Services Implementation Co-ordination Group (ACSICG)”~~

Terms of Reference (TORs)

Complete implementation of Asia and Pacific (APAC) Aeronautical ~~Telec~~ommunication Network (ATN) and voice/data service to support the evolving ICAO operational requirements for the dynamic exchange and management of aeronautical information. ~~and data.~~

Composition

The Group will be composed of experts nominated by ICAO member States/Administrations in the Asia and Pacific Regions.

Reporting

The Group will present its report to APANPIRG through the CNS Sub-group.

**B) Revised TOR of PBNICG**

**Revised Terms of Reference (TOR)  
APAC PBN Implementation Coordination Group (PBNICG)**

- 1) Serve as the primary APAC Regional Body to support PBN implementation, harmonization and prioritization with a goal to enhance safety and efficiency of aircraft trajectories and operations. The forum also takes into account activities related to the implementation of relevant ASBU elements, with initial focus on B0-CDO, B0-FRTO, B0-CCO, and B0-APTA. The following are the main activities envisaged:
  - a. Monitor PBN implementation ~~by~~ of APAC States/Administrations of PBN related Assembly Resolution and of the Seamless ATM items relating to Optimal trajectories, associated regional priorities and targets, and make recommendations as necessary in areas where ICAO and international organizations can provide assistance.

- b. Through ICAO, provide guidance to States to update their PBN implementation plans. Identify challenges within State PBN Implementation Plans and PBN implementation activities and advise States in addressing these challenges in a harmonized manner.
  - c. Taking a multi-disciplinary approach, promote more efficient flight operations and trajectories and, as necessary, address related topics including Air Traffic Services (ATS) route network.
  - d. Analyze and report operational benefits of PBN implementation and provide regular PBN implementation updated information to ICAO for inclusion in the air navigation reports and regional performance dashboard.
- 2) Identify issues/action items which are related to the regional implementation of PBN and related ASBU elements, and where appropriate, communicate with related regional groups.
  - 3) Review regional priorities/targets and relevant regional plans as related to PBN implementation.
  - 4) Identify, propose and facilitate where necessary, appropriate corrective action in the development and implementation of action plans by States to resolve identified deficiencies.
  - 5) Review and update Air navigation deficiencies in the field of PBN (as listed in the APANPIRG database);
  - 4.6) PBNICG will report to CNS/SG. CNS/SG will coordinate with ATM/SG.

### **Composition**

The PBNICG will be composed of multi-disciplinary experts with knowledge of and/or responsibility for PBN implementation nominated by ICAO member States/Administrations in the Asia and Pacific Regions and International Organizations. The PBNICG adopts project management principles as necessary. Secretariat support for the PBNICG will be provided by the ICAO APAC RSO with assistance from the and/or APAC RO and ANB. Representatives of ICAO programmes such as COSCAPs and FPP will be invited to participate as applicable.

The scale of the project is regional.

*Note: The PBNICG, while undertaking conducting the its tasks, should take into account of the work being undertaken by relevant ICAO Panels and other study/working groups.*

### **C) Revised TOR of SURICG**

#### **TERMS OF REFERENCE OF SURVEILLANCE IMPLEMENTATION COORDINATION GROUP (SURICG)**

Consists of objectives and deliverables as follows:

**The Objectives of the SURICG are to:**

- 1) *Ensure continuous and coherent development of the Surveillance parts of the Asia/Pacific Regional Air Navigation Plan (APAC e-ANP) in a manner that is harmonized with adjacent regions, consistent with ICAO SARPs, the Global Air Navigation Plan and the Global Aviation Safety Plan;*
- 2) *Facilitate the implementation of Surveillance systems and services identified in the Aviation System Block Upgrades (ASBU) modules, APAC ANP, and Asia/Pacific Seamless ATM Plan elements using the project management principles where appropriate; and*
- 3) *Review, identify and address major issues in technical, operational, safety and regulatory aspects to facilitate the implementation or provision of efficient Surveillance services in the Asia and Pacific Regions.*

**Deliverables to meet the Objectives:**

- 1) Progress report to be submitted to CNS SG addressing the SURICG deliverables (listed in 2 to 13 below);
- 2) Surveillance parts of the APAC ANP to be reviewed and aligned with work programme of States and, as necessary, amendment proposals prepared to update the APAC ANP to reflect changes in the operational and global requirements;
- 3) To review the outcome of the Surveillance Panel, **SAS Panel**, AN-Conf, APANPIRG and CNS SG related to surveillance, revise and update a tasks list and action items for the SURICG and formulate relevant Working Groups to work on those tasks / action items;
- 4) To develop regional targets/metrics for planning, implementation, measurement and monitoring of Surveillance systems and services;
- 5) To review and update the Surveillance Strategy by considering currently available and emerging technologies with respect to concept of operations, relative costing, technical and operational performance and maturity of alternative technology/solutions such as primary radar, secondary radar including Mode-S, ADS-B, Multilateration, ADS-C, multi-static **primary radar (MPSR) and existing and emerging technology for detection of UAS including RPAS**;
- 6) To study and identify applicable multilateration applications in the Asia and Pacific Regions considering:
  - Concept of use/operation
  - Required site and network architecture
  - Expected surveillance coverage
  - **Cost Benefits Analysis**
  - Recommended separation minimums
- 7) To study and identify applicable Mode S radar applications in the Asia and Pacific Regions considering:
  - Concept of use/operation

- Required site and network architecture
  - Expected surveillance coverage
  - Cost of system
  - Matching functionality required in ATC automation system
  - **the use of Enhanced MODE S data (DAPS)**
- 8) To develop an implementation plan for ~~near-term~~ ADS-B applications in the Asia and Pacific Regions including implementation target dates taking into account:
- available equipment standards
  - readiness of airspace users and ATS providers
  - identifying sub-regional areas (FIRs) where there is a positive cost/benefit for—~~near-term~~ implementation of ADS-B ~~OUT~~; and
  - developing a standardised and systematic task-list approach to ADS-B ~~OUT~~ implementation.
- 9) To coordinate ADS-B implementation plan and concept of operations with other ICAO regions where ADS-B implementation is going on and with relevant external bodies such as EUROCONTROL, EUROCAE, RTCA and Industry;
- 10) To encourage research and development, trials and demonstrations in the field of Surveillance and other relevant areas ~~and, as necessary~~;
- 11) Facilitate sharing of surveillance information and expertise between States through organizing educational seminars and providing guidance materials to educate States and airspace users;
- 12) To support the ICAO in making specific recommendations, developing guidance materials, aimed at improving the Surveillance services by the use of existing and/or new procedures, facilities and technologies; and
- 13) Draft Conclusions and Decisions to be formulated relating to matters in the field of Surveillance that come within the scope of the APANPIRG or CNS Sub-group work plan.

*[Note: The Implementation Coordination Group, while undertaking the tasks, should take into account of the work being undertaken by SAS, Surveillance Panels with a view to avoid any duplication.*

*The Implementation Coordination Group will report to CNS Sub-group and CNS Sub-group will coordinate with ATM Sub-group.]*

**Membership:**

All APAC member States/Administrations providing air navigation services in the Asia and Pacific Regions.

The Surveillance Implementation Coordination Group shall normally invite representatives of International Organizations recognized by the ICAO Council **and Industry partners as required by the group which** representing important civil aviation interests to participate in its work in a consultative capacity.

**D) Slightly revised TOR of SEA/BOB ADS-B Implementation Working Group**

**TERMS OF REFERENCE**

**SOUTHEAST ASIA AND BAY OF BENGAL SUB-REGIONAL  
ADS-B IMPLEMENTATION WORKING GROUP**

**Terms of Reference**

APANPIRG18 Conclusion 18/38 agreed to the establishment of a sub-regional ADS-B implementation Working Group in the South-East Asia area (SEA ADS-B WG) by the end 2007 to develop the *terms of cooperation* and an *implementation plan* for near-term ADS-B applications in the sub-region.

APANPIRG/22 Decision 22/34 agreed to rename the Southeast Asia Sub-regional ADS-B Implementation Working Group to “South East Asia and Bay of Bengal Sub-regional ADS-B Implementation Working Group” and tasked the new Working Group to develop a revised Terms of Cooperation and work programme in the sub-regions.

The outcome of the ADS-B Working Group will report to APANPIRG through the [Surveillance Implementation Coordination Group](#) ~~ADS-B Study and Implementation Task Force~~.

The SEA/BOB ADS-B WG shall

- (a) Develop **Terms of Co-operation** which will include :
- establishing model documents for possible use by States when :
    - Agreeing to share ADS-B data, and DCPC (such as VHF radio voice communication) capability between adjoining States for various ADS-B applications (including a sample letter of agreement); or
    - Establishing ADS-B avionics fitment mandates
  - identifying optimum coverage for ADS-B ground stations and associated VHF radio voice communication in the sub-regional FIR boundary areas.
- (b) Develop an **implementation plan** for near term ADS-B application which will delivery efficient airspace and increased safety on a regional basis that include :
- schedule and priority dates to bring into effect ADS-B based services taking into account;
    - Timing of any equipage mandates.
    - Timing of any ATC automation upgrades to support ADS-B.
    - Timing of commissioning of any ADS-B data and associated VHF radio voice communication facilities.

- consideration of major traffic flows
- (c) Coordination for implementation of the plan and identify implementation issues and solutions

**Composition:** The Group will be composed of experts nominated by States in the Sub-region including: Australia, Bangladesh, Brunei Darussalam, China, Hong Kong China Cambodia, India, Indonesia, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam, IATA and CANSO.

**Reporting:** The Group will present its report to [Surveillance Implementation Coordination Group](#)  
~~ADS-B Study and Implementation Task Force.~~

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**NOTES ON THE PRESENTATION OF THE PROPOSED AMENDMENT**

1. The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

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

**REVISED TERMS OF REFERENCE FOR AERONAUTICAL COMMUNICATION SERVICES IMPLEMENTATION CO-ORDINATION GROUP (ACSICG)**

The Objectives of the APAC ACSICG are to:

- 1) *Complete implementation of Asia and Pacific **Regions** (APAC) Aeronautical Telecommunication Network (ATN) and voice/data service to support the evolving ICAO operational requirements for the dynamic exchange and management of aeronautical information.*
- 2) *Ensure continuous and coherent development of the aeronautical communication services and infrastructure of the Asia/Pacific Regional Air Navigation Plan (APAC ANP) in a manner that is harmonized with adjacent regions, consistent with ICAO SARPs, the Global Air Navigation Plan and the Global Aviation Safety Plan.*
- 3) *Facilitate the implementation, enhancements, operation and maintenance of aeronautical communication services and infrastructure identified in the Aviation System Block Upgrades (ASBU) elements and Asia/Pacific Seamless Air Navigation Service (ANS) Plan (APSAP) elements using the project management principles where appropriate.*
- 4) *Review, identify and address major issues in technical, operational, safety and regulatory aspects to facilitate the implementation or provision of safe, secure, efficient and orderly aeronautical communication services to enhance systems robustness, resilience, interoperability and cybersecurity.*
- 5) *Encourage collaboration among ANSPs and keep abreast of the latest developments in aeronautical communication services and infrastructure to cope with forthcoming development and implementation so as to reduce operating costs and enable quick implementation of new requirements to cope with new challenges.*

**Deliverables to meet the Objectives:**

- 1) *To submit progress report to the ICAO APAC CNS Sub-group while keeping ATM Sub-group informed of addressing the APAC ACSICG deliverables (listed in 2 to 7 below);*

2) To support the ICAO in making specific recommendations and developing guidance materials, such as general/specific regional requirements, which aim at facilitating the implementation or provision of safe, secure and performance based aeronautical communication services by the use of existing and/or new procedures, facilities and technologies;

3) To review outcome of the AN-Conf., DGCA Conference, APANPIRG, CNS Sub-group, ATM Sub-group, RASMAG, FIT-Asia, SWIM TF and ATMAS TF related to aeronautical communication services and infrastructure, revise and update a tasks list and action items for the ACSICG;

4) To facilitate and coordinate the implementations of aeronautical communication services and infrastructures within the Asia/Pacific Regions to support existing and evolving aeronautical applications, including

- inter-facility communications,
- datalink implementations,
- air/ground communications
- ground/ground communications
- etc.

5) To Monitor the progress of aeronautical communication service and infrastructure implementation and provide regular updates to stakeholders.

6) To provide guidance on the implementation of aeronautical communication services in accordance with relevant standards and regulations, facilitate sharing of information and recommend the best industry practice to Asia/Pacific States and aviation stakeholders on the progress of the development, standardization, and implementation of ICAO provisions\* relating to aeronautical communication services and infrastructures.

7) To encourage research and development, trials and demonstrations of applications and technologies, and, as necessary, steer for the sharing of this information and expertise between States/Administrations through organizing educational seminars and symposia to educate States/Administrations and airspace users;

8) To formulate draft Conclusions and Decisions relating to matters in the field of aeronautical communication services that come within the scope of the APANPIRG, CNS Sub-group, ATM Sub-group, and RASMAG work plan;

9) To develop Asia/Pacific regional input and suggestions relating to the implementations and global standardization of aeronautical communication services and infrastructures to be submitted through the CNS Sub-group for APANPIRG consideration and endorsements, in support of ICAO technical panels' developments and implementations of ICAO SARPs; and

10) To collaborate with relevant international organizations (such as EUROCONTROL) for harmonisation of aeronautical communication services and infrastructures requirements.

#### **Timeframe for Deliverables:**

For deliverable items, the guidance materials and progress reports would be developed, updated/enhanced on an on-going basis and be made available as appropriate subject to review by the ACSICG. The life time of the ACSICG would be subject to review against the implementation and operation of all identified aeronautical communication services.

#### **Meeting:**

*The APAC ACSICG shall convene annually, to review progress and address any issues that arise during implementation, at least one face-to-face meeting per year, which is supplemented by teleconference meetings (e.g. MS Teams, ZOOM or WebEx) as appropriate.*

**Membership:**

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

**Reporting**

*The Group will present its report to APANPIRG through the CNS Sub-group.*

**Note:**

\*ICAO provisions mainly refer to the following

ICAO Annex 10,

Doc 9869: Performance-based Communication and Surveillance (PBCS) Manual,

Doc 9880: Technical Specifications for ATN using ISO/OSI Standards and Protocols;

Doc 9896: Manual on the Aeronautical Telecommunication Network (ATN) using Internet Protocol Suite (IPS) Standards and Protocol;

Doc 10037: Global Operational Data Link (GOLD) Manual

Doc 9673: Asia and Pacific Air Navigation Plan

Doc 7030: Regional Supplementary Procedures.

Doc 9750: Global Air Navigation Plan (GANP), <https://www4.icao.int/ganportal/>

Doc 10004: Global Aviation Safety Plan (GASP)

Asia/Pacific Seamless Air Navigation Service (ANS) Plan (APSAP)