

International Civil Aviation Organization

ICAO

Sixth Meeting of the Surveillance Implementation Coordination Group (SURICG/6)

Video Teleconference, 24 – 27 August 2021

- Agenda Item 9:** Review the Action Items from SURICG/5 Meeting
b) review SURICG ToR with integration of SEA/BOB ADS-B WG ToR

**REVIEW SURICG TERMS OF REFERENCE (ToR) WITH
INTEGRATION OF SEA/BOB ADS-B WG ToR**

(Presented by the Secretariat)

SUMMARY

This paper reviews the Terms of Reference (ToR) of SURICG in consideration of integrating the ToR of SEA/BOB ADS-B WG from its dissolution.

1. INTRODUCTION

1.1 This paper reviews the ToR of SURICG in consideration of integrating the ToR of SEA/BOB ADS-B WG from its dissolution. For reference, the last version of ToR of SEA/BOB ADS-B WG before its dissolution was updated from its 12th Meeting in year of 2016 as a result of updating the reporting body to SURICG since its formation. In addition, the ToR of SURICG has stayed the same since its formation. The ToRs of SEA/BOB ADS-B WG and SURICG are given at **Appendices A and B** to this paper respectively.

2. DISCUSSION

2.1. SURICG/5 discussed the future for the SEA/BOB ADS-B WG, and agreed to formulate the following Decision and it was further endorsed in CNS SG/24:-

Decision CNS SG/24/12 (SURICG/5/2) - Dissolution of SEA/BOB ADS-B WG	
What: Noting that most of the tasks outlined in the TOR have been achieved and the completion of residual part of action items will be performed by SURICG, That, the SEA/BOB ADS-B WG be dissolved.	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: The SEA/BOB ADS-B WG terms of reference have been completed and pending action items will be performed by SURICG.	Follow-up: <input type="checkbox"/> Required from States
When: 4-Dec-20	Status: Adopted by Sub-group
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> APANPIRG <input checked="" type="checkbox"/> Other: SURICG	

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2.2. Following the Decision above, the complete ToR of SEA/BOB ADS-B WG is listed below together with relevant/corresponding ToR of SURICG for comparison and review by the Meeting.

ToR of SEA/BOB ADS-B WG	Relevant ToR in SURICG / Remarks
<p><u>Terms of Reference</u></p> <p>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 <i>terms of cooperation</i> and an <i>implementation plan</i> for near-term ADS-B applications in the sub-region.</p> <p>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.</p> <p>The outcome of the ADS-B Working Group will report to APANPIRG through the Surveillance Implementation Coordination Group.</p>	<p>N/A</p>
<p>The SEA/BOB ADS-B WG shall</p> <p>(a) Develop <u>Terms of Co-operation</u> which will include:</p> <ul style="list-style-type: none"> • establishing model documents for possible use by States when : <ul style="list-style-type: none"> ○ 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 	<p><i>Deliverable Item (11): Facilitate sharing of surveillance information and expertise between States through organizing educational seminars and providing guidance materials to educate States and airspace users;</i></p> <p>The template could be found under https://www.icao.int/APAC/Documents/edocs/cns/sampleagreementrev.doc</p> <p>The template has been developed in Appendix 3 of AIGD endorsed by SURICG</p>

<ul style="list-style-type: none"> • identifying optimum coverage for ADS-B ground stations and associated VHF radio voice communication in the sub-regional FIR boundary areas. 	<p><i>Deliverable Item (8): To develop an implementation plan for ADS-B applications in the Asia and Pacific Regions including implementation target dates taking into account:</i></p> <ul style="list-style-type: none"> - available equipment standards - readiness of airspace users and ATS providers - identifying sub-regional areas (FIRs) where there is a positive cost/benefit for implementation of ADS-B; and - developing a standardised and systematic task-list approach to ADS-B implementation. <p>A coverage map for surveillance and VHF DCPC has been included in Seamless ANS Plan Version 3.0</p>
<p>(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:</p> <ul style="list-style-type: none"> • schedule and priority dates to bring into effect ADS-B based services taking into account; <ul style="list-style-type: none"> ○ 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 	<p><i>Deliverable Item (8): To develop an implementation plan for ADS-B applications in the Asia and Pacific Regions including implementation target dates taking into account:</i></p> <ul style="list-style-type: none"> - available equipment standards - readiness of airspace users and ATS providers - identifying sub-regional areas (FIRs) where there is a positive cost/benefit for implementation of ADS-B; and - developing a standardised and systematic task-list approach to ADS-B implementation. <p>Implementation of ADS-B has been one of the agenda items in SURICG meetings.</p>
<p>(c) Coordination for implementation of the plan and identify implementation issues and solutions</p>	<p><i>Objective (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.</i></p>
<p>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,</p>	<p>N/A</p>

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India, Indonesia, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam, IATA and CANSO.	
<p>Reporting: The Group will present its report to Surveillance Implementation Coordination Group</p> <p style="text-align: center;">-----</p>	N/A

2.3. From the comparison table above, it shows that the current ToR of SURICG could cover that of SEA/BOB ADS-B WG.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) review ToR of SURICG as appropriate, in particular to cover the ToR of SEA/BOB ADS-B WG; and
- c) discuss any relevant matter as appropriate.

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.

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

**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 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 implementation of ADS-B; and*
 - *developing a standardised and systematic task-list approach to ADS-B 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; ,*

- 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 represent important civil aviation interests to participate in its work in a consultative capacity.
