



**26<sup>th</sup> MEETING OF COMMUNICATIONS /  
NAVIGATION AND SURVEILLANCE SUB-GROUP OF APANPIRG  
WEB-CONFERENCE 5 – 9 SEPTEMBER 2022**

**Review Report of the Seventh Meeting of the  
Surveillance Implementation Coordination Group  
(SURICG/7)**

**Presented by SURICG Co-Chair**



# High-level Overview on SURICG/7

- a) 24 - 27 May 2022 via video teleconference
- b) 117 participants from 21 States/Administrations
- c) 4 International Organizations (IATA, ICCAIA, IFATCA, RTCA), PCCW Global (CRV Service Provider), and a sponsoring service provider - Chengdu Civil Aviation Air Traffic Control Science & Technology Co., Ltd (CDATC)
- d) 12 working papers, 17 information papers, 1 presentation/flimsy
- e) Major outcomes :
  - i. 1 Decision adopted by SURICG/7
  - ii. 2 Draft Conclusions – for adoption by CNS Sub-Group/26
  - iii. 1 Draft Conclusion – for consideration by CNS Sub-Group/26 and adoption by APANPIRG/33



# Revised TOR of Mode S Downlinked Aircraft Parameters Working Group (Mode S DAPs WG)

- a) Mode S DAPs Working Group was established under SURICG in March 2018, with target for completion of deliverables by March 2024 (within 6 years). It has been working on various tasks related to harmonizing the planning and implementation of Mode S and DAPs for the region.
- b) SURICG/7 reviewed and deliberated the proposal from DAPs WG to rename the Group, and update its Terms of Reference (ToR) to better reflect the current work scope that covers not only DAPs, but also Mode S surveillance in general.
- c) After deliberation, SURICG/7 considered it appropriate to rename the Group from “Mode S DAPs” to “Mode S and DAPs” Working Group, and the relevant contents of the ToR were updated accordingly:



# Revised TOR of Mode S & DAPs Working Group (Adopted by SURICG/7)

## Decision *SURICG/7/2 (DAPs WG/5/2)* - Revised ToR of Mode S and DAPs Working Group

**What:** That, the Revised Terms of Reference of the Mode S and DAPs Working Group provided in **Appendix B** to the Report be adopted.

Expected impact:

- Political / Global
- Inter-regional
- Economic
- Environmental
- Ops/Technical

**Why:** SURICG/7 suggested that DAPs Working Group be renamed, and its Terms of Reference be amended to better reflect the current work scope that covers not only DAPs but also Mode S radars.

Follow-up:

- Required from States

**When:** 27-May-2022

Status: adopted by SURICG

**Who:**  Sub groups  APAC States  ICAO APAC RO  ICAO HQ  Other



# Amendments to Mode S DAPs IGD

- a) Mode S DAPs WG/5 reviewed and proposed improvements to Mode S DAPs Implementation and Guidance (IGD). The main amendments include:
- Introduce ADS-B DAPs, their benefits, differences from SSR DAPs , avionics capability to broadcast ADS-B DAPs, applications in ATM automation system;
  - Revision of description on use of DAPs data for meteorological applications; and
  - Inclusion of guidance on measurement of 1030/1090 MHz usage.
- b) SURICG/7 reviewed and supported the proposed amendments. A Draft Conclusion was formulated to adopt the updated Mode S DAPs IGD Edition 4.0 provided in **Appendix A** to this paper for endorsement by CNS/26:



# Amendments to Mode S DAPs IGD

<p><b>Draft Conclusion CNS SG/26/XX (SURICG/7/1) - Mode S DAPs IGD 4.0</b></p>	
<p><b>What:</b> That, the Mode S DAPs Implementation and Operation Guidance Document Edition 4.0 provided in <b>Appendix A</b> to this Paper be adopted.</p>	<p><b>Expected impact:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Political / Global</li> <li><input type="checkbox"/> Inter-regional</li> <li><input type="checkbox"/> Economic</li> <li><input type="checkbox"/> Environmental</li> <li><input checked="" type="checkbox"/> Ops/Technical</li> </ul>
<p><b>Why:</b> The revised draft includes ADS-B DAPs and adds guidance on the measurement of 1030/1090 MHz usage.</p>	<p><b>Follow-up:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Required from States</li> </ul>
<p><b>When:</b> 9-Sep-2022</p>	<p><b>Status:</b> To be adopted by Sub Group</p>
<p><b>Who:</b> <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> APANPIRG <input type="checkbox"/> ICAO HQ</p> <p><input type="checkbox"/> Other:</p>	



## Amendments to ADS-B AIGD

- a) SURICG/7 reviewed and updated “ADS-B Implementation and Operations Guidance Document” (AIGD) with inclusion of the following new contents described in WP/11 (Japan) and WP/07 (Singapore & ICCAIA) of the SURICG/7.
- Reasonableness tests to verify decoded position of ADS-B
  - Guidance on measuring 1090MHz congestions and mitigating measures
- b) SURICG/7 formulated a Draft Conclusion to adopt the updated AIGD Version 15 provided in **Appendix D** to this paper for endorsement by CNS SG/26 meeting.



# Amendments to ADS-B AIGD

**Draft Conclusion CNS SG/26/XX (SURICG/7/4)** - Revised ADS-B Implementation and Operations Guidance Document (AIGD)

**What:** That, the revised ADS-B Implementation and Operations Guidance Document (AIGD) provided in **Appendix D** to this Paper, which consolidated all change proposals during SURICG/7, be adopted as Version 15

**Expected impact:**

- Political / Global
- Inter-regional
- Economic
- Environmental
- Ops/Technical

**Why:** Updates from SURICG/7

**Follow-up:**

- Required from States

**When:** 9-Sep-2022

**Status:** To be adopted by Sub Group

**Who:**  Sub groups  APAC States  ICAO APAC RO  APANPIRG  ICAO HQ  
 Other:



# Revised Regional Surveillance Strategy

- a) Surveillance Strategy for APAC Region is regularly reviewed to cope with the prevailing circumstances and developments
- b) Last review was conducted in Apr 2019 with last version of Surveillance Strategy for APAC Region adopted by APANPIRG/30 in Nov 2019. SURICG/7 reviewed the Surveillance Strategy and proposed the following amendments:
  - To monitor 1090 MHz congestion by means of routine measurements, both terrestrial and airborne
  - To encourage sharing of surveillance data via regional provisions, such as CRV
  - To enhance surveillance services by multilayers surveillance provisions to fulfil contingency surveillance requirements
- c) SURICG/7 formulated the revised Strategy provided in **Appendix C** to this paper as following Draft Conclusion for consideration by CNS SG/26 and adoption by APANPIRG/33:



# Revised Regional Surveillance Strategy

**Draft Conclusion CNS SG/26/XX (SURICG/7/3) - Revised Surveillance Strategy for the APAC Region**

**What:** That, the Revised Surveillance Strategy for the APAC Region provided in **Appendix C** to this paper be adopted.

**Expected impact:**  
 Political / Global  
 Inter-regional  
 Economic  
 Environmental  
 Ops/Technical

**Why:** To reflect the outcome of the latest development in surveillance technology.

**Follow-up:**  
 Required from States

**When:** 23-Nov-2022

**Status:** Draft to be adopted by PIRG

**Who:**  Sub groups  APAC States  ICAO APAC RO  ICAO HQ  Other : SURICG



## Other Reviews and Discussions

- SURICG/7 reviewed and discussed other topics as summarized below:
  - a) Reviewed outcomes of relevant and previous meetings on surveillance, and action items for SURICG.
  - b) Established an ad-hoc group within “Surveillance Study Group” (in lieu of a contributory body), named “Surveillance Sharing in SWIM Trial Implementation Adhoc Group (S3TIG)” , to work on trial on concept for surveillance data sharing via SWIM, and collaborate with SWIM TF.
  - c) Continued the work of an established ad-hoc group within SURICG to discuss performance parameters of radar system and relevant test methods, with a view to generating a guidance document for the region.
  - d) Worked on update for regional surveillance coverage map (presented as WP/22 in this meeting) for incorporation into APAC Seamless ANS Plan



# Other Reviews and Discussions

- SURICG/7 reviewed and discussed other topics as summarized below:
  - d) Provided updates on:
    - work being done by ICAO Surveillance Panel on proposals for amendment (PfA) for updating Annex 10 Vol III & IV, and Doc 9924 “Aeronautical Surveillance Manual”
    - RTCA’s latest development of surveillance related standards
    - surveillance implementation activities from States, Space based ADS-B Service Provider, and CRV Service Provider
  - e) Informed of **recurring inconsistencies** in Aircraft Address & Target Identification between ADS-B / MLAT / Mode S data & flight plan for some aircraft flying across member States, despite Conclusion **was formulated in CNS SG/25** and **repeated efforts** to address the inconsistencies. The following is suggested :
    - A workshop to be organized by ICAO with support from Hong Kong China and IATA to educate airspace users and aviation community
    - Invite Hong Kong China to present the latest update (as WP/30 in this meeting) to draw attention from CNS SG
    - Consolidate the information into guidance materials



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# Thank You

