



ICAO

*International Civil Aviation Organization*

**THE THIRD MEETING OF MODE S DOWNLINKED  
AIRCRAFT PARAMETERS WORKING GROUP  
(MODE S DAPs WG/3)**

Web-conference, 12 – 15 May 2020

---

**Agenda Item 5:** Review the Action Items from DAPs WG/2 Meeting

**REVIEW OF ACTION ITEMS**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the Action items developed by DAPs WG/2 meeting in March 2019. The meeting is expected to review and further update the action items.

**1. INTRODUCTION**

1.1 The list of action items for DAPs WG was developed by the DAPs WG/2 meeting in March 2019. It was incorporated into the meeting report of DAPs WG/2 as Appendix C and was also provided to SURICG/4 meeting for review as Appendix C of the Working Paper 06 by co-chairs of DAPs WG.

1.2 The list of action items is developed and owned by the working group, and it needs to be updated by this meeting.

**2. ACTION BY THE MEETING**

2.1 The meeting is invited to:

- a) note the list of action items provided in **Appendix A**, update the information in **Appendix B**,
- b) review and update the list of action items for the WG with reference to **WP/03** of this meeting.

-----

**LIST OF ACTION ITEMS**

<b>No.</b>	<b>Subject</b>	<b>Forum Raised</b>	<b>Status / Target Date</b>	<b>Remarks / follow-up</b>	<b>Action Party</b>
1.	Introduction of this <b>List of Action Items</b>	DAPs WG/2	Drafted and updated by DAPs WG/2	To track the tasks assigned to the working group.	Co-chairs
2.	II code coordination process and method	DAPs WG/2	DAPs WG/3	A joint offline expert group to develop the material and submit a working paper for consideration whether to be included into IGD.	China, Malaysia and Singapore
3.	Develop a DAPs Implementation Status table for APAC region	DAPs WG/2	On-going basis	To update the information in the table as necessary.	Member States
4.	PRF, interrogation pattern coordination	DAPs WG/2	DAPs WG/3	To prepare working paper in this subject.	Member States with experience on this subject
5.	Study of Data Source of DAPs	DAPs WG/2	DAPs WG/3	Based on IP05 of DAPs WG/2, to provide a basic and accurate briefing on the avionics systems relevant to DAPs application.	China
6.	Harmonization with air space users	SURICG/2	On-going basis	Invite avionics manufacturers and airlines to share experience.	Co-chairs and hosting States
7.	Roadmap	DAPs WG/2	On-going basis	To continuously monitor the developments of available equipment standards, readiness of regulator, airspace users and ATS providers so as to develop and update the DAPs roadmap for Asia/Pacific region.	Co-chairs, ICAO

-----

**DAPS IMPLEMENTATION STATUS IN THE APAC REGION**

<b>No.</b>	<b>State/ Administration</b>	<b>Mode-S Surveillance Facilities and ATM System Readiness</b>	<b>Operational Status</b>	<b>Remark</b>
<b>1</b>	<b>CHINA</b>	<p>68 Mode-S capable radars.</p> <p>Now ATM automation systems could process the DAPs including the position altitude and Mode 3/A Code.</p> <p>By 31 Dec., 2021, ATM system ready to process almost all the DAPs.</p>	<p>Radars and DAPs application in ATM system for the first stage are operational</p>	
<b>2</b>	<b>INDIA</b>	<p>25 Mode-S capable Radars have already been installed.</p> <p>All ATM systems except Chennai are capable to process DAPs.</p>	<p>Out of 25 Mode-S capable Radars, 23 radars are presently operational. All DAPs capable ATM systems are operational.</p>	<p>Commissioning of remaining 02 Mode-S capable radars is under process.</p>
<b>3</b>	<b>JAPAN</b>	<p>2 Mode-S capable radars</p> <p>ATM system is in evaluation process for DAPs.</p>	<p>Radars are operational and DAPs application in ATM is in evaluation.</p>	

Mode DAPs WG/3  
Appendix B to WP/07

No.	State/ Administration	Mode-S Surveillance Facilities and ATM System Readiness	Operational Status	Remark
4	MALAYSIA	<p><b>Surveillance Facilities:</b> <b>Peninsular Malaysia</b> Operational as of March 2019: 3 SSR with Mode-S Stations and 2 ADS-B Ground Stations are in operational.</p> <p><u>Near Future (Less than 5 years):</u> Additional of 2 Stations SSR with Mode-S will be operational in end of year 2019.</p> <p><b>Sabah &amp; Sarawak</b> Operational as of March 2019. 2 SSR with Mode-S Stations in operation.</p> <p><u>Near Future (Less than 5 years):</u> Additional of 3 SSR with Mode-S Stations and 4 ADS-B Ground Stations will be operational in end of year 2020.</p> <p><b>ATM System Readiness:</b> DAPs Capable*. Fully ready in 2022</p>	<p><b>Surveillance Facilities:</b> <b>Peninsular Malaysia</b> ADS-B mandate is scheduled in end of year 2019.</p> <p><b>Sabah &amp; Sarawak</b> <b>ADS-B mandate is scheduled in end of year 2020</b></p> <p><b>Full Mode-S Mandatory</b> Shall be completed by 2021.</p>	<p><b>Note:</b> As of March 2019, CAA Malaysia is embarking Optimization Programme of CNS/ATM as part of CAA Malaysia Transformation.</p> <p>Under this programme, CAA Malaysia is to achieve 100% of Mode-S Coverage by year 2021 in Peninsular Malaysia, Sabah &amp; Sarawak.</p> <p>*Currently, DAPs information is evaluated for safety case studies and data analytic.</p> <p>CAA Malaysia is in supports of the DAPs implementation in APAC Region. In view of this, the earliest for full implementation of DAPs in Malaysia will be in 2025 to make way for infrastructures, procedures and technical competency readiness; coordination and bilateral agreement with all stakeholders that will be affected and benefited from this implementation are in agreement.</p>

Mode DAPs WG/3  
Appendix B to WP/07

No.	State/ Administration	Mode-S Surveillance Facilities and ATM System Readiness	Operational Status	Remark
5	<b>PHILIPPINES</b>	12 Mode-S capable radars  ATM system Capable of DAPs.	All radar systems are Operational ATM systems are likewise operational with DAPs capability disabled	Temporarily turned off/disabled due to some issues as advised by the vendor (Thales).
6	<b>SINGAPORE</b>	3 Mode-S capable radars  ATM system ready to process DAPs.	Radars and DAPs application in ATM system are operational	
7	<b>THAILAND</b>	12 Mode-S EHS RADARs The new ATM system, TMCS project, is capable to process DAPs.	The TMCS project is planned to fully operate by the end of 2019.	
8	<b>VIET NAM</b>	- 2 Mode-S capable radars - 2 ATM system ready to process DAPs. - 13 ADS-B stations	- Radars and ATM are capable of handling Mode S DAPs but not yet officially operation. - ADS-B is on operation	Vietnam is deploying following projects in 2019 -2021: - New 5 SSR Mode Station (EHS), - 10 ADS-B stations; - 01 MLAT system, - New Ho Chi Minh ATCC and new Da Nang ATCC (with new modern ATM system).

-----