



Virtual Meeting ADS-B/ANP/1

(Teleconference, 02 – 04 March 2022)

**First NAM/CAR/SAM Meeting/Workshop on
Planning the Implementation of Automatic
Dependent Surveillance - Broadcasting (ADS-B)
(ADS-B/ANP/1)**



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(Teleconference, 02 – 04 March 2022)

Tentative Schedule y Provisional Agenda





TENTATIVE SCHEDULE

| HOUR (UTC) | Wednesday 02 Marzo 2022 | HOUR (UTC) | Thursday 03 Marzo 2022 | HOUR (UTC) | Friday 04 Marzo 2022 |
|-----------------------|---|-----------------------|-----------------------------------|-----------------------|---------------------------------|
| 13:00 13:15 | Registration of participants Opening | 13:30 15:30 | Agenda Item 4 | 13:30 15:30 | Agenda Item 6 |
| 13:15 15:30 | Agenda Item 1 | | | | |
| 15:30 15:45 | Break | 15:30 15:45 | Break | 15:30 15:45 | Break |
| 15:45 16:45 | Agenda Item 2 | 15:45 16:45 | Agenda Item 5 | 15:45 16:45 | Agenda Item 7 |
| 16:45 17:30 | Lunch Break | 16:45 17:30 | Lunch Break | 16:45 17:30 | Lunch Break |
| 17:30 19:00 | Agenda Item 3 | 17:30 19:00 | Agenda Item 5 | 17:30 19:00 | Agenda Item 7 Closing |



Provisional Agenda

Agenda item 1: Guides and documents published on ADS-B implementation

Agenda item 2: Instructions for use of the Template of Volume III of the Regional Air Navigation Plan
- CAR/SAM ANP

Agenda item 3: ASBU Threads and Elements/Modules of CNS Technology and Services

Agenda item 4: Information required for the ADS-B implementation planning

Agenda item 5: Specific Concept of Operations (CONOPS) of each State for ADS-B implementation

Agenda item 6: Review of the information regarding aeronautical surveillance planning of the
CAR/SAM ANP Volume II

Agenda item 7: Status of ADS-B implementation in the States of the CAR/SAM Region



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Agenda Item 1

Guides and documents published on ADS-B implementation





Events held:


- 2017: Workshop/Seminar on ADS-B implementation (Lima, 13-16 November)
<https://www.icao.int/SAM/Documents/2017-ADSB/Sumario%20de%20discusion%20ADS%20B.pdf>
- 2018: ADS-B Implementation and Regulation Meeting for the NAM/CAR/SAM Regions (Mexico City, 26-30 November)
<https://www.icao.int/NACC/Pages/meetings-2018-adsb.aspx>
- 2019: Automatic Dependent Surveillance – Broadcast OUT Implementation Meeting (ADS-B/OUT/M) (Ottawa, 21-23 August)
<https://www.icao.int/NACC/Pages/meetings-2018-adsbout.aspx>




Events held:

- 2021: Automatic Dependent Surveillance – Broadcast OUT Technical On-Line Workshop for the NAM/CAR Regions (ADS-B/OUT/W) (26-29 January)
<https://www.icao.int/NACC/Pages/meetings-2021-adsb.aspx>
- 2021: ICAO/Industry Workshop: ADS-B & WAM/MLAT Technologies (10 February)
<https://www.icao.int/NACC/Pages/meetings-2021-adsb1.aspx>
- 2011: ICAO/Industry Workshop: Surveillance Technologies (17 February)
<https://www.icao.int/NACC/Pages/meetings-2021-adsb2.aspx>





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North American, Central American and Caribbean (NACC) Office

THE AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B)
CONCEPT OF OPERATIONS (CONOPS)
Development by Surveillance ICAO Task Force for NAM/CAR Region
Supported by SAM States

Mexico City, 28 April 2015
Revised on August 2019

| DECISION ADS-B/OUT/M/03 | REGIONAL NAM/CAR OPERATIONAL CONCEPT OF ADS-B IMPLEMENTATION |
|---|--|
| <p>What:</p> <p>That, due that the updating of the document CONCEPT OF OPERATIONS (CONOPS) required a revision and update process aligned with the regional needs and that it was reviewed and updated with the provided comments from the States and Industry. The document was approved by the Meeting and it is recommended that the ICAO NACC Regional Office distribute the final version of the document to the NAM/CAR States, Brazil and French Guyana, due to the fact that this SAM States participated in the last revision of the document, and to the ANI/WG members.</p> | <p>Expected impact:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Operational/Technical |
| <p>Why:</p> <p>It is important that the States know and integrate to their processes the ADS-B implementation the information of this document.</p> | |
| <p>When: Immediately</p> | <p>Status: <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input checked="" type="checkbox"/> Completed</p> |
| <p>Who: <input type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input type="checkbox"/> Other:</p> | <p>ICAO NACC Regional Office</p> |



BACKGROUND

- ICAO Assembly 40 endorsed the Sixth Edition of the Global Air Navigation Plan (GANP)
- The Thirteenth Air Navigation Conference (ANConf/13) issued recommendations related to the preparation of Vol. III of the Regional Air Navigation Plans.
- Conclusion GREPECAS 19/05

| CONCLUSION GREPECAS 19/05 | COMPLETION OF CAR/SAM AIR NAVIGATION PLAN (ANP) VOLUME III |
|--|---|
| <p>What:</p> <p>That,</p> <p>a) States adopt the “Instructions for the use of template of air navigation regional plan – ANP CAR/SAM, Volume III”;</p> <p>b) States appoint or ratify their focal points/work teams to act as counterparts of the Secretariat and communicate such nomination to the correspondent Regional Office by 30 November 2021;</p> <p>c) States ensure the active participation of focal points/work team in the activities assisted by the Secretariat for the development of Volume III; and</p> <p>d) States and Regional Offices complete the development and approval of Vol III in the first semester of 2022.</p> | <p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input checked="" type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Operational/Technical</p> |
| <p>Why:</p> <p>To achieve a planning aligned with the Global Air Navigation Plan (GANP), according to the needs of efficiency, balance between demand and capacity of the States, to ensure interoperability of the air navigation services and facilities of the CAR SAM Regions with the rest of the world, for an orderly and safe development of regional aviation and to be able to benefit from new technologies in a cost-efficiently manner.</p> | |
| <p>When: By 31 July 2022</p> | <p>Status: <input checked="" type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed</p> |
| <p>Who: <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input type="checkbox"/> Other:</p> | |



ANP → eANP



ORGANIZACION DE AVIACION CIVIL INTERNACIONAL
INTERNATIONAL CIVIL AVIATION ORGANIZATION

LISTA / LIST NO. 6

GUIA DE ENCAMINAMIENTO AFTN
AFTN ROUTING DIRECTORY

REGION SAM
SAM REGION

DICIEMBRE
2004
DECEMBER

Example

Former AFTN Routig Directory


| A DESTINO / DESTINATION | ORIGEN /ORIGIN | | | | | | |
|-------------------------------|----------------|-----------|-----------|---------------------|----------|---------------------|---------------------------|
| | 1 MPPC | 2 SAEZ | 3 SBBR | 4 SCSC | 5 SEU | 6 SGAS | 7 SKBO |
| A | KA | <u>sk</u> | SP sb | KA sv | SP sa | SP sk | SA sb SV sp |
| B | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| C | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| D | KA | <u>sk</u> | SB sp | GO le | SP sa | SP sk | SB sa SV sp |
| E | KA | <u>sk</u> | SB sp | LE sv | SP sa | <u>SL</u> <u>sp</u> | SB sa SV sp |
| F | KA | <u>sk</u> | SB sp | GO le | SP sa | SP sk | SB sa SV sp |
| G | KA | <u>sk</u> | SB sp | GO le | SP sa | SP sk | SB sa SV sp |
| H | KA | <u>sk</u> | SB sp | GO le | SP sa | SP sk | SB sa SV sp |
| K | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| L | KA | <u>sk</u> | SB sp | LE sv | SP sa | <u>SL</u> <u>sp</u> | SB sa SV sp |
| MB | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MD | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MG | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MH | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MK | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MM | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MN | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MP | (N) | (n) | SB sp | KA sv | SP sa | SP sk | SB sa <u>MP</u> sp |
| MR | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MS | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MT | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MU | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MW | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MY | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| MZ | KA | <u>sk</u> | SB sp | KA sv | SP sa | SP sk | SB sa SV sp |
| N | KA | <u>sk</u> | SP sb | KA sv | SP sa | SP sk | SA sb SV sp |
| O | KA | <u>sk</u> | SB sp | LE ka | SP sa | SP sk | SB sa SV sp |
| P | KA | <u>sk</u> | SP sc | KA sv | SP sa | SP sk | SB sa SV sp |
| R | KA | <u>sk</u> | SP sc | KA sv | SP sa | SP sk | SB sa SV sp |
| SA | KA | <u>sk</u> | (N) (n) | SA sp | SA sp | SP sk | SA sb <u>SP</u> <u>sv</u> |
| SB | KA | <u>sk</u> | SB sp | (N) (n) | SA sp | SP sk | SB sa <u>SB</u> sp |
| SC | KA | <u>sk</u> | SC sp | SA sp | (N) (n) | SP sk | SA sb SP sc |
| SE | <u>SA</u> | <u>ka</u> | SP sc | SP <u>sv</u> | SP sa | (N) (n) | SB sa SE sp |
| SG | KA | <u>sk</u> | SG sb | SG sa | SA sp | SP sk | (N) (n) SP sv |
| SK | <u>SA</u> | <u>ka</u> | SP sc | <u>SA</u> sp | SP sa | SK sk | SB sa (N) (n) |
| SL | KA | <u>sk</u> | SL sp | <u>SL</u> sp | SA sp | SP sk | SA sb SP sc |
| SM | KA | <u>sk</u> | SB sp | <u>SM</u> <u>sv</u> | SP sa | <u>SL</u> sp | SB sa SV sp |
| SO | KA | <u>sk</u> | SB sp | SO <u>sv</u> | SP sa | <u>SL</u> sp | SB sa SV sp |



Example

Digital Application

AMHS Management



View Operational Data

- ▶ Network Inventory
- ▶ Routing Directory
- ▶ Address Management
- ▶ User Capabilities Management
- ▶ Statistics
- ▶ Static Report
- ▶ COM Charts

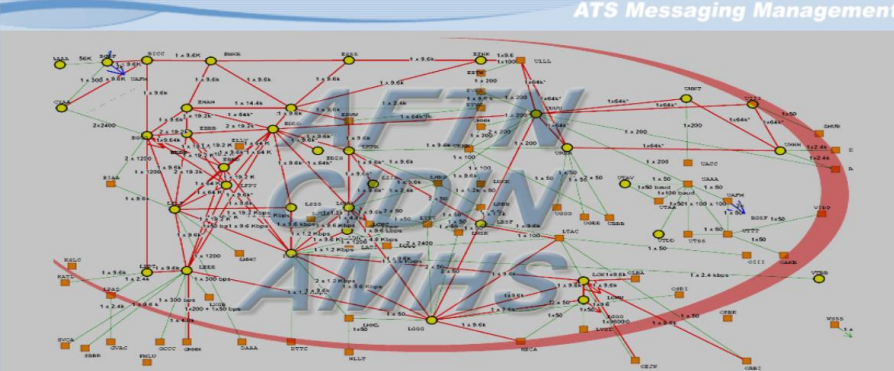
Miscellaneous Functions

- ▶ Support Functions
- ▶ View Bulletin Board
- ▶ View AIRAC Cycle
- ▶ AMC Operator Details
- ▶ Documentation Part of AMRD
- ▶ Path Function
- ▶ Extended Path Function
- ▶ Convert AFTN Address
- ▶ AFTN Country Code and AMHS PRMD
- ▶ View ANP Locations
- ▶ Regions
- ▶ Send E-Mail to User Groups
- ▶ Archived Data

AMHS MD Contacts

- ▶ Persons and Contacts

ATS Messaging Management



Welcome : ALMEIDA DA SILVA Francisco
You last logged in on : 23/02/2022 at 13:31 UTC
Bulletin Board last updated on : 25/02/2022

Current day in the AIRAC cycle : 2
AMC phase : Data Entry Phase
There are currently 0 COM Centre(s) locked

OPER.234 Day 1

Dear Colleagues,

All comm Centres have been unlocked. Changes for OPER.234 can now be proposed.

Best regards,
 AMC Team
 amc.operator@nats.co.uk

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North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANKS