



INTERNATIONAL CIVIL AVIATION ORGANIZATION

Third Meeting of APIRG Infrastructure and Information Management Sub-Group (IIM/SG/3)  
(Virtual Meeting, 12-14 October 2020)

**Agenda Item 4: Report on progress made by the surveillance project team of the IIM**

**Title of the Working Paper**

*((Presented by Ghana- Surveillance project team leader))*

SUMMARY
This working paper reports on the progress of work by the Surveillance Project team of the IIM. It gives information about the working methods of the project team as well as work done so far. <b>Action by the meeting is at paragraph 3</b>
<b>REFERENCE(S):</b> <ul style="list-style-type: none"><li>▪ APIRG 22 REPORT</li><li>▪ IIM 2 REPORT.</li></ul>
<b>Related ICAO Strategic Objective (s):</b> <i>A – Safety, B – Air Navigation Capacity and Efficiency, D – Economic Development of Air Transport, and E – Environmental Protection.</i> <b>Related ASBU KPIs &amp; B0 Modules:</b> <b>B0-ASUR, B0 -SNET, B0-ASEP</b>

**1. INTRODUCTION**

- 1.1 Following the change of working method of APIRG into project approach, a number of project teams were formed and approved by APIRG, including the surveillance project team. The objectives of the team were to, in the framework of the technologies Roadmap for Surveillance defined in the GANP and AFI strategy, assist States in the implementation of:
- a) Secondary Surveillance Radar Mode S (**SSR**) in accordance with the operational requirements of Annex 11, Air Traffic Service, Doc 4444 Procedures for air Navigation services and the provision of Annex 10 Volume IV and its supporting Documents
  - b) Automatic Dependent Surveillance - Contract (**ADS-C**)
  - c) Automatic Dependent Surveillance - Broadcast (**ADS-B**) ground and space-based as well as Multilateration (MLAT)
  - d) AFI ADS-B Transponder requirements mandate in line with APIRG 22 conclusion 22/41
  - e) Surveillance Data Sharing.

- 1.2 The scope of our work was identified as, the provision of Air Traffic Surveillance to cover all areas of routing and homogeneous traffic flow in the AFI Region in all Centers involved in the provision of Air Navigation Service for International Civil Aviation.

## 2. DISCUSSION

- 2.1 The work of the project team has mainly been by electronic mail and telephone exchanges. The project team recalled the side meeting of the surveillance team held in Nairobi, in 2017, during which members present, decided that it would be necessary to carry out a survey of existing surveillance infrastructure in the AFI region. The purpose of this proposed survey was to establishment a baseline for work. In order to make progress with the survey, it was necessary to come out with a questionnaire
- 2.2 The questionnaire would among others enable us gather information on the deployed surveillance infrastructure, i.e. Radar, ground-based and space-based ADS-B, ADS-C and MLAT / WAM and assist in the identification of the availability and reliability of these systems in the region as well as access the possibility of sharing surveillance data between neighbouring States.
- 2.3 In view of this, the team has so far, finalized a questionnaire, which would assist in obtaining relevant data to use as a reference in the work. The questionnaire is attached.
- 2.4 In addition to the questionnaire, the surveillance team has identified initial linkages with the following IIM projects:
- COMS 1-AIDC
  - Cyber Security
- The surveillance project team is of the view that, as the work progresses, more linkages with other IIM projects would be identified.
- 2.5 As part of the APIRG/22 report Conclusion 22/40:
- 2.5.1 States and aircraft operators are to ensure that all aircraft operating within the AFI RVSM airspace are equipped with ADS-B 1090MHz Extended Squitter Transponder by June 2023 (AIRAC date).
- 2.5.2 An assessment for Go or No-Go Decision be conducted on 2022 targeting 90% aircraft equipped with Transponder Extended Squitter 1090 for AFI RVSM airspace as the threshold
- 2.5.3 States and aircraft operators to ensure that all aircraft operating within the AFI Region airspace are equipped with ADS-B 1090 MHz Extended Squitter Transponder by January 2025 (AIRAC date).
- 2.6 The avionics equipage required to be installed in aircraft (Commercial and General Aviation) to validate the above-mentioned mandate carry an associated capital expenditure.
- 2.7 Due to the financial difficulty emanated out of the COVID - 19, many aircraft operators will find it challenging to carry out this activity.
- 2.8 The AFI ADS-B aircraft transponder requirements mandate extension will enable appropriate planning by the AFI region.



2.9 An Initiative for Surveillance Data Sharing in the airspaces along the Gulf of Guinea has begun among Four (4) ANSPs namely, ASECNA, Ghana Civil Aviation Authority (GCAA) Nigeria Airspace Management Agency (NAMA) and The Roberts FIR. The four ANSPs have signed some initial Memorandum of Cooperation (MoC) and have a roadmap for implementation. This Roadmap has also been affected by the COVID-19 pandemic. Though this initiative does not cover the entire AFI region, it is the belief that the experiences gained by such an initiative can be shared with other states in the hope that it would encourage them to follow suite.

**3. Challenges:**

- 3.1 The main challenge of the project team has been that respondents to the questionnaire, which would provide a good baseline for our work has not been received from States.
- 3.2 The COVID -19 pandemic has also had a major impact on the participation of team members.

**4. ACTION BY THE MEETING**

- 4.1 The meeting is invited to:
  - a) Take note of the information provided in this paper.
  - b) Encourage states/ANSPs to kindly provide responses to the questionnaire as soon as possible for the team to make progress.
  - c) Request ICAO (ESAF and WACAF) regional offices to assist in circulating and receiving the questionnaires from all possible respondents.
  - d) Endorse the proposal for the IIM/SG/3 to submit a working paper to APIRG/23, recommending the review of the APIRG/22 conclusion 22/40 and the associated compliance timelines at APIRG’s discretion.

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