

*International Civil Aviation Organization*



**ELEVENTH MEETING OF THE SOUTHEAST  
ASIA AND BAY OF BENGAL SUB-REGIONAL  
ADS-B IMPLEMENTATION WORKING GROUP  
(SEA/BOB ADS-B WG/11)**



New Delhi, India 17 – 19 November 2015

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**Agenda Item 4: Report on ground system and avionics performance monitoring and improvement in compliance**

**MONITORING AND BLACK LISTING NON PERFORMING ADS-B AVIONICS**

(Presented by India)

**SUMMARY**

This paper presents information about the software based monitoring and blacklisting of non performing ADS-B avionics system being developed for the effective implementation and monitoring of the promulgated ADS-B avionics transmission mandate.

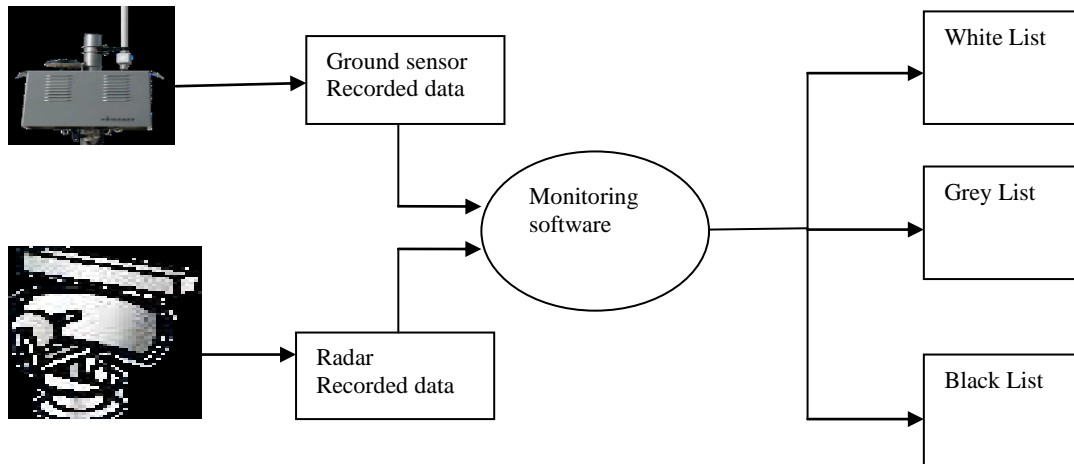
**1. INTRODUCTION**

1.1 Airports Authority of India is soon to implement ADS-B based surveillance in its defined airspace. So it is necessary to implement a system to detect any violation of the mandated ADS-B transmission requirements by aircrafts. It is possible that the aircrafts are unaware that the position information transmitted by them are not complying to the reported accuracy and integrity quality factors. And they may not have means to verifying them and therefore complying to the mandate will be difficult unless the ANSP assess with the Reference RADAR and intimate them.

**2. DISCUSSION**

2.1 The recorded data from ADS-B ground sensor and from the RADAR belonging to a particular airframe, whose ADS-B avionic performance is to be assessed, is fed to the monitoring software. The Monitoring software will assess the ADS-B position reports with the reference RADAR and when the position reports complying with the reported NUC values, the respective airframe, identified by its registration, is added to the white list.

2.2 The airframe whose position reports do not comply with its reported NUC values will be added to the Black List. There may be some avionics which may emit position reports as good as that of reference RADAR but the reported NUC values may be of lower value. These airframes shall be added to grey list.



2.3 This list of airframes will be disseminated to all ATC centers and respective airline operators to take appropriate actions.

2.4 On priority basis the aircrafts flying in the ADS-B airspace will be the first to be brought into the lists and when the ADS-B based surveillance is extended to other airspaces other airframes will also be covered. Any new airframe flying in to the ADS-B airspace will be brought into the lists on priority basis.

2.5 For continuous monitoring and updating, all airframes in the lists will be reassessed with a periodicity as deemed appropriate.

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters and suggest improvements as appropriate.

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