

*International Civil Aviation Organization*



**AUTOMATIC DEPENDENT  
SURVEILLANCE – BROADCAST SEMINAR  
AND FOURTEENTH MEETING OF  
AUTOMATIC DEPENDENT  
SURVEILLANCE – BROADCAST (ADS-B)  
STUDY AND IMPLEMENTATION TASK  
FORCE (ADS-B SITF/14)**



Christchurch, New Zealand, 14 – 17 April 2015

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**Agenda Item 4: Review States' activities and interregional issues on implementation of ADS-B and multilateration**

**THE STUDY OF THE NECESSITY OF ADS-B FORWARD FITMENT**

(Presented by Japan)

**SUMMARY**

ADS-B Forward fitment proposal across the board in Asia Pacific was discussed at the CNS SG/18 meeting in 2014 and each States were urged to consult with domestic authority concerned regarding the proposed forward fit mandate. Before the consultation for stakeholders about this matters, Japan Civil Aviation burrow, JCAB, studied the necessity of ADS-B Forward fitment in Japan.

This paper presents the result that the regional decision should consider the diversity of different regional characteristics and should not require ADS-B Forward fitment across the board in Asia Pacific.

**1. INTRODUCTION**

1.1

ADS-B Forward fitment proposal in the Asia Pacific was discussed at the CNS SG/18 meeting in 2014 and each States were urged to consult with domestic authority concerned regarding the proposed forward fit mandate. Before the consultation for stakeholders about this matters, Japan Civil Aviation burrow, JCAB, studied the necessity of ADS-B Forward fitment in the Asia Pacific regions. This WP reports the results.

*ADS-B OUT Forward Fit*

*That, States/Administrations in APAC Region mandate that air transport aircraft with a maximum take-off weight of more than 5,700 kg and an individual certificate of airworthiness first issued on or after 8 January 2018 (two years after the European forward fitment mandate is effective) be equipped with ADS-B avionics compliant with Version 2 ES (equivalent to RTCA DO260B).*

## 2. DISCUSSION

### 2.1 About the study of ADS-B Forward fitment

JCAB has already established 39 terminal radar and 21 air route surveillance radar, and those covers whole of Japan. As a result, JCAB is able to provide the ATC separation with 3NM or 5NM by depending of the radar range. (See Fig1)

Of course, there is a plan to use the ADS-B information in JAPAN. However, for the time being, JCAB will utilize the information as a reinforcement of accuracy in the area limited to the SSR covering. In this condition ATC separation will not improve. In other words, JCAB has a policy to provide a safe service even if any operator's aircraft are capable or incapable of ADS-B function.

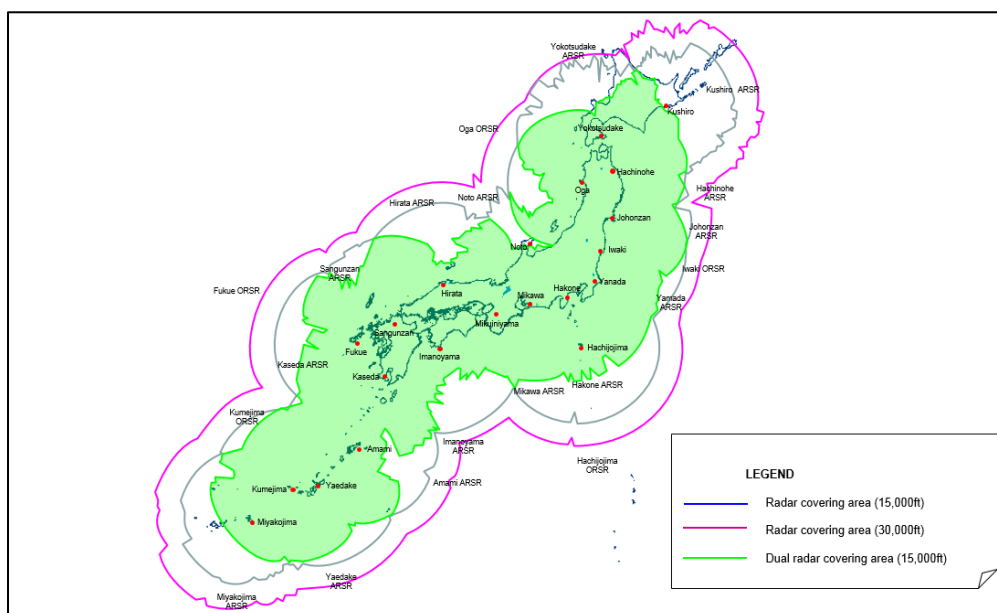


Figure-1 Radar Location and Coverage (Air Route)

### 2.2 The reason why JCAB need not mandate ADS-B immediately

JCAB does not require the immediate ADS-B mandatory. The reason is as following:

- ATS provider; ATC separation minima is not able to be reduced but to be the same, even if ADS-B information is fused with radar or WAM data. This does not lead to the situation that has been faced with the need for mandatory;
- Aircraft operators; There is no difference in service to receive for aircraft operators whether their aircrafts are equipped with ADS-B or not. This means there is no benefits for them currently;
- Regulators; There is no reason to amend domestic law for mandating ADS-B;
- Global tracking; The draft proposal for global tracking is not limited to ADS-B SAT. Each stakeholder can select the service as global tracking;

- TOR of APANPIRG; The TOR of APANPIRG does not mention about establishing the regulation, only mentions facilitating;

With these reasons JCAB does not accept and decide the ADS-B mandatory.

2.3 Activity for the improvement of the equipage rate

JCAB has a plan to use ADS-B information in future and our stance is not different from the idea of promoting by the proposed country. Especially we agree that forward fitment does not require little or possibly no additional cost and reduce the cost impact for aircraft operators.

But JCAB cannot agree with regulating by mandatory for increasing of equipage rate. JCAB is promoting another approach. JCAB has a future road map, CARATS. For the introduction or promotion of the roadmap JCAB discussed with ATC providers, regulator, and operators about the future operation. And we introduce the future system after agreement among the stakeholders. This method is very successful.

We believe we can share the international trend and indicate a policy of region through this meeting. It is appropriate to present a recommendation of the region to the operators and it will effect to increase the equipage rate.

**3. CONCLUSION**

3.1 Currently there is no need of ADS-B Forward fitment in Japan. In this condition JCAB cannot consult with stakeholders about imposing the restrictions of ADS-B Forward fitment.

The regional decision should consider the diversity of different regional characteristics and should not require ADS-B Forward fitment across the board in Asia Pacific.

**4. ACTION BY THE MEETING**

4.1 The meeting is invited to: discuss the matters below;

- a) recognize and note that there is a country that does not need a mandatory of ADS-B immediately;
- b) note the information contained in this paper; and
- c) discuss any relevant matters as appropriate.

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