**THE FORTY-FIRST MEETING OF THE**

**INFORMAL PACIFIC ATC CO-ORDINATING GROUP**

**(IPACG/41)**

(Kyoto, Japan 16 – 17 September 2015)

Agenda Item 5: Communications/Navigation/Surveillance (CNS) Issues

**ADS‑C Periodic Reporting Interval Change**

(Presented by Civil Aviation Bureau of JAPAN)

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| SUMMARY This paper provides the result of the safety assessment analysis for the RNP4 capability aircraft and information relevant to the use of automatic dependent surveillance – contract (ADS-C) for global flight tracking (GFT) and search and rescue (SAR). A 14 minute ADS‑C reporting interval will be specified for all FANS 1/A aircraft in the Fukuoka Flight Information Region (FIR), regardless of required navigation performance (RNP) capability. |

# Introduction

## At the IPACG Providers meeting PM15 which was held in Anchorage, Alaska, USA, 2-4 June 2015, JCAB provided the information regarding extension of ADS-C periodic position report interval for RNP 4 aircraft in Fukuoka FIR. Currently, it is set to 10 minutes, but will be extended to 14 minutes based on the safety assessment. (Refer to Attachment A for details.)

## Following a special multidisciplinary meeting regarding global flight tracking (MMGFT) and the Second High-level Safety Conference (HLSC 2015), the Air Navigation Commission (ANC) considered a proposal for amendment (PfA) to Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, to develop a performance-based aircraft tracking requirement, specifically, for a routine aircraft tracking solution that could be implemented in the near future.

## At the HLSC 2015, the following text was proposed to be added to Annex 6:

# \*\*\*\*\*\* PfA to Annex 6 \*\*\*\*\*\*

3.3 Aircraft Tracking

3.3.2 The operator shall track the position of an aeroplane at least every 15 minutes for the portion(s) of the inflight operation(s) that is planned in an oceanic area(s) under the following conditions:

a) the aeroplane has a maximum certificated take-off mass of over 27 000 kg and a seating capacity greater than 19; and

b) where an ATS unit obtains aeroplane position information at greater than 15 minute intervals.

*Note.— Access to ATS aeroplane position data meets aeroplane tracking requirements.*

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# Discussion

## In response to HLCS 2015 on GFT, Airservices Australia commenced a trial to determine the effectiveness of reducing the Automatic Dependent Surveillance – Contract (ADS-C) periodic reporting interval to monitor flights through procedurally-controlled airspace. The default reporting interval in these areas is currently 30 minutes and, in the initial stage of the trial, this was manually updated by the controller to a 10 minute interval. Airservices Australia has determined a 14 minute reporting interval (currently required for the application of the 30 nautical mile longitudinal separation minimum) to be applied for all aircraft in both Melbourne and Brisbane FIRs.

## The Australian trials are exploring the use of current ADS-C capability for compliance to the GFT requirement. However, ADS-C is also used for ATM operations which are predicated on ADS‑C performance (such as the application of 30 nautical mile (NM) longitudinal separation minimum). Such monitoring could affect ADS-C and controller-pilot data link communications (CPDLC) performance, particularly within high traffic density oceanic airspace and if operators establish their own separate ADS‑C connection with aircraft. The effects of GFT capability on the FANS 1/A system, including sub-networks, used by ADS‑C and CPDLC for ATM operations will need to be monitored.

## The ICAO approach to approve the PfA to Annex 6 and expedite implementation using ADS C as compared to the other options presents a cost-effective and practical solution to an identified problem, and so is expected to quickly increase FANS 1/A equipage. Once implemented, communication and surveillance performance appropriate for the type of ATM operations will need to continue to be assured on a per operator basis for each aircraft type/system in its fleet. The PBCS framework will ensure appropriate performance consistent with ATM operations while at the same time allow FANS 1/A solutions for GFT.

## In support of GFT and to minimize the potential negative effects on FANS 1/A CPDLC and ADS‑C performance, the JCAB is planning to apply an ADS‑C periodic reporting interval to 14-minutes for all FANS 1/A aircraft in the Fukuka FIR, regardless of RNP capability. This change is tentatively scheduled to be effective in November 2015.

# Action by the meeting

## The meeting is requested to:

1. note the content of this information paper; and
2. discuss any relevant matters as appropriate.

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