

Telephone: (65) 6595 6051
AFS: WSSSYNYX
Facsimile: (65) 6441 0221
caas_singaporeais@caas.gov.sg
www.caas.gov.sg

REPUBLIC OF SINGAPORE
AERONAUTICAL INFORMATION SERVICES
CIVIL AVIATION AUTHORITY OF SINGAPORE
SINGAPORE CHANGI AIRPORT
P.O. BOX 1, SINGAPORE 918141

AIC

2/15
26TH JUNE

AIR TRAFFIC FLOW MANAGEMENT OPERATIONAL TRIAL FOR FLIGHTS ARRIVING INTO SINGAPORE CHANGI AIRPORT

1 GENERAL

1.1 Purpose

1.1.1 The purpose of this Aeronautical Information Circular (AIC) is to provide information on the commencement of the Distributed Multi-Nodal Air Traffic Flow Management (ATFM) Operational Trial on 29 June 2015.

1.2 Introduction

1.2.1 ATFM is a service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that Air Traffic Control (ATC) capacity is utilized to the maximum extent possible, and that the traffic volume is compatible with the capacity. It is a means to ensure optimised balance between the fast rising air traffic demand and available system capacity while capacity enhancement initiatives continue to address the long term needs of Air Traffic Management.

1.2.2 The Distributed Multi-Nodal ATFM concept was developed by Civil Aviation Authority of Singapore (CAAS) and Airbus ProSky (APS) with inputs from other Air Navigation Service Providers (ANSPs) and stakeholders to provide a suitable and effective means to effect cross-border ATFM for the Asia Pacific Region.

1.2.3 Several ANSPs, airspace users and airport operators within the Asia Pacific Region will be embarking on the ATFM Operational Trial to validate the Distributed Multi-Nodal ATFM concept in the operational environment. The trial will provide a platform to refine operational procedures, communication framework and harmonise rules to achieve the objectives of an effective ATFM. The trial will also provide the opportunity to study the effectiveness of ATFM measures to enable optimised flight operations which will support potential region wide cross-border ATFM implementation.

2 CONCEPT

2.1 The Distributed Multi-Nodal ATFM Network concept involves each ANSP leading and operating an independent, virtual ATFM node supported by interconnected information sharing framework. Air traffic flow into an airport is managed by balancing demand and capacity through the application of Calculated Take-Off Time

(CTOT) at the departure airport. The CTOT is derived from the Calculated Landing Time (CLDT) based on the Estimated Elapsed Time defined in the flight plan. The Collaborative Decision Making (CDM) processes between Airspace Users, Airport Operators and ANSPs support the implementation of ATFM measures for maximum operational efficiency.

- 2.2 The ANSPs that are actively involved in the ATFM Operational Trial include Aeronautical Radio of Thailand (AEROTHAI), Civil Aviation Administration of China Air Traffic Management Bureau (CAAC ATMB), Civil Aviation Authority of Singapore (CAAS), Department of Civil Aviation Malaysia (DCA) and Hong Kong Civil Aviation Department (CAD).

3 OPERATIONAL TRIAL TIMELINE

- 3.1 The Operational Trial will be conducted in phases. The first phase will commence on 29 June 2015. Phase 1 will be conducted in three stages which progressively tests CTOT management with increasing complexity.

- i. Phase 1: Distributed ATFM for optimized air traffic flow at airports (June 2015 – June 2016)
- Stage 1 – CTOT Communications (June – September 2015)
 - Stage 2 – CTOT Adherence (October 2015 – January 2016)
 - Stage 3 – Advanced CTOT Management (February – June 2016)

- ii. Phase 2: Advanced Distributed ATFM (Commencement date to be determined)

- 3.2 Stage 1 involves CTOT communication framework testing without affecting live flight operations. Stage 2 and Stage 3 require CTOT adherence by all flights when ATFM measures are applied at arrival airports. CTOT compliance will be tested progressively in these stages.

4 AIRSPACE USERS REQUIREMENTS

- 4.1 With effect from 29 June 2015 0000UTC, it is recommended that all airspace users adhere to the following for accurate demand prediction:

- File FPLs at least 3 hours before EOBT
- Submit CHG/DLA messages when EOBT changes by more than 15 minutes
- Prompt submission of CNL messages

5 FURTHER INFORMATION

- 5.1 Detailed information on the ATFM Operational Trial is available at https://secure.metronaviation.com/WSSS_atfm-ops-trial.

- 5.2 For queries, please e-mail to the CAAS ATFM Unit at [CAAS ATFMU@caas.gov.sg](mailto:CAAS_ATFMU@caas.gov.sg)