International Civil Aviation Organization

The Sixth Meeting of ICAO Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/6)

Bangkok, Thailand, 06 – 10 June 2016

Agenda Item 6: Development of Regional ATFM Framework

PROGRESS OF THE TECHNICAL SUB-GROUP OF THE DISTRIBUTED MULTI-NODAL ATFM OPERATIONAL TRIAL

(Presented by Australia, China, Hong Kong China, Singapore, Thailand, CANSO, and IATA)

SUMMARY

This paper shares progress of the Distributed Multi-Nodal ATFM Operational Trial Project Technical Sub-Group. The outputs of the Technical Sub-Group could be used to contribute to the objectives of the ICAO Asia-Pacific ATFM Information Requirement Small Working Group (ATFM-IR/SWG).

1. INTRODUCTION

1.1 The Distributed Multi-Nodal ATFM Operational Trial project that started in June 2014 has attracted the participation of ANSPs, Airport Operators (AOs) and Airspace Users (AUs) from 10 States/Administrations in the Asia Pacific Region. The on-going operational trials aim to validate the Distributed Multi-Nodal ATFM Network Concept of Operation in an operational environment while providing opportunities for stakeholders to move towards harmonised regional implementation of Cross-Border ATFM.

1.2 The Core Team members of the project, consisting of Australia, China, Hong Kong China, Singapore, Thailand CANSO, and IATA, recognised the need for the development of an ATFM system framework to support the operational requirements for cross-border ATFM. Acknowledging the challenges associated with multiple ATFM systems within the Distributed Multi-Nodal ATFM Network concept, the project established a Technical Sub-Group in December 2015.

1.3 The Technical Sub-Group works with the Core Team to draft the technology requirement roadmap and Interface Control Document (ICD) for system-to-system linkage. The output from the Technical Sub-Group serves to strengthen the multi-nodal ATFM concept while contributing towards the on-going work to harmonize the technical requirements for cross-border ATFM implementation in the Asia Pacific region.

2. DISCUSSION

2.1 Recognizing that ANSPs will acquire or develop different ATFM systems to support cross-border ATFM operations, the Sub-Group attempted to harmonize as much as possible the way in which Calculated Take-Off Time (CTOT) and associated information such as flight plan data, resource data (e.g., airport and airspace capacity), ATFM measure data, and CDM actions can be disseminated and presented to stakeholders while working toward an ideal end-state where information flows smoothly between Multi-Nodal participants. The Sub-Group focused on 3 main topics: a) System Access, b) Minimum User Requirements, and c) End-State ATFM System-to-System Interface.

a) System Access – During the trials, ATFM information such as CTOT could be accessed via the different approaches that are available such as web portals, e-mails, excel spreadsheet and AFTN (e.g., SAM, SRM, SLC) messages for the near term. End state minimum system access has been initially identified as single point of access web-based, although the Technical Sub-Group and the Core Team will continue to explore other means as well to ensure there is a system access method that can readily be integrated into flight operations / ATS automation.

b) Minimum User Requirements – A set of requirements to be harmonized by the Core Team to ensure data accessibility, especially in the interim period for the Demonstration Flight and Limited-Scope Operational Service activities as well as the end state. This set of Minimum User Requirements will be further detailed by the Technical Sub-Group.

c) End State ATFM System-to-System Interface – The "end state" is defined as a network of interconnected systems with shared data between all ATFM Nodes. Participants can choose to use any given information access point to access the entire network's CTOT and associated data. The development of an Interface Control Document (ICD) detailing the content and format of data to be shared will enable an ATFM Node / ANSP to use the ICD as guideline in developing or procuring their ATFM system. This will allow the particular ATFM Node to participate in Cross Border ATFM by harmonizing the interfaces between regional participants, while providing flexibility as more ANSPs join the programme. This approach also supports the requirement identified by the ANSPs to reduce the need for a centralized component for the Distributed Multi-Nodal ATFM Network. The ATFM systems will be data platforms that support the full functionality required by each end user.

2.2 As the Core Group further refines the processes and procedures for cross-border ATFM operations, the Technical Sub-Group will continue to translate the operational requirements into a roadmap for system development towards an interconnected network of systems as described above. A key element of the roadmap is that ANSPs will have the freedom to use any ATFM System and hosted web-portal suitable for their needs and is able to be integrated into the multi-nodal concept for Cross Border ATFM.

2.3 As the work of the Sub-Group is to harmonize the development of an ATFM system in the region, the work could become a key input to the ICAO Asia-Pacific ATFM Information Requirement Small Working Group (ATFM-IR/SWG) that was established to design the framework for ATFM information sharing in support of regional implementation of Cross-Border ATFM. The Sub-Group will provide updates to the ICAO ATFM/SG as necessary together with the overall progress of the Distributed Multi Nodal ATFM Operational Trial Project.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the developments from the Technical Sub-Group of the Multi-Nodal ATFM Project;

b) consider the Technical Sub-Group's work to harmonize the development of ATFM systems requirements as potential to contribute to the on-going work by the ATFM-IR/SWG; and

c) discuss any relevant matters as appropriate.

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