International Civil Aviation Organization

Tenth Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/10)

Video Teleconference 04 – 08 May 2020

Agenda Item 4: Review of Current CDM/ATFM Operations and

PROGRESS OF INTEROPERABILITY BETWEEN HONG KONG CHINA AND JAPAN

(Presented by Hong Kong China and Japan)

SUMMARY

This paper describes the operation trial of Ground Delay Programme (GDP) between Hong Kong China and Japan.

1. INTRODUCTION

1.1 In the EATMCG/10 meeting held in July 2017, the establishment of an ATFM framework in East Asia was proposed, and subsequently in the ATFM/IR/SWG, interoperability between multiple ATFM groups in the Asia Pacific region has been discussed intensively.

1.2 Aiming to realize regional interoperability and improve efficiency, Hong Kong China and Japan are working together to consider the application of GDP, where appropriate, for flight departing from Japan FIR to Hong Kong International Airport (HKIA). In case Hong Kong ATFMU activates a GDP, Hong Kong ATFMU shall notify Japan Air Traffic Management Centre (ATMC) the Calculated Take Off Time (CTOT) calculated based on the capacity of HKIA.

1.3 In ATFM/IR/SWG/2, JCAB reported that there was no significant difference between the simulated CTOT by Hong Kong China and delay based on Minutes-In-Trail (MINIT). From spring to summer 2019, simulation was done on the case of traffic flow control in bad weather in Hong Kong China and the difference between the delay by CTOT and the actual delay assigned by ATMC was calculated. After detailed analysis of the simulation results, it is concluded that there are no major obstacles to the operation of CTOT, except some minor issues related to CTOT operations that required further refinements.

1.4 At the conference held in December 2019 in Japan, Japan ATMC explained to the operators the outline, operational method of CTOT and received their understanding and support.

1.5 This WP describes the countermeasures for the expected problems and reports the progress of the operation trial.

2. DISCUSSION

2.1 Several operational issues to be evaluated and resolved during the trial:

a) Additional workload

Issuing Expected Departure Clearance Time (EDCT) (CTOT in JAPAN), which is currently performed automatically by the Japanese ATFM system, will need to be manually input into the ATFM system after receiving CTOT from Hong Kong China by emails. This creates additional workload to ATMC officers by inputting the CTOT into the system. To minimize the workload so generated, it is agreed that the changes of CTOT should be kept to minimum after CTOT assignment during the trial.

b) Handling of departure aircraft from airports with curfew

Currently, the Japanese ATFM system calculates the EDCT considering the operating hours of the departure airport. The Japanese side will consider whether the CTOT has exceeded the operating hours of the departure airport, and if it exceeds the operating hours, it will be dealt with by coordinating with Hong Kong ATFMU.

c) Request for slot swapping with Hong Kong ATFMU

Slot swapping between flights is considered essential to the operations in Japan. Due to the system limitation of Hong Kong ATFM system, CTOT exchange between flights departing from different airports in Japan is not available. However, CTOT exchange can be entertained between controlled aircraft departing from the same airport through verbal coordination.

d) Post-operation analysis (POA)

Once the trial is started, it becomes difficult to compare the CTOT given by Hong Kong ATFMU with the current EDCT. It is necessary to consider a POA method suitable to the trial so that the operation and efficiency can be improved.

2.2 Considering the above points, Hong Kong China and Japan are drafting a MOU for the trial. The trial is planned to commence in Q3 of 2020 and is divided into 2 phases as follows:

Phase 1: Hong Kong ATFMU issues “No delay CTOT” in order to evaluate the procedure and the reliability of message connection between Hong Kong China and Japan.

Phase 2: Hong Kong ATFMU issues genuine CTOT when HKIA or HKFIR has a capacity and demand imbalance.

2.3 Flow control (in the form of MINIT) has been implemented between Hong Kong China and Japan at FIR boundary limits of adjacent FIRs for quite some time. However, this method is inefficient and creates wastage in the network due to traffic imbalance. Besides, numerous coordination is required with other enroute FIRs, resulting in high workload and delays. Using this trial operation as a foothold, it is hoped to continue to improve and streamline cross-border air traffic management between the FIRs in East Asia to unleash potential benefits of regional ATFM.

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 as appropriate.

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