International Civil Aviation Organization

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

Bangkok, Thailand, 06 – 10 June 2016

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

CROSS-BORDER ATFM COOPERATION PROJECT – COLLABORATIVE MIT CONVERSION PROGRAM (CMCP)

(Presented by China and Thailand)

SUMMARY

The purpose of this paper is to present Cross-Border ATFM Cooperation project – Collaborative Minutes/Miles-in-Trail Conversion Program (CMCP) to begin transitioning the use of traditional flow restriction (Miles-in-Trail, Minutes-in-Trail, Minimum Departures Interval and Ground Stop) towards more efficient ATFM Measure (Ground Delay Program through issuance of Calculated Take-Off Time: CTOT).

1. INTRODUCTION

1.1 South China Sea Air Traffic Flow is one of three main traffic flows in Asia-Pacific Region provide air traffic services for more and more flights and passengers in recent years. With the requirement of economics, political, cultural, business and tourism in the region, people in growing number would like to choose civil aviation flights as the preferred means of transport across this region.

1.2 Meanwhile, flight delays become an even more serious issue than ever before due to the imbalance between traffic requirement and limited capacity bring traffic especially for the traffic from South East Asia to North East Asia and Mainland China.

1.3 Minutes/Miles-in-Trail (MIT) is a major flow restriction implemented in South China Sea region for Demand/Capacity Balancing. However, negative effects of MIT such as slot waste from coordination of MIT and lack of predictability on delay to be incurred reduced the efficiency and effectiveness of Cross-border ATFM in the region.

1.4 Further cooperation around South China Sea States/Administration to optimize ATFM Measure and implement more efficient ATFM Measure such as Ground Delay Program (GDP) through issuance of Calculated Take-Off Time (CTOT) could bring more benefits to the aviation community.

1.5 Traffic flow between China and Thailand has been rapidly growing. Between 2010 – 2015, China – Thailand grew between 10 – 66 percent per year, effectively increasing average daily flight of 50 flights/day in 2010 to 260 flights/day in 2015. Latest tourism statistics also shows Thailand as a top destination for international outbound travel from China.

1.6 China and Thailand had history of ATFM collaboration through Distributed Multi-Nodal ATFM Operational Trial Project which started Phase 1 Operational Trial in June 2015, with planned Limited-Scope Operational Service starting in late 2016 as outlined by another WP to ICAO ATFM/SG/6 meeting.

1.7 Through collaboration in Distributed Multi-Nodal ATFM Operational Trial Project, China and Thailand continued to harmonize ATFM infrastructure to ensure interoperability among China ATFM Node and Thailand ATFM Node, enabling further CMCP collaboration.

2. DISCUSSIONS

CMCP Concept

2.1 Collaborative MIT Conversion Program (CMCP) attempts to convert the use of traditional Minutes/Miles-in-Trail flow restriction into Ground Delay Program (GDP) through issuance of Calculated Take-Off Time (CTOT).

2.2 This can be achieved as part of a Combined ATFM Measure outlined in other joint Working Paper presented by Multi-Nodal ATFM Project Core Team (Australia, China, Hong Kong China, Singapore, Thailand, CANSO and IATA).

2.3 Within the scope of CMCP, traditional flow restrictions (MIT) will be gradually migrated into GDP/CTOT.

CMCP Objectives

2.4 CMCP's main objectives are:

a) Increase operational efficiency of A1, A202 Major Traffic Flow (MTF)

b) Increase ATFM efficiency through the use of GDP in place of traditional MIT flow restriction

c) Increase ATFM delay predictability prior to departure

d) Decrease ATFM delay due to inefficient MIT coordination process

e) Provide a template to attract more stakeholders to join the program

Traffic Analysis

2.5 Traffic volume within South China Sea region has been analyzed within the scope of ICAO South China Sea Major Traffic Flow Review Group (SCS-MTFRG) with latest analysis conducted based on RVSM Traffic Sample Data (TSD) from December 2015, as presented to ICAO SCS-MTFRG/3 meeting in March 2016.

2.6 Traffic Sample Data visualization presented to ICAO SCS-MTFRG/3 meeting is shown in **Figure 1**.

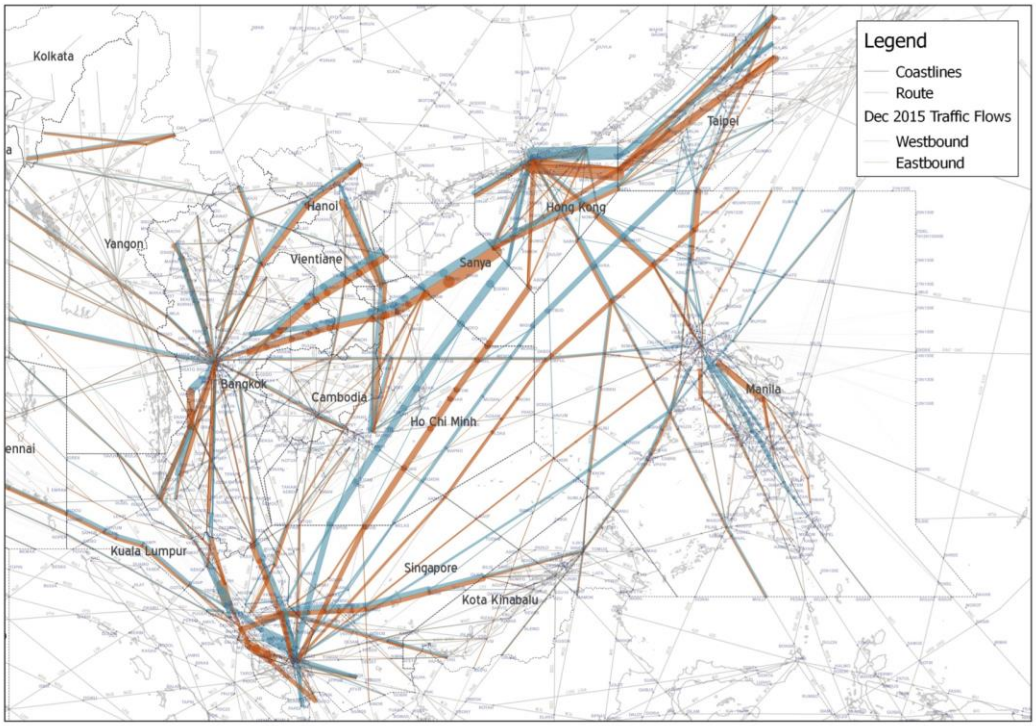

Figure 1: December 2015 Traffic Sample Data Visualization – South China Sea (SCS-MTFRG/3)

2.7 Analysis of **Figure 1** indicates that A1/A202 are major international routes in South China Sea airspace supporting most traffic. Accordingly, traffic flow on A1/A202 would be used as initial traffic flow to be included under CMCP arrangement. High traffic volume associated with A1/A202 may enable more opportunity to test Combined ATFM Measure transitioning traditional flow restrictions into GDP/CTOT operations.

CMCP Scope

2.8 Initial scope of CMCP is planned as follows:

a) Phase 1: Departures from Thailand overfly Sanya FIR to North East Asia

b) Phase 2: Departures from South East Asia overfly Sanya FIR to North East Asia

c) Phase 3: Departures from North East Asia to South East Asia

2.9 Within scope of each CMCP Phase, it is expected that Combined ATFM Measure would be deployed for select airports to enable focused study and quick project expansion.

CMCP Mechanism

2.10 It is envisaged that CMCP operations will involve implementation of a Combined ATFM Measure in ways that CTOT would be issued in combination with MIT to ensure GDP flights benefit from enhanced predictability while also not being disadvantaged by absorbing delay for other flights.

2.11 Flight Plan and ATS message delivery requirement will be in accordance to Multi-Nodal ATFM requirement i.e. Flight Plan shall be submitted at least 3 hours prior to Estimated Off-Block Time (EOBT) and deviation from EOBT of more than 15 minutes should be notified through appropriate ATS messages. In addition, transmission of DEP message is required.

2.12 It is planned that CTOT will be delivered at least 2 hours before EOBT through similar means of delivery as Multi-Nodal ATFM Operational Trial (web-portal or email) applying Common Operating Procedure (COP) from Multi-Nodal ATFM Operational Trial.

CMCP Planning and Timeline

2.13 Current initial plan of CMCP is as follows:

a) Project Plan Meeting: Jun 2016

b) Table-Top Exercise: Jul 2016

c) Demonstration Flight: Aug 2016

d) Operational Trial: Q4 2016

e) Phased Implementation: 2017

2.14 China and Thailand plan to hold side meeting on the sideline of ICAO ATFM/SG/6 to enhance further project planning. It is envisaged that other Stakeholder participation would commence in Aug 2016 ahead of planned Operational Trial.

2.15 It is envisaged that CMCP scope may be expandable, but expansion would be considered in a step-by-step phased approach to minimize operational risks.

3 ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Note information presented in this working paper; and,

b) Discuss relevant matters as appropriate.

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