



International Civil Aviation Organization

**The Second Meeting of the APANPIRG ATM Sub-Group
(ATM /SG/2)**

Hong Kong, China, 04-08 August 2014

Agenda Item 4: ATM Systems (Modernisation, Seamless ATM, CNS, ATFM)

AIR TRAFFIC FLOW MANAGEMENT (ATFM) OPERATIONAL TRIAL

(Presented by Australia, China, Hong Kong China, Indonesia, Malaysia, Singapore, Thailand, Viet Nam and IATA)

SUMMARY

This paper presents the collaborative efforts for the ATFM Operational Trial between Australia, China, Hong Kong China, Indonesia, Malaysia, Singapore, Thailand and Viet Nam using the concept of distributed multi-nodal ATFM network.

The initiative aim to enhance safety and efficiency to cope with the growth of air traffic in this region.

1. INTRODUCTION

1.1 At the third meeting of the ATFM Steering Group (ATFM/SG/3) in March 2014, the concept of distributed multi-nodal ATFM network was presented and the meeting was apprised of the initiative to conduct an ATFM Operational Trial between participating States commencing in June 2015 using the multi-nodal concept. The proposed ATFM Operational Trial initiative had received strong support and encouragement from several ANSPs, ICAO as well as IATA, ACI, CANSO, EU/AATIP and IFATCA.

1.2 The first ATFM Operational Trial Project Kick-Off Meeting was held from 2 June to 3 June 2014 in Singapore. The meeting was attended by 45 participants from 6 ANSPs, 3 Airport Operators, 5 Aircraft Operators and IATA. The meeting developed a structured plan to address capability development in areas such as Demand Capacity management, ATFM system requirement, common business rules and ATFM personnel management to assist members of the project to reach the level of readiness for active participation in the operational trial.

2. DISCUSSION

Trial members and Participation

2.1 AEROTHAI, Airservices Australia, CAAC ATMB (Sanya ACC), Civil Aviation Authority of Singapore (CAAS), Hong Kong Civil Aviation Department (HKCAD), Viet Nam ATM (VATM), Airport Authority Hong Kong (AAHK), Airports of Thailand (AOT), Changi Airport Group (CAG), IATA, Cathay Pacific Airlines and Singapore Airlines indicated strong commitment to be active participants in the ATFM Operational Trial. While the ATFM Operational Trial project received strong support and commitment, it also gave consideration for other members of the project an option to review individual capability elements, specific needs and efforts to determine their participation level and share their preference at subsequent project meeting.

Distributed Multi-Nodal ATFM concept

2.2 Participating members have agreed that the Distributed Multi-Nodal ATFM concept form the foundation for the ATFM Operational Trial. However, it was noted that to successfully run the complete scale of the multi-nodal ATFM concept, it would require project members to reach a certain level of capability by June 2015 to meet the target trial date. Thus a phased approach which adopts selected elements of the multi-nodal concept was considered as a more viable option for timely commencement of the trial as well as providing room for further development and expansion of participation as the trial progress into subsequent phases.

Phases of the ATFM operational trial

2.3 The ATFM Operational Trial was targeted to commence in June 2015 with a Go/No-Go decision in May 2015. The trial would be approached in two phases. Phase 1 of the ATFM Operational Trial is planned to be conducted for a period of 3 months followed by a review to extend the trial further with added refinements. Phase 2 of the trial will be discussed at later stages subject to the outcomes of Phase 1 of the trial as well as the capability level of participating members.

2.4 Phase 1 would focus on addressing Demand/Capacity balancing at required resources by imposing ATFM Measures such as Ground Delay Program (GDP) through the provision of Calculated Take-Off Time (CTOT) information back engineered from Required Time of Arrival (RTA) to regulate flights in the event that traffic demand saturate available capacity. Phase 2 in addition to elements of Phase 1 would include focus on addressing Demand/Capacity balancing within sectors and airspace under the participating ANSPs.

Capability development Milestones and Ops Trial working group

2.5 The members agreed to adopt the progressive approach along the capability development milestones to reach a level readiness for active participation in the ATFM Operational Trial. The milestones will be reviewed at each ATFM Operational Trial meetings and fine-tuned to pace the progress of capability development.

Meetings	Milestones
June 2014- Kick-Off Meeting (Singapore : 2-3 Jun 2014)	<ul style="list-style-type: none"> • Trial objectives set • Agreement to capability development methodology and timeline • Stakeholder commitment & dedicated POC • Ops scenarios and supporting ATFM/CDM process • Agreement for common business rules for stakeholder groups to support trial • System support and interoperability framework to serve the trial
August 2014 (Bangkok : 28-29 Aug 2014)	<ul style="list-style-type: none"> • Review initial ATFM/CDM processes and Draft procedures for trial • Discuss Compliance management • Discuss and draft harmonized business rule • Share Individual capability development plans to participate in the trial

Meetings	Milestones
October 2014	<ul style="list-style-type: none"> • Share on system development or acquisition • Review system requirements for interoperability • Personnel selection and FMU setup • Auxiliary support for Ops trial
December 2014	<ul style="list-style-type: none"> • Develop Compliance Management procedures • Discuss Training for FMP/Airspace users • Discuss Safety assessment process
March 2015	<ul style="list-style-type: none"> • Procedure refinement for ATFM • Operational procedure training • Enhance MET capability to support • Refine Compliance Management procedures • System training for FMCs • Safety assessment of ATFM procedures and ATFM system • March 2015 Collaborative review of progress
April-June 2015	<ul style="list-style-type: none"> • ATFM system and personnel support for Ops trial • Pretrial Interoperability testing independently and collectively with stakeholders • May 2015 Go/No-Go decision for Ops trial
July-September 2015	<ul style="list-style-type: none"> • Collaborative ATFM operational trial
October-December 2015	<ul style="list-style-type: none"> • Trial progress evaluation • Extension or modifications to trial

2.6 Trial members have identified dedicated Point of Contacts (POCs) to form the working group to focus on the various efforts and aspects of capability developments with progressive refinement leading to the ATFM Operational Trial. Owing to the vast amount of trial preparation efforts which are necessary to reach an adequate level of preparedness, more frequent meetings would be planned to facilitate effective discussion and decision making instead of the quarterly meetings which was proposed during the initiation of the trial effort. Meanwhile, the working group will continue to work off-line focusing on the preparation efforts in between meetings.

Operational Trial Awareness and Participation

2.7 The research of the Distributed Multi-Nodal ATFM concept had revealed that a high percentage of participation by flights was essential to ensure equity in spreading delay across participating flights. Thus, the ATFM Operational Trial project urged the members to seek high percentage of flights that operate into their ATM resources.

2.8 Participating members noted the need for greater publicity and stronger stakeholder engagement, akin to BOBCAT efforts that would help create greater awareness on ATFM and the ATFM Operational Trial. The ATFM Operational Trial initiative urged for appropriate effort through the help of IATA and ICAO to reach the greater aviation community to create adequate awareness of the operational trial which would serve as an effective avenue while ANSPs engaged local stakeholders.

Continue Working on Convergence and Harmonization

2.9 While the on-going effort to conduct ATFM operational trial attempt to kick-start cross-border ATFM collaboration, it was essential for the Asia Pacific region to continue to work on convergence and harmonization of ATFM implementation. This could be achieved through continued sharing of progress and development at related regional forums. Operational procedures, ATFM Phraseology and business rules could be harmonized taking guidance from ICAO Doc 9971 and the leadership role that the ICAO ATFM Steering Group provides. Moving in this direction would help this region to fulfill the Asia Pacific Seamless ATM Plan.

Conclusion

2.10 The ATFM Operational Trial preparations are currently ongoing with the upcoming meeting to be hosted by AEROTHAI in Bangkok on 28-29 August 2014. The progress of the ATFM Operational Trial will be shared at all relevant forums to provide an update and create greater ATFM awareness within the aviation community in the region.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to;
- a) note the information contained in this paper;
 - b) continue to work on ATFM convergence and harmonization; and
 - c) discuss any relevant matters as appropriate.

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