



Combined ATFM Measures: Distributed Multi-Nodal ATFM Operational Trial Stage 3 – Transition to the Regional ATFM Concept of Operations



International Civil Aviation Organization

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

- This paper presents a Combined ATFM Measure that supports the Multi-Nodal Stage 3 transition to provide early operational benefits for Multi-Nodal and Regional Cross-Border ATFM deployments prior to the full implementation of the Regional ATFM Concept of Operations endorsed by ATFM/SG/3, March 2014.

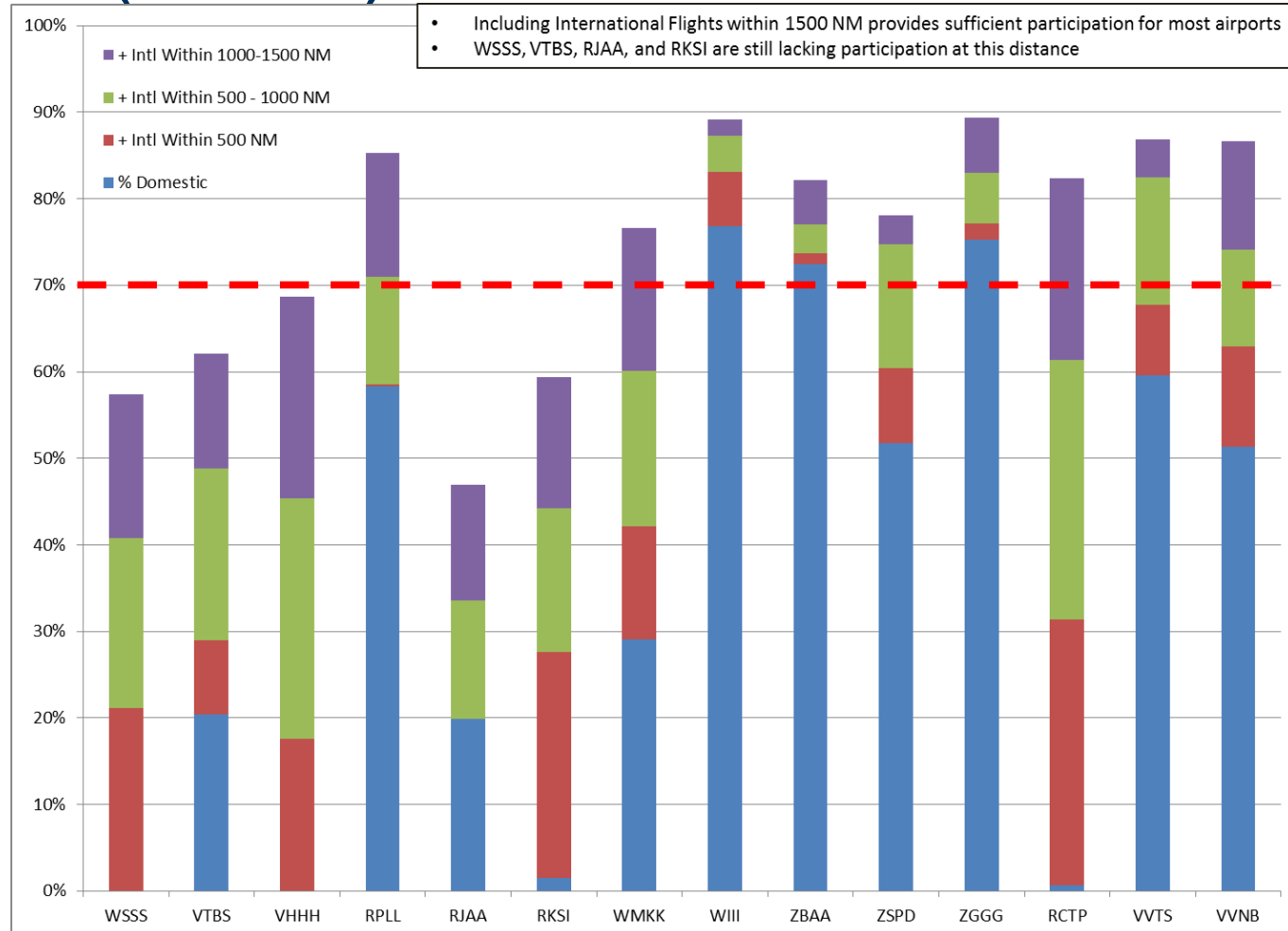
Presented by: Australia, China, Hong Kong China, Singapore, Thailand, CANSO and IATA

Introduction (1 of 2)

- Stage 3 Limited Operational Scope activities assisted by introduction of Combined ATFM Measure
- Guidelines for effective and equitable demand capacity balancing:
 - Minimum of 70% participation of flights accepting new departure times
 - Participating flights within approximately 1500NM of constrained airport
- Multi-Nodal ATFM provides a path for ANSPs that do not satisfy the guidelines

Introduction (2 of 2)

- Analysis of major APAC airports demand profiles
- Multiple airports do not meet the guidelines even with participation from other ANSPs
- Operational involvement of stakeholders to meet guidelines may delay implementation and benefits



Combined ATFM Measure

➤ Definition:

- Combination of new departure times (e.g., CTOTs) for some flights and tactical flow control (e.g., Miles-In-Trail, Minutes-In-Trail, Minimum Departure Intervals, Ground Stop) for other flights

➤ Operational Benefit:

- The minimum participation level for efficient and effective demand capacity balancing can be reached while still providing ATFM/CDM benefits to stakeholders

Value for Multi-Nodal Project

- Part of a methodical transition from current operations to the Regional ATFM operational concept for Cross Border ATFM
- Encourage wider participation and reduce the number and type of flow restrictions required to achieve efficient and equitable ATFM Measures
- Determine effective measures via analysis
- Cross-Border cooperation to set flow restriction
- Minimal impact on Tactical ATC

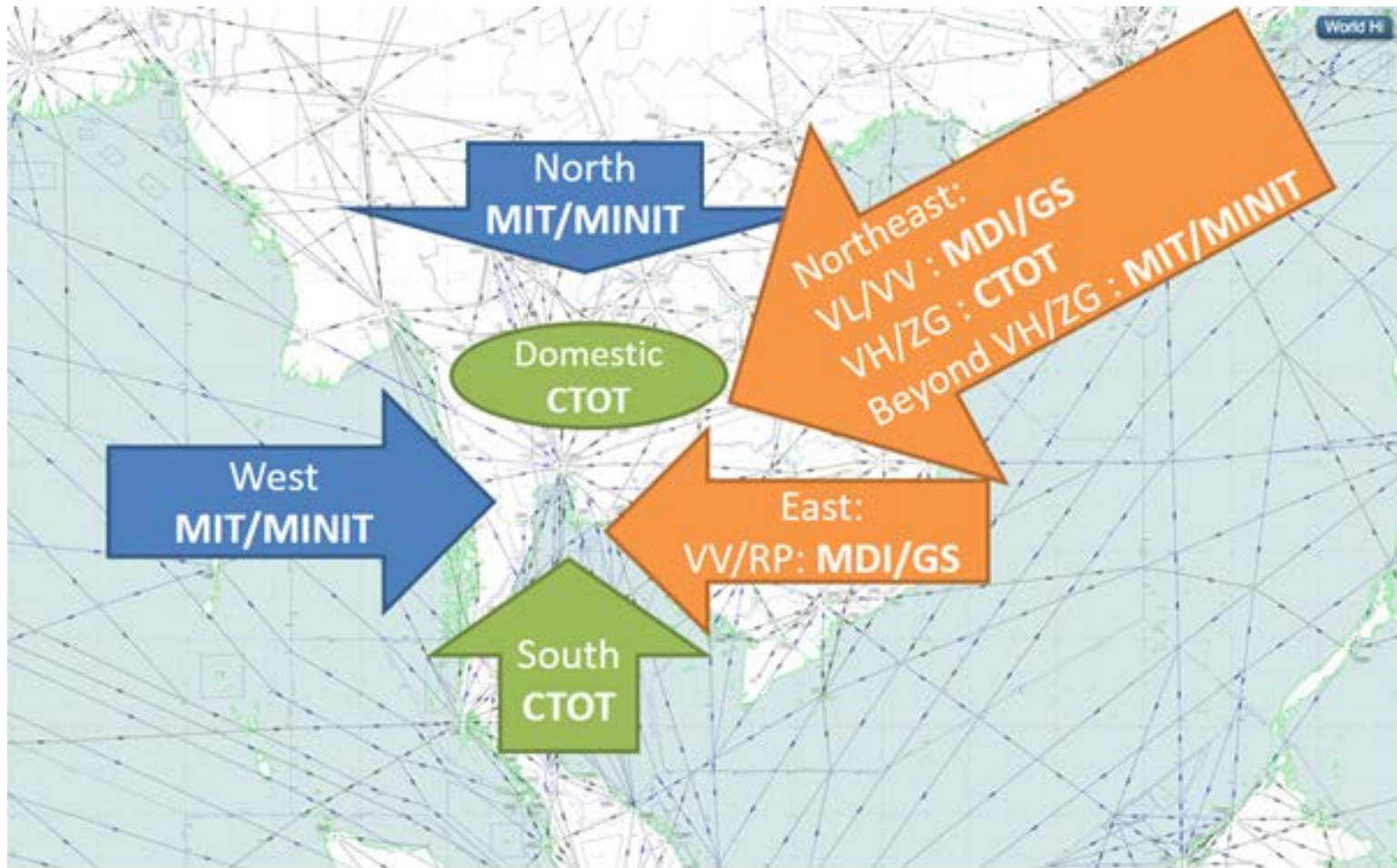
Combined ATFM Measure Determination

- Include all flights in arrival airport ATFM slot allocations (e.g., Calculated Landing Time assignments)
- Using new expected arrival times, determine hourly demand for flights part of a similar flow
- Determine equivalent flow restriction to achieve the demand from the set of flights

Interim ATFM Measure

- Combined ATFM Measures are not as efficient as the ATFM Measure resulting from the Regional ATFM Operational Concept
 - Tactical flow restrictions:
 - Do not provide the same level of predictability or efficiency.
 - Are less precise than flight-specific CTOTs for all flights.
- The region must continue to work towards the operational use of the Regional ATFM Operational Concept including:
 - Aircraft operator delay intent
 - Airport maximum gate delay.

Operational Example



Action by the Meeting

- note the information contained in this paper;
- discuss the use of Combined ATFM Measure in Distributed Multi-Nodal ATFM Stage 3 Trial (Limited-Scope Operational Service);
- discuss potential of Combined ATFM Measure as candidate for future updates to the ICAO Regional Framework for Collaborative ATFM and ICAO Manual on Collaborative ATFM (Doc 9971); and
- discuss any relevant matters as appropriate.

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