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

OPERATIONAL REQUIREMENTS FOR INFORMATION DISTRIBUTION IN A DISTRIBUTED MULTI-NODAL ATFM NETWORK,

(Presented by the Secretariat)

SUMMARY

This paper presents a strawman proposal for the development of first-stage operational requirements for distribution of ATFM information in a distributed multi-nodal ATFM network.

1.1   Operational requirements for a first stage of distributed multi-nodal ATFM network operation.

1.2   ATFM programs only for arrivals at constrained airports.

1.3   CTOT is the only ATFM measure distributed on the network.

1.4   Categorization of ATFM stakeholders.

1.5   Definition of what information should be distributed.

1.6   Definition of how information should be distributed to different categories of stakeholder.

2.   DISCUSSION

Categories of Stakeholder?

2.1   Based on the example of tiered trial participation from the Regional Framework for Collaborative ATFM (itself based on the Multi-Nodal ATFM Ops Trial).

- Category 1 Node[1]:

    - Does not formulate or distribute CTOT to other nodes.

    - Relevant ATSU within the Category 1 Node receive CTOT for departure to demand-capacity imbalance airports, and facilitate airline operator CTOT compliance for departing flights.

- Category 1 Aircraft Operator:

    - Is subject to CTOT but may not receive ATFM information from outside the ATC operational communications environment.

- Category 2 Node:

    - Evaluates traffic demand, evaluates and updates airport acceptance rate (AAR) and distributes ADP and ATFM information to other Nodes.

        - ADP and ATFM information by FIXM (?) to other Category 2 Nodes.

        - CTOT by AFTN (ADEXP) directly to relevant ATC Towers within the area of responsibility of Category 1 Nodes.

    - Makes ATFM information available on the Node web site, or by other means as necessary, for all flights <u>departing</u> from within the area of responsibility of the Node, per departure airport.

    - Makes ATFM information available on the Node web site, or by other means as necessary, for all flights <u>inbound</u> to ATFM program airports within the area of its responsibility, per destination airport.

- Category 2 Aircraft Operator:

    - Retrieves CTOT from the Node responsible for the destination aerodrome, either through web-site or other means;

    - May re-negotiate CTOT through direct contact with the Node responsible for the destination airport.

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[1] The Regional Framework for Collaborative ATFM states that under the distributed multi-nodal ATFM network concept each State/Administrating collaboratively in cross-border ATFM will form a **node** of the multi-nodal network, and should be led by an agreed ANSP as the Node Leader.

What information should be distributed in Stage 1?

2.2   Regional Framework for Collaborative ATFM defines the minimum ATFM information for distribution and sharing.

Estimated	Calculated	Actual	Applicable
EOBT		AOBT	Terminal Gate
	CTOT	ATOT	Departure Runway
ETO	CTO	ATO	RFIX or AFIX
ELDT	CLDT	ALDT	Arrival Runway
Other			
ADP			

Table 1: Minimum ATFM Information for Distribution and Sharing

2.3   For each aircraft that will have a CTOT (ground delay) applied, the Category 2 Node running the ATFM program (destination aerodrome) transmits ATFM information to <u>all</u> other Category 2 Nodes in the distributed multi-nodal ATFM network:

- Aircraft Identification (from FPL).

- Departure aerodrome (ICAO location indicator)

- EOBT

- CTOT

- Destination aerodrome (ICAO location indicator)

- ELDT

- CLDT

Category 2 Nodes – Destination airport within area of responsibility

2.4   Each Category 2 Node displays on its website, or provides by other means, all flights subject to CTOT and having destination within that node's area of responsibility:

- Per destination aerodrome (ATFM program airports)

- Example of possible common display of ATFM information per destination aerodrome

DEST Aerodrome: VTBS						
Aircraft Identification	**DEP AD**	**EOBT (FPL)**	**CTOT**	**DEST AD**	**ELDT (FPL)**	**CLDT**
GHI987	WSSS	0100	0145	VTBS	0340	0415
JKL654	VHHH	0105	0150	VTBS	0405	0440

<u>Category 2 Nodes – Departure airport within area of responsibility</u>

2.5   Each receiving Category 2 Node determines whether the received CTOT information applies to an aircraft departing from within its area of responsibility (discards non-relevant information)

2.6   Each Category 2 Node displays on its website, or distributes by other means, all flights subject to CTOT departing from within that node's area of responsibility:

- Per departure aerodrome

    – ATC Tower needs to only see ATFM measures for aircraft departing their aerodrome.

    – Example of a possible common display of ATFM information per departure aerodrome:

DEP Aerodrome: VTBS						
Aircraft Identification	DEP AD	EOBT (FPL)	CTOT	DEST AD	ELDT (FPL)	CLDT
ABC123	VTBS	0100	0145	WSSS	0340	0415
DEF478	VTBS	0105	0150	VHHH	0405	0440

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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