



International Civil Aviation Organization

**The Fourth Meeting of ICAO Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/4)**

Bangkok, Thailand, 1 – 5 December 2014

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**Agenda Item 5: Development of Regional ATFM Framework**

**ATFM TERMINOLOGY**

(Presented by CANSO and Thailand)

**SUMMARY**

This paper presents an ATFM terminology proposed for adoption as the Regional standard for use in ATFM communications.

**1. INTRODUCTION**

1.1 Global development of ATFM has largely been undertaken in isolation by individual ANSPs, EUROCONTROL, ICAO Sub-Regions or other informal groups of States, or by ATFM system vendors. This has resulted in differences in concept development and in the technical terms used for operational and technical coordination of ATFM information.

1.2 ATFM/SG/3 agreed to develop a standardized ATFM terminology to promote harmonization and interoperability of CDM/ATFM systems and procedures. The work was undertaken by an ad hoc group led by CANSO and Thailand, and including India, Japan and Singapore.

**2. DISCUSSION**

2.1 The development of the Asia/Pacific Regional Framework for Collaborative ATFM provides the opportunity to also develop standardized terminology, messages and message formats and communications protocols for collaborative ATFM. The first step in this process is agreement on a set of ATFM terminology. By agreeing to an appropriate set of ATFM terms and definitions, and messages for the Asia/Pacific Region, the ATFM/SG has the opportunity to also influence the global interoperability of ATFM/CDM.

2.2 **Attachment A** provides the terminology proposed for inclusion in the Framework. The terms and definitions were determined in consultation between the ad hoc group and ICAO Regional Office, and were drawn from those used by Australia, Canada, EUROCONTROL, Japan, South Africa and USA, and those in the *Flight Information Exchange Model*<sup>1</sup> (FIXM) data dictionary. The attachment includes the acronym, description and source/history for each term.

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<sup>1</sup> FIXM is part of a suite of data exchange formats including Aeronautical Information Exchange Model (AIXM) and Meteorological Information Exchange Model (WXXM) intended to provide a global standard for information exchange. More information can be found at [www.fixm.aero](http://www.fixm.aero).

2.3 The meeting should particularly note the following terms for which there was no current equivalent found elsewhere: RFIX, CTO.

2.4 Terms in common operational use that are currently defined in ICAO publications are not included, except in the case of Estimated Off Block Time (EOBT) which was added to ICAO Document 4444 PANS-ATM in late 2012 and should be included in the Regional ATFM terminology to facilitate standardization of ATFM and Airport CDM (A-CDM) systems and processes. The term ETD was removed from PANS-ATM in the 2012 amendment and is therefore not included in the terminology as it has no functional use in the ATFM context.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) agree to the proposed terminologies provided in Attachment A;
- c) discuss any relevant matters as appropriate.

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**Proposed ATFM Terminology - General**

Proposed APAC Acronym	Term	Definition	Source / History
AAR	Airport Acceptance Rate	Arrival capacity of an airport normally expressed in movements per hour	ICAO Doc 9971 North America, South Africa, Australia, EUROCONTROL, Japan
ADR	Airport Departure Rate	Departure Capacity of an airport normally expressed in movements per hour	North America, South Africa, Australia
ASD	Aircraft Situation Display	ATC Aircraft/Traffic Situation Display	South Africa, Australia, EUROCONTROL
AFIX	Arrival Fix	A waypoint during the arrival phase of a flight. In the context of ATFM it could a waypoint where an ATFM Measure may be applied	North America, South Africa, Australia, EUROCONTROL, Japan
CDM	Collaborative Decision-Making	Process which allows decisions to be taken by amalgamating all pertinent and accurate sources of information, ensuring that the data best reflects the situation as known, and ensuring that all concerned stakeholders are given the opportunity to influence the decision. This in turn enables decisions to best meet the operational requirements of all concerned.	ICAO Doc 9971
CDR	Conditional Route	ATS route that is available for flight planning and use under specific conditions	EUROCONTROL ASM Handbook

Proposed APAC Acronym	Term	Definition	Source / History
DFIX	Departure Fix	The first published fix/waypoint used after departure of a flight.	North America, South Africa, Australia, EUROCONTROL, Japan, FIXM 2.0
DMAN	Departure Manager	A planning system to improve the departure flows at an airport by calculating the Target Take-Off Time (TTOT) and Target Startup Approval Time (TSAT) for each flight, taking multiple constraints and preferences into account	EUROCONTROL Airport CDM
FCA	Flow Constrained Area	An sector of airspace where normal flows of traffic are constrained, which could be caused by weather, military exercise etc.	North America, South Africa, FIXM 2.0
FMP	Flow Management Position	A position in any ATCC that monitors traffic flows and implements or requests ATFM measures to be implemented"	EUROCONTROL Airport CDM ICAO Doc 9971
GDP	Ground Delay Program	ATFM process where aircraft are held on the ground in order to manage capacity and demand in a specific volume of airspace or at a specific airport. In the process departure times are assigned and correspond to available entry slots into the constrained airspace or arrival slots into the constrained airport	ICAO Doc 9971
GS	Ground Stop	A tactical ATFM measure where some selected aircraft remain on the ground	ICAO Doc 9971
MINIT	Minutes in Trail	A tactical ATFM measure expressed as the number of minutes required between successive aircraft. It is normally used in airspace without air traffic surveillance or when transitioning from surveillance to non-surveillance airspace, or even when the spacing interval is such that it would be difficult for a sector controller to measure it in terms of miles	ICAO Doc 9971

Proposed APAC Acronym	Term	Definition	Source / History
MIT	Miles in Trail	A tactical ATFM measure expressed as the number of miles required between aircraft (in addition to the minimum longitudinal requirements) to meet a specific criterion which may be separation, airport, fix, altitude, sector or route specific. MIT is used to organize traffic into manageable flows as well as to provide space to accommodate additional traffic (merging or departing) in the existing traffic flows. It will never be less than the separation minima.	ICAO Doc 9971
RFIX	En-route Fix	A waypoint during the en-route phase of a flight. In the context of ATFM it could a waypoint where an ATFM Measure may be applied	ATFM/SG
SUB	Slot Swapping	The ability to swap departure slots gives AUs the possibility to change the order of flight departures that should fly in a constrained area	ICAO Doc 9971
Air Traffic Flow Management measure	Traffic Management Initiative	ATFM Measure which will balance demand against capacity or assist in the safe expeditious flow of traffic	ICAO Doc 9971 vs ATFM Measure, FIXM 2.0

**Proposed ATFM Terms – Phase of Flight**

Phase of Flight			
Proposed APAC Acronym	Term	Definition	Source / History
SOBT	Scheduled off Block Time	The time that an aircraft is scheduled to depart from the parking position	EUROCONTROL Airport CDM, FIXM 2.0
EOBT	Estimated Off Block Time	The estimated time that an aircraft will start movement associated with departure	ICAO Doc 4444, FIXM 2.0
TOBT	Target Off - Block Time	The time that an aircraft Operator or Ground handler estimates that an aircraft will be ready to startup/pushback immediately upon reception of clearance from the tower.	EUROCONTROL Airport CDM, FIXM 2.0
TSAT	Target Start Up Approval Time	The time provided by ATC taking into account TOBT, CTOT and/or the traffic situation that an aircraft can expect start up/push back approval	EUROCONTROL Airport CDM, FIXM 2.0
COBT	Calculated Off Block Time	A time calculated and issued by ATFM Unit, as a result of tactical slot allocation, at which a flight is expected to pushes back / vacates parking position so as to meet a CTOT taking into account start and taxi time.	EUROCONTROL Airport CDM, FIXM 2.0
AOBT	Actual Off Block Time	The time the aircraft pushes back / vacates parking position (Equivalent to Airline / Handlers ATD – Actual Time of Departure & ACARS=OUT)	EUROCONTROL Airport CDM
STOT	Scheduled Take Off Time	The estimated take off time derived from an aircraft operators schedule, typically based on a standard taxi-out time	Airport CDM TTOT
PTOT	Planned Take Off Time	Time aircraft is expected to take off derived from the flight plan.	South Africa, Australia
TTOT	Target Take Off Time	The Target Take off Time taking into account the TOBT/TSAT plus Estimated Taxi-Out Time	EUROCONTROL Airport CDM
CTOT	Calculated Take off Time	A time calculated and issued by ATFM Unit, as a result of tactical slot allocation, at which a flight is expected become airborne	EUROCONTROL Airport CDM, FIXM 2.0

Phase of Flight			
Proposed APAC Acronym	Term	Definition	Source / History
ETOT	Estimated Take Off Time	The Estimated take off time taking into account EOBT plus Estimated Taxi-Out Time	EUROCONTROL Airport CDM, FIXM 2.0
ATOT	Actual Take Off time	The time that an aircraft takes off from the runway (Equivalent to ATC ATD– Actual Time of Departure, ACARS = OFF)	EUROCONTROL Airport CDM
SEET	Scheduled Estimated En-route Time	The estimated elapsed time of a flight derived from the aircraft operators schedule	South Africa, Australia
ETO	Estimated Time Over	Estimated time at which an aircraft would be over a fix, waypoint or particular location typically where air traffic congestion is expected	Needed for En Route ATFM operations, FIXM 2.0
CTO	Calculated Time Over	Time calculated and issued by ATFM Unit, as a result of tactical slot allocation, at which flight is expected to be over a fix, waypoint or particular location typically where air traffic congestion is expected (referred to in FIXM 2.0 as "Airspace Entry Time - Controlled")	En Route ATFM operations, FIXM 2.0
PLDT	Planned Landing Time	The expected landing time of a flight derived from the flight plan	North America, South Africa, Australia
SLDT	Scheduled Landing Time	Scheduled time aircraft is expected to land on a runway, typically based on Scheduled In-Block Time (SIBT) and a standard taxi-in time	Airport CDM ELDT South Africa, Australia
TLDT	Target Landing Time	Targeted Time from the Arrival Management process at the Threshold, taking runway sequence and constraints into account; Progressively refined planning time used to coordinate between arrival and departure management processes	EUROCONTROL Airport CDM, FIXM 2.0
CLDT	Calculated Landing Time	A landing time calculated and issued by ATFM unit, as a result of tactical slot allocation at which a flight is expected to land on a runway	Based on Airport CDM CTOT and ALDT

Phase of Flight			
Proposed APAC Acronym	Term	Definition	Source / History
ELDT	Estimated Landing Time	The estimated time that an aircraft will touch-down on the runway (equivalent to ETA)	EUROCONTROL Airport CDM
ALDT	Actual Landing Time	Actual time an aircraft lands on a runway (Equivalent to ATC ATA –Actual Time of Arrival = landing, ACARS=ON)	EUROCONTROL Airport CDM
SIBT	Scheduled In Block Time	The Time that an aircraft is scheduled to arrive at its first parking position.	EUROCONTROL Airport CDM
CIBT	Calculated In Block Time	An in block time calculated and issued by ATFM unit, as a result of tactical slot allocation at which a flight is expected to be at its first parking position.	Based on Airport CDM CTOT and AIBT
AIBT	Actual in block time	The time that an aircraft arrives in-blocks (Equivalent to Airline/Handler ATA – Actual Time of Arrival, ACARS = IN)	EUROCONTROL Airport CDM



**Proposed ATFM Terminology Map**

<b>Phase of Flight</b>	<b>Scheduled</b>	<b>Flight Plan</b>	<b>Target (Airline)</b>	<b>Target (ANSP)</b>	<b>ATFM Measure</b>	<b>Estimated</b>	<b>Actual</b>
Off-Block Time (OBT)	SOBT	EOBT	TOBT	TSAT	COBT		AOBT
Take-Off Time (TOT)	STOT	PTOT		TTOT	CTOT	ETOT	ATOT
En-Route Elapsed Time (EET)	SEET	EET					
Time Over (TO)					CTO	ETO	
Landing Time (LDT)	SLDT			TLDT	CLDT	ELDT	ALDT
In-Block Time (IBT)	SIBT				CIBT		AIBT