

**AIR TRAFFIC FLOW & CAPACITY MANAGEMENT  
OPERATIONS  
ATFCM USERS MANUAL**



**EUROCONTROL**

**Edition N°: 17.0**

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# ATFCM QUICK REFERENCE GUIDE

## OPERATIONAL PROBLEMS HELP-DESKS

Clients experiencing on-line problems should inform the relevant Units as indicated below depending on the nature of the problem.

### FLIGHT PLAN FILING PROBLEMS

A problem with an FPL message including RPLs within 20 hours of EOBT.

**Action**      **Contact the relevant IFPS Unit Supervisor**

#### **FP1 - BRUSSELS**

OPS TELEPHONE    ++32 (0) 2 745.19.50  
OPS FAX            ++32 (0) 2 729.90.41

#### **FP2 - BRÉTIGNY**

                          ++33 1 69.88.17.50  
                          ++33 1 69.88.38.22

### OPERATIONAL ATFCM PROBLEMS

**Action**      **Contact the Central Flow HELPDESK**

TELEPHONE        ++32 (0) 2 745.19.01

#### **NM Flow Management Supervisor**

TELEPHONE        ++32 (0) 2 745.19.00  
FAX                ++32 (0) 2 729.90.27  
OPS AFTN            EUCHCEUW            OPS SITA    BRUEC7X

### TECHNICAL PROBLEMS (Transmission, Terminals)

**Action**      **Contact the CSO HELPDESK**

TELEPHONE        ++32 (0) 2 745.19.97    FAX    ++32 (0) 2 729.90.23  
Mail to: [nm.cso.help-desk@eurocontrol.int](mailto:nm.cso.help-desk@eurocontrol.int)

### OPERATIONAL POST EVENT PROBLEMS

**Action**      **Contact the NM Investigation Team**

FAX                ++32 (0) 2 729.90.28  
Mail to : [nm.incident@eurocontrol.int](mailto:nm.incident@eurocontrol.int)

## STANDARD PROCEDURES

### **FPL FILING**

#### **When do I file an FPL?**

Not later than 3 hours before EOBT. You will get either:  
ACK (FPL accepted).  
MAN (errors in FPL; after manual processing you will get either ACK or REJ)  
REJ (FPL rejected).

### **FPL UPDATES**

#### **How do I revise my FPL?**

Send a DLA/CHG.

#### **When do I notify a delay?**

Send a DLA/CHG for any change of EOBT greater than 15 minutes. However, do not update EOBT as a result of delay given by CTOT.

### **SLOT**

#### **When do I get a slot (CTOT)?**

At the earliest, 2 hours before EOBT you will receive a SAM with a CTOT. However, if a regulation is applied after this time a slot will be issued immediately.

#### **Why have I not received a slot 2 hours before EOBT?**

Flight is currently not subject to regulation.

#### **What happens if I update my EOBT after I have received a slot?**

Normally, if the new EOBT still enables the flight to depart according to its CTOT, the slot will not be recalculated.

If a recalculation is necessary, the next available slot will be issued. To avoid a substantial delay, especially in busy regulations, it is therefore important to update EOBT as soon as practicable.

#### **What happens if my slot changes?**

You will receive an SRM with a new CTOT.

#### **Why did I receive an SRM?**

There are several reasons why an SRM would be sent such as :  
A better slot has been found for you.  
In response to a rate change in a regulation.  
In response to a DLA/CHG message, etc...

#### **What action do I take if I receive an SRM?**

Comply with the new CTOT stated in the message.

#### **What action do I take if I cannot comply with my slot?**

As soon as possible send a DLA/CHG stating your new EOBT or send an SMM, if your new EOBT is not known, to ensure that the slot can be reused and to minimise your risk of substantial delay.

#### **What do I do if I have missed my slot?**

If your new EOBT is known send DLA/CHG.

- You will receive either :
- SRM, SLC or FLS

If your new EOBT is not known send an SMM. You will receive an FLS (Flight Suspension message) and will remain suspended until you send a DLA to provide your new EOBT.

### What do I do if I get an SLC?

You are no longer subject to ATFCM measures and may depart without delay. If the SLC is issued after EOBT+15 minutes you must update your EOBT by sending a DLA/CHG.

### Can I 'freeze' my slot?

No. However, if the CTOT received is acceptable, then a DLA message should be sent to IFPS using the following formula:

New EOBT must not be later than CTOT minus taxi time minus 10 minutes.

Example: EOBT 1000, CTOT 1100, but the flight cannot go off blocks until 1025. The taxi time is 15 minutes. Calculation :  
 $1100 - 15, \text{ minus } 10 = 1035.$

The new EOBT must be earlier than 1035, in order not to trigger a revised CTOT.

Alternatively, you may change the status to SWM, which gives an option of accepting or rejecting any improvement offered.

### What should I do if I need to make a last minute revision to CTOT?

Revisions to CTOTs should, where possible, be coordinated between the AO and the NM using the ATFCM message exchange procedures. However, it may be the case that last minute revisions to CTOTs and slot extensions when the pilot is in direct communication with ATC, are more easily or efficiently coordinated with the FMP/NM by ATC.

## REDUCING DELAY

### REROUTING

#### What are my options?

Investigate alternative routes that avoid congested areas.

Refer to the daily network news for suggestions and use the AOWIR if available.

Consider filing an FPL at an alternative flight level. It is important that pilots are briefed that flight levels in FPL have been filed so as to avoid an ATFCM regulation.

#### How can I reroute my flight?

Send a new route via a CHG or CNL and RFP, or

Use AOWIR, if you have access to ATFCM CHMI/NOP.

### CHANGE STATUS

#### What are my options?

Default status for AOs is RFI, i.e. if an improvement is available you would receive it via an SRM.

Another status is SWM, where improvements are proposed by an SIP. Alternatively, you may request the ATC at the departure aerodrome to change your status by sending an REA.

#### How do I change status of my flight?

By sending :

An SWM, if you were in RFI status, or

An RFI, if you were in SWM status.

#### Can I send an REA?

No. Only ATC (TWR or FMP) can send an REA.

## CALL HELP DESK

#### When do I contact the Central Flow Help Desk?

If your delay is significantly above average.

If you have a critical ATFCM problem on the day of operations.

## UNUSUAL SITUATIONS

### LOW VISIBILITY

#### What will the NM do in the event of low visibility at my destination airport?

Suspend flights with unknown RVR capability. Delay flights with insufficient RVR capability until the end of the low visibility period.

Slot flights with sufficient RVR capability within the low visibility period.

#### How do I specify my RVR?

Either by an FPL or CHG, or by sending an FCM.

### NON AVAILABILITY OF AERODROME OR AIRSPACE

#### What may I expect if an aerodrome becomes non-available?

The NM will assess the duration and nature of the non-availability and :

Accept the FPLs in IFPS and regulate them and :

- either suspend flights in the event of a long non-availability (more than one hour), or
- delay flights to arrive or depart when the aerodrome is opened.

#### What may I expect if an airspace becomes non-available?

The NM will assess the duration and nature of the non-availability and :

- either close the airspace in the ENV database and consequently reject all relevant FPLs, or
- accept the FPLs and regulate them and :
- either suspend flights in the event of a long non-availability (more than one hour), or
- delay flights to arrive or depart when the airspace is available.

## STRIKES

#### What may I expect in the event of a strike?

The NM procedures are similar to those for non-availability of aerodrome or airspace and are adapted to specific local conditions.

### ATFCM CONTINGENCY

#### What will the NM do if its system fails?

In the event of the system failure a contingency procedure will be started and instructions will be issued by the NM.

To permit resumption of slot allocation following recovery, AOs should continue to send flight plans and flight plan update messages to IFPS throughout the whole period of operation of the contingency plan.

Depending on the level of severity of the failure, AOs may expect significantly higher delays than normal.

## ACRONYMS

<b>AOWIR</b>	Aircraft Operator 'What-If' Re-route
<b>NOP</b>	Network Operation Portal
<b>CTOT</b>	Calculated Take-Off Time
<b>EOBT</b>	Estimated Off Block Time
<b>FLS</b>	Flight Suspension Message
<b>REA</b>	Ready Msg. (sent only by ATC)
<b>RFI</b>	Ready/Request For (direct) Improvement
<b>RFP</b>	Replacement Flight Plan
<b>SAM</b>	Slot Allocation Message
<b>SLC</b>	Slot Requirement Cancellation Msg.
<b>SRM</b>	Slot Revision Message
<b>SWM</b>	SIP Wanted Message

## AMENDMENT N° 19

Section	Issue Date	Amended Section	Amended Date
1. INTRODUCTION	16/Feb/2012		
2. ESTABLISHMENT OF ATCFM PROCEDURES	16/Feb/2012		
3. AIR TRAFFIC FLOW AND CAPACITY MANAGEMENT (ATFCM)	16/Feb/2012		
4. ATFCM PROCESSES	13-Mar-2012	Slot swapping procedure updated DPI de-suspension process updated	12-Mar-2013
5. SLOT ALLOCATION PROCEDURES	16/Feb/2012		
6. REROUTEING PROCEDURES	16/Feb/2012		
7. ATFCM DELAY ATTRIBUTION	16/Feb/2012		
8. COLLABORATIVE DECISION MAKING (CDM)	16/Feb/2012		
9. OPERATIONS IN UNUSUAL CIRCUMSTANCES	16/Feb/2012		
10. EXEMPTIONS FROM ATFM SLOT ALLOCATION	16/Feb/2012	Updated STS exemptions list	12-Mar-2013
11. REPORTING OF EVENTS IMPACTING ATC/ATFCM	16/Feb/2012		
12. REGULATORY REPORTING PROCESS	16/Feb/2012		
13. SECURITY SENSITIVE FLIGHTS	16/Feb/2012		
14. GENERAL INFORMATION ON ATFCM MESSAGES	16/Feb/2012		
15. SUGGESTIONS FOR EVOLUTION OF SYSTEM AND PROCEDURES	16/Feb/2012		
16. DICTIONARY OF ABBREVIATIONS	16/Feb/2012	List updated	12-Mar-2013
17. DEFINITIONS	16/Feb/2012	List updated	12-Mar-2013
ANNEX 1 THE MESSAGES FIELDS, ABBREVIATIONS & DEFINITIONS	16/Feb/2012		
ANNEX 2 SLOT RELATED MESSAGES ORIGINATED BY NM	13-Mar-2012	FLS Procedure & Action text updated	12-Mar-2013
ANNEX 3 SLOT RELATED MESSAGES ORIGINATED BY AOs/ATS	16/Feb/2012		

## AMENDMENT N° 19

Section	Issue Date	Amended Section	Amended Date
ANNEX 4 PRIMARY FIELDS COMPOSITION OF TACTICAL ATFCM MESSAGES EXCHANGES	16/Feb/2012		
ANNEX 5 SEQUENCE OF MESSAGE EXCHANGES FOR DIALOGUE PURPOSES	16/Feb/2012		
ANNEX 6 CORRELATION BETWEEN IATA DELAY CODES & THE NM REASONS FOR REGULATION	16/Feb/2012		
ANNEX 7 ATFM RTF PHRASEOLOGY	16/Feb/2012		
ANNEX 8 SUMMARY OF CASA PARAMETERS	16/Feb/2012		

Amendments to the ATFCM Operations Manual are indicated in **RED** with revision bars.

Significant deletions of text are indicated with the symbol ✂

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## 1. INTRODUCTION

### 1.1. Purpose

The ATFCM Users Manual has been prepared with the main object of providing in one document an operational description of the **NM** ATFCM procedures and of the related actions, information and message exchange.

### 1.2. Applicability

This manual is aimed at all those likely to be involved in the ATFCM process including Aircraft Operators (**AOs**) and those manning Flow Management Positions (**FMPs**), Air Traffic Services Reporting Offices (**AROs**), aerodrome and en-route ATS Units operating within the NM Area of Operation. For details refer to the **NM** Website:

<http://www.eurocontrol.int/network-operations>

### 1.3. Validity

The application of this manual is in line with the operational implementation of the **NM** software releases, with version numbering of the manual reflecting the relevant software release. Incremental numbering shall be used to indicate interim updates. This version corresponds to **NM** Release 17 which is implemented with effect from the date of which will be announced by an Air Traffic Flow and Capacity Management Information Message (**AIM**). This document shall not be used operationally before that date.

### 1.4. Amendments

This document is usually updated once a year.

### 1.5. Operational Problems Reporting

Real time and post-event reporting of operational problems and anomalies is covered in a separate document '**NM** Operational Problem Reporting', which is a Part of the **Network Operations Handbook**.

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## 2. ESTABLISHMENT OF ATFCM PROCEDURES

### 2.1. General

ATFCM procedures, roles and responsibilities in this document have been established in line with:

- a) **ICAO** procedures as defined in the ICAO Doc. 4444, EUR SUPPs Doc 7030 and **ICAO** Doc. 7754, vol. II. These procedures are amended following the **ICAO** consultation process.
- b) Procedures specific to the ATFCM operations according to the policy and strategy developed and approved by the responsible EUROCONTROL bodies.

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### 3. AIR TRAFFIC FLOW AND CAPACITY MANAGEMENT (ATFCM)

#### 3.1. Objectives

ATFCM is a service that is enhancing ATFM with the objective of managing the balance of demand and capacity by optimising the use of available resources and coordinating adequate responses, in order to enhance the quality of service and the performance of the ATM system.

#### 3.2. ATFCM Phases

ATFCM consists of 4 phases:

1. **Strategic Flow Management** takes place seven days or more prior to the day of operation and includes research, planning and coordination activities. It is a co-operative approach of EUROCONTROL involving several units and also all the partners involved in ATM (ANSPs, airports, airspace users, military). The output of this phase is the Network Operations Plan (NOP), that responds to the requirement developed in the context of the Dynamic Management of European Airspace Network (DMEAN) Framework Programme and in the EU Network Management Function Implementing Rule as a single document that incorporates the existing information on traffic demand and capacity plans for each season, identifying bottlenecks and presenting the ATFCM and ASM measures foreseen to counterbalance them.
2. **Pre-Tactical Flow Management** is applied during the six days prior to the day of operation and consists of planning and coordination activities. This phase analyses and decides on the best way to manage the available capacity resources and the need for the implementation of a wide range of appropriate ATFCM measures. The output is the ATFCM Daily Plan (**ADP**) published via ATFCM Notification Message (**ANM**) / Network News and via the NOP portal.
3. **Tactical Flow Management** is applied on the day of the operation. This phase updates the daily plan according to the actual traffic, capacity and monitoring values.
4. **Post Operational Analysis** is applied following the day of operation. This phase analyses the day of operation, and feeds back into the previous 3 phases.

#### 3.3. Areas Covered

The **NM** Environment database covers several different geographical areas that have common and uncommon elements.

The FPM Distribution Area (FPM DIST) is the area in which IFPS is responsible for the distribution of flight plans and associated messages.

The ATFCM Area is the area in which the **NM** is responsible for the provision of ATFCM.

The **NM** provides limited ATFCM services to some FIRs which are geographically adjacent to the ATFCM Area. These FIRs, which are collectively referred to as the ATFCM Adjacent Area, have a letter of agreement which details the service level provision.

Additionally, the FMPs of these FIRs may request to apply ATFCM measures for the airports within the FIR or for significant points at the interface between the FIR and the ATFCM Area.

The **NM** may apply ATFCM measures to flights which:

- Depart from within the ATFCM area.
- Enter the ATFCM area after departing from an adjacent Flight Information Region (**FIR**) within the ATFCM Adjacent Area.

Latest update of the list of adjacent FIRs may be found on the website:

<http://www.eurocontrol.int/network-operations>

### 3.4. Collaborative Decision Making (CDM)

Collaborative Decision Making is a process which allows decisions to be taken by those best positioned to make them on the basis of the most comprehensive, up-to-date and accurate information. This in turn enables decisions about a particular flight to be made according to the latest information available at the time, thereby enabling the flight to be dynamically optimised to reflect near or real-time events.

This CDM process is a key enabler of ATFCM allowing the sharing of all relevant information between the parties involved in making decisions and supporting a permanent dialogue between the various partners throughout all phases of flight. This provides the various organisations with the opportunity to update each other continuously on events from the strategic level to the real-time. To be efficient and reach the required objectives, CDM must be:

- an inclusive process;
- a transparent process;
- a process that builds trust between the players involved.

The principles of CDM have been implemented in the **NM** day-to-day operations, planning and developments with active involvement of ANSPs (mainly through FMPs) and AOs (through the AO Liaison Officers and the AO Liaison Cell).

#### 3.4.1. AO Liaison Cell

A significant element of the **NM** operational organisation is the integration of the AOs into the operations by means of the Aircraft Operator Liaison Cell (**AOLC**), which is staffed by representatives of the airlines. During the daily activities of the **NM**, the cell is the focal point for the operators for strategic and tactical information about the airspace and ATFCM situation in Europe. The cell liaises with **NM** operational services, AOs and ATM providers, proposes **NM** developments to benefit airspace users and ATM providers, follows up on any repetitive problems affecting the operators, and monitors the equity of the flow management process.

The latter is a key point – because the AOs are involved and the system is transparent, the airlines accept the **NM** proposals and are realistic both in their demands and expectations. For the first time in European ATM, all partners address together the problems.

## 4. ATFCM PROCESSES

This section gives a general overview of current ATFCM processes. The emphasis is on enabling AOs to choose between the concepts of acceptable delays on one hand and preferred routeings on the other.

This Section also sets out in broad terms critical event management processes such as low visibility, non-availability of aerodromes/airspace, strikes, de-icing and ATFCM contingency.

### 4.1. Network Operations Plan

The Network Operations Plan (**NOP**) has been developed in the context of the Dynamic Management of European Airspace Network (**DMEAN**) Framework Programme to build a single document that provides a consolidated view of the forecast seasonal, monthly, weekly and daily ATFCM situation.

This service improves through a consolidation of the planning and monitoring activities and a stronger cooperation with Airspace design, Airspace management, Aircraft Operators, Air Traffic Services and Airport partners supported by an enhancement of the information exchange system. It incorporates the existing information on traffic demand and capacity plans, identifying bottlenecks and presenting the ATFCM and ASM measures foreseen to counterbalance them.

The objectives are to update permanently the ATM Network Operations Plan, using scenarios, providing common situation awareness, and minimising the impact of the lack of resources while ensuring a common understanding of the situation.

In the context of NOP, winter is defined as the period 31st October – 30th April and summer 1st May – 30th October.

Special events expected to affect the demand and for which specific ATFCM measures have been planned are also described in detail in the document.

The NOP is published on the NOP portal at:

<https://www.public.cfm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>

### 4.2. Route Planning Processes

The information published by the **NM** concerning route restrictions, rerouting possibilities and the processes involved in deciding to reroute a flight vary according to the phase of activity.

#### 4.2.1. Strategic Route Planning

##### 4.2.1.1. Route Availability Document (RAD)

The RAD is an ATFCM tool that is designed as a sole-source flight-planning document, which integrates both structural and ATFCM requirements, geographically and vertically. The RAD is updated each AIRAC cycle following a structured standard process of Requirement, Validation and Publication by the **NM** in cooperation/coordination with the States and the AOs.

The RAD is only applicable to the IFR part of the flight plan.

The objective of the RAD is to facilitate flight planning in order to improve ATFCM, while allowing AOs' flight planning flexibility. It provides a single, fully integrated and coordinated routing scheme. Except where otherwise specified the RAD affects all **NM** airspace.

The RAD enables ANSPs to maximise capacity and reduce complexity by defining restrictions that prevent disruption to the organised system of major traffic flows through congested areas with due regard to AOs requirements.

The RAD is designed as a part of the **NM** ATFCM operation. It organises the traffic into specific flows to make the best use of available capacity. Whilst, on its own, it will not guarantee the protection of congested ATC sectors during peak periods, it should facilitate more precise application of tactical ATFCM Measures.

The RAD should also assist the **NM** in identifying and providing rerouteing options. Global management of the demand will, potentially, lead to an overall reduction of delays. It is important to note that to achieve this, some re-distribution of the traffic may be required through the implementation of scenarios. This may result in modified traffic/regulations in some areas where, under normal circumstances, they would not be seen.

The RAD is subject to continuous review by the **NM**, the ANSPs and AOs to ensure that the requirements are still valid and take account of any ATC structural or organisational changes that may occur. Further reviews may be initiated at the request of the States or the user organisations.

Permanent amendments to the RAD, or the period of validity, are coordinated by the **NM** with the States concerned together with the AO organisations, taking into account agreed publication and implementation dates, in accordance with AIRAC procedures.

RAD is promulgated on the NOP Portal:

<https://www.public.cfm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>

Temporary changes due to exceptional circumstances (e.g. major equipment failure, industrial action or large-scale military exercises) may necessitate the suspension of part of the RAD for specified periods, and additional routeings will be activated where possible following coordination with the relevant FMPs and AO organisations. Changes will be published by AIM giving details of the traffic affected, the period of activation and the corresponding routeings.

#### 4.2.2. Routeing Scenarios

To overcome some of the limitations of the RAD and improve medium and short-term management of ATC capacity, reducing complexity or workload in a sector, the **NM**, together with the FMPs concerned, will develop reroutes during the planning period to help resolve forecast ATC capacity problems and to achieve a global decrease of delays by spreading the traffic. The proposed routes may be for particular flows or for selected individual flights.

For each area where major imbalance between demand and capacity may be expected, the **NM**, together with the FMPs concerned, may identify a number of flows, for which other routeings may be made available, that follow the general scheme, but avoid the critical area. These measures are known as routeing scenarios and are published in the form of advice or a mandatory instruction via ANM and Network News.

Routeing scenarios are promulgated on the NOP Portal:

<https://www.public.cfm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>

#### 4.2.2.1. Mandatory Scenarios

When, during Pre-Tactical planning, the **NM** identifies the risk of major imbalance between demand and capacity, it may be decided through the CDM process to make part (or all) of the alternative routeings mandatory for the period expected to be critical.

Depending on the type of rerouting required, they may be considered in two parts:

1. Rerouting Scenarios (**RR**) (e.g. RR1FUJ): mandatory diversion of flows to offload traffic from certain areas. If affected by a RR, AOs shall file/refile their FPL to meet the RR requirements.
2. Flight Level Capping Scenarios (**FL**) (e.g. FL11FFM): rerouteings of flows carried out by means of level restrictions (e.g. flights from EDDN to Paris TMA should file below FL245). If affected by a FL scenario, AOs should file/refile their FPL to meet the FL requirements.

#### 4.2.2.2. Alternative Routeing Scenarios (AR)

These are alternative routes which are exceptionally made available to offload traffic from certain areas, implemented by regulations with a low rate. The other option is the application of dynamic routing restrictions in the ENV system. To avoid heavy delays and achieve better spreading of traffic, the **NM** may reach an agreement with the FMPs concerned to enable AOs to use routes, which are otherwise not available for this type of traffic. Activation of AR (e.g. AR7SKI) normally causes higher traffic complexity in the sector(s) concerned, which is the reason for there being a low rate in an AR scenario.

#### 4.2.2.3. Zero Rate Scenarios (ZR)

In the event where RAD or some national AIP restrictions are incorrectly described in the ENV database, flight plans may be accepted on routes, which should normally be closed. To rectify the situation and prevent flights from continuing to use the routeings concerned, the FMP may request the **NM** to implement a zero rate regulation (e.g. ZBNO).

In order to better manage short notice changes of the airspace structure and in particular non-availability of some of its elements (e.g. routes, airspaces, etc.) as well as some amendments to the RAD, system improvements have been introduced. These modifications will enable managing flow restriction in a more dynamic manner and will also contribute to reducing the use of zero rate regulations. This change will allow activating or deactivating predefined restrictions and creating new ones during the current AIRAC cycle, when needed (currently, most of these operational changes are performed through the application of zero rate regulations).

Before being put in operations appropriate procedures will be developed and evaluated together with **NM** customers.

#### 4.2.3. Tactical Rerouting

Route planning measures prepared in Strategic and Pre-Tactical Phases are applied and updated in the Tactical Phase.

During the Tactical Phase, the **NM** monitors the delay situation and where possible, identifies flights subject to delays that would benefit from a reroute.

Rerouting may be carried out manually by an **NMOC** Air Traffic Flow and Capacity Controller.

Additionally, AOs equipped with a **NM** Client Application may reroute their flights by means of Aircraft Operator 'WHAT-IF' Reroute (**AOWIR**).

The AOWIR is also available for use with non-regulated flights in order to maximise the flight efficiency aspect by allowing flights to benefit from shorter routes using released CDR2 routes.

### 4.3. Slot Allocation Process

The slot allocation procedures detailed below are those applicable to the **NM** ETFMS. They are applied to all flights subject to ATFCM slot allocation departing from within the ATFCM area or from within the ATFCM Adjacent area and entering the ATFCM area.

#### 4.3.1. Description of the Computer Assisted Slot Allocation (CASA)

The CASA system is largely automatic and centralised, and functions from an AO's point of view in passive mode. In other words, the act of filing a flight plan effectively constitutes a request for a slot.

After coordination with the FMP, the **NM** decides to activate regulations in those locations where it is necessary. In ETFMS regulations include the start and the end times, the description of the location, the entering flow rate and some others parameters. In accordance with the principle of 'First Planned - First Served' the system extracts all the flights entering the specified airspace and sequences them in the order they would have arrived at the airspace in the absence of any restriction.

On this basis, the Take-Off Time (**TOT**) for the flight is calculated. It is this information, Calculated Take-Off Time (**CTOT**), which is transmitted to the AO concerned and to the control tower at the aerodrome of departure.

In addition to this fundamental process, a number of other mechanisms will act to compensate for factors such as late received flight plans and modifications.

#### 4.3.2. Description of the Slot Allocation Process

##### 4.3.2.1. Slot Allocation List - Basic Rate

For each regulated point, area or airport, CASA builds and manages a list of slots i.e. the Slot List. A regulation may be specified over sub-periods, each sub-period being assigned a rate. CASA uses these items to build initially an empty Slot List. For instance, a four hour long sub-period associated with a basic rate of 28 flights per hour, would result in a Slot List made up of 112 slots separated from one another by approximately 2 minutes.

##### 4.3.2.2. Pre-Allocation Stage

When the regulation is activated, CASA starts to receive flight data, based on Repetitive Flight Plan (**RPL**) and Filed Flight Plan (**FPL**) as available. Each flight concerned by the regulation is given a provisional slot based on the order of their Estimated Time Over (**ETO**) the restricted location.

This initial reservation is internal to the ETFMS system and is subject to amendment.

Due to the constant recalculation of the SAL as new flight plans arrive, the provisional slot is very likely to be changed.

When CASA receives new flight data, it pre-allocates the slot as close to the requested Estimated Time Over (**ETO**) the restricted location **as it is available**:

- a) If that slot is free, it is assigned to the flight, which thus suffers no delay.
- b) If that slot is already pre-allocated to a flight which is planned to overfly the restricted location after the new flight then the latter takes the slot. Of course, the consequence can be a chain reaction, because the flight whose slot has been taken tries to recover another slot, possibly by taking the slot of another flight, etc.

### 4.3.3. Slot Amendment Procedure

When CASA receives the flight data for the cancellation of a flight, this may improve the slots given to other flights. The slot amendment procedure aims to take into account the new slots made available. It applies only to pre-allocated flights. Therefore it is an essential requirement, with beneficial interest for AOs, to **cancel as early as possible** those flight plans which will **no longer operate**.

#### 4.3.3.1. Allocation Stage

At a fixed time before the Estimated Off-Block Time (**EOBT**) of each pre-allocated flight, called Slot Issue Time 1 (**SIT1**), the slot is allocated to the flight and a Slot Allocation Message (**SAM**) is sent to the AOs and ATC.

An allocated slot cannot be taken by another flight, unless the regulation is deep rectified and the CTOT has not been forced. However, an AO should update its EOBT, if it is thought that the flight will not be able to comply. Moreover, the slot allocated to a flight may be improved by the true revision process (see § 4.3.3.3.).

#### 4.3.3.2. Combined Flow Measures for one Flight

The general principle is that a flight which is subject to several CASA regulations is given the delay of the most penalising regulation and is forced with that delay into all other regulations.

#### 4.3.3.3. True Revision Process

This is the automatic mechanism that routinely attempts to improve the slot of allocated flights; for a given flight, the true revision process takes place after the SAM has been issued until a time parameter before the CTOT. This parameter is linked to the Aerodrome of Departure (**ADEP**).

##### 4.3.3.3.1. RFI and SWM Status

All flight plans are by default in Ready for Improvement (RFI) status. In case an improvement is possible, flights in status RFI will immediately receive a Slot Revision Message (**SRM**).

This default status may be changed to **SWM** status for all flights upon request, if an AO wishes to receive proposal of improvement via a Slot Improvement Proposal (**SIP**).

##### 4.3.3.3.2. RFI Message

The AO may change the status of a particular flight from SWM to RFI by sending the **RFI** message. It will immediately receive a Slot Revision Message (**SRM**) in case of improvement.

##### 4.3.3.3.3. Slot Improvement Proposal Message

The AO may change the status of a particular flight from **RFI** to **SWM** by sending the SIP Wanted Message (**SWM**). In case of possible improvement, the flight will receive a Slot Improvement Proposal (**SIP**) instead of SRM.

The AO may accept or refuse the new CTOT via a Slot Proposal Acceptance (**SPA**) message or a Slot Rejection (**SRJ**) message.

After a fixed time (**SIP** time out), if no response has been received from the AO, the proposal is cancelled and the slot that was blocked for that flight, is released.

AOs are requested to use the **SRJ** message if they do not wish to take advantage of the **SIP**. This is designed to release the slot so that it can be offered to another flight.

#### 4.3.3.4. Ready Procedure

For regulated flights being in a situation to depart before their CTOT/EOBT (doors closed and ready to depart), the AO may ask local ATC to send a Ready (**REA**) message.

ATC could send this message upon AO request. In case of change to CTOT/EOBT the flight will be inserted in departure sequence accordingly

A MINLINEUP time may also be included in the REA to indicate the minimum time needed for that flight to get from its position to take-off.

A REA may be sent between EOBT minus 30 minutes and the CTOT of the flight which may result in a flight being offered earlier CTOT or even take off time before its original EOBT. When the REA is filed before the EOBT, the flight is considered as having a new EOBT at this filing time and the MINLINEUP as a revised taxitime. To keep track of the difference between the filed off block time and the effective one in ETFMS all subsequent ATFCM messages include the field(s) IOBT and possibly IOBD (IOBT = latest EOBT filed before the REA was sent).

If an improvement is possible, it will be provided with an SRM.

#### 4.3.3.5. Slot Swapping Procedure

##### 4.3.3.5.1. Definition

**The ETFMS slot swapping functionality is used to swap flights when requested by aircraft operators and also to improve another flight if an aircraft operator requests a slot extension (i.e. instead of forcing the flight).**

##### 4.3.3.5.2. Procedure

**The procedure should be applied when a request for slot swapping is received from an aircraft operator or FMP**

**Aircraft operators shall only request swaps concerning flights for which they are the responsible operator (OPR field) or where there is a formal agreement between both aircraft operators for swaps to take place between their flights.**

##### 4.3.3.5.3. Conditions

- **A request for a slot swap from an AO must be submitted via the E-Helpdesk**
- **The NMOC shall not check whether flights are from the same operator or where there is a formal agreement between both aircraft operators for swaps to take place between the concerned operators.**
- **FMPs can request swaps for two flights of the same aircraft operator or, during critical events at airports, also for different aircraft operators;**
- The two concerned flights must be in status slot issued.
- The two flights must be subject to the same most penalising **regulation**.
- Only one swap per flight shall be accepted, except critical events (see CHAMAN).



#### 4.3.3.6. Aerodrome Parameters

##### 4.3.3.6.1. Taxitime

The taxitime at aerodromes is an important parameter taken into account in the slot allocation process. Default taxitime is specified for each runway at an aerodrome in the ENV database but can be changed on the day of operation following a request of the FMP concerned. Changing taxitime can resolve certain aerodrome operating problems without the need to reduce capacity or to request an increase of the slot window beyond the existing -5+10 minutes around the CTOT.

The taxitime can be modified for a given time period. A modification of the taxitime will modify all flights having their EOBT inside the period, some issued slots may be recalculated and a few short notice SRMs issued.

A modification of taxi time triggers an automatic AIM to inform the aircraft operators of the modification

##### 4.3.3.6.2. TIS and TRS

Parameters are defined for each aerodrome to prevent late change of CTOT.

The Time to Remove from the Sequence (**TRS**) prevents a change to a later CTOT when the flight is already in the departure sequence.

The Time to Insert into the Sequence (**TIS**) prevents an improvement into an already organised departure sequence.

These parameters may be adjusted at any time depending on the local aerodrome traffic situation and may vary during the day.

**The TIS parameter is not relevant when ATC has sent an REA message for a flight.**

#### 4.3.4. Late Reception of Slot Messages

There are many mechanisms within the **NM** systems to prevent, in normal circumstances, the late transmission of a slot, or update to a slot. Nevertheless, there are four conditions that can cause the late reception of a slot time:

##### a) Late Flight Plan Submission/Update

The flight plan is filed or modified (reception of a FPL/DLA/CHG message by the ATFCM system) shortly before the EOBT. If needed, a SAM/SRM is sent immediately. Of course, in this case the SAM/SRM is also late.

##### b) A Regulation is Created or Modified

For flights having already received a slot, a SRM may be sent. However, a SRM is not sent for flights that are close to their off block time. The parameter TRS (Time to Remove from Sequence), related to each aerodrome, prevent it from happening. The values of the TRS for each aerodrome are available via the **NM** Client Application in the Environment/Aerodrome Details menu.

For flights that become regulated as a result of the new or modified regulation, a SAM is sent. There is no mechanism to forbid sending a SAM up to the last minute, however, for flights very close to their EOBT, the SAM will not indicate a delay i.e. it will indicate an 'on time' slot. The main reason for sending the SAM is to inform the Tower and the pilot that the flight has become regulated. If the flight preparation is on schedule, it should not be unduly affected. If the flight preparation is late, then the normal procedure for flights not able to cope with their slots must be used.

In case of cancellation of a regulation, a SLC may be sent. This can happen any time up to the CTOT. The main reason is to inform the Tower and the pilot that the flight is no longer regulated.

**c) Manual Intervention**

The **NMOC Air Traffic Flow and Capacity** Controller manually allocates another slot to a given flight causing a SRM to be sent. This normally only happens following an agreement between the parties.

**d) Transmission Delay**

The message is sent early enough, but due to transmission problems it arrives late. The occurrence is limited but it may happen.

#### 4.4. Slot Adherence

AOs and ATC are jointly responsible for achieving CTOT compliance at departure aerodromes.

##### 4.4.1. Aircraft Operators

In order to comply with a CTOT, AOs need to plan the departure of a flight so that the aircraft will be ready for start up in sufficient time to comply with a CTOT taking into account the taxitime.

AOs shall inform themselves of and adhere to:

- a) General ATFCM procedures including flight plan filing, strategic ATFCM Measures and message exchange requirements.  
and
- b) Current ATFCM Measures (e.g. specific measures applicable on the day in question, such as ATFCM slot or flight suspension).

##### 4.4.2. ATC

ATC is responsible for CTOT compliance monitoring at departure aerodromes. Whereas the exact procedures to be followed will depend on the way that ATS is organised at each aerodrome, the following requirements shall apply in all cases:

- a) States shall ensure that CTOT, if applicable, be included as part of the ATC clearance. ATC shall take account of an applicable slot or flight suspension when a clearance is issued.
- b) ATC units responsible for CTOT compliance monitoring shall be provided with the necessary information concerning the ATFCM measures in force and CTOTs allocated.
- c) ATC shall provide all possible assistance to AOs to meet CTOT or to coordinate a revised CTOT.
- d) A slot tolerance (-5' to +10') is available to ATC for which the aircraft must not depart outside.
- e) ATC may deny start up clearance to a flight unable to meet its CTOT until coordination with the ATFCM units concerned has been effected and a revised CTOT issued.

#### 4.4.3. Slot Revisions

Revisions to CTOTs should, where possible, be coordinated between the AO and the **NM** using the ATFM message exchange procedures. However, it may be the case that last minute revisions to CTOTs and slot extensions when the pilot is in direct communication with ATC, are more easily or efficiently coordinated with the FMP/**NM** by ATC.

#### 4.5. Position Reporting

Position reporting refers to the reception in ETFMS of information concerning the current position and perhaps future route of the flight.

##### 4.5.1. Impact of Position Reporting after Airborne

Air Traffic Services provide the **NM** with the necessary data concerning the position of flights once airborne. These data are based upon ATC messages such as First System Activation (**FSA**)<sup>1</sup> and Correlated Position Reports (**CPRs**)<sup>2</sup>. The **NM** uses this data to update the profile of the flight (its trajectory) in ETFMS and, where necessary, the flight will be 'forced' within all concerned regulations.

As a consequence, slots allocated to other non-airborne flights will be modified by the true revision process (see § 4.3.3.3)

Wind information is taken into account to calculate the time estimates in the profiles. When new meteo data arrive, flight profiles are fully updated.

For some flights departing from outside the ECAC area, AOs provide information on their estimated time of arrival (e.g. AO Position Reports – APRs derived from ACARS), which gives a more accurate view of the future traffic situation.

##### 4.5.2. Impact of Position Reporting prior Airborne - Flight Activation Monitoring (FAM)

In the areas in which Correlated Position Reports (**CPRs**) are received and where flight activation monitoring has been enabled in ETFMS, the flights, which are expected to be airborne but are not actually reported as airborne at the expected time, will be regularly 'shifted' in ETFMS. When an acceptable maximum time shift (parameter set by **NM**, currently 30 minutes) is reached, any such flight will then be suspended and will receive an FLS.

If the flight is not yet airborne, AOs are required to send a DLA or CHG to IFPS to confirm the flight together with its new EOBT. In order to ensure that flights are not unnecessarily suspended, AOs are requested to make sure that a DLA or CHG message is sent in due time. (see § 5.1.3.)

In normal circumstances a suspended flight shall not receive a departure clearance but if the flight has already departed, the first received ATC message (DEP/FSA) or the first received CPR will automatically de-suspend the flight. As such a flight will be 'forced' in all regulations affecting its profile, other flights may be moved aside to accommodate them. The consequence of this, is that airports which do not comply with CTOTs, will create serious disturbances in the allocated slots of other aircraft, not necessarily from that airport.

#### Notes

- a) See § 5.1.4.3. for details about the procedure in the event FAM has been enabled.

<sup>1</sup>. **FSA** is a message designed to enable ATC systems to automatically inform the CFMU of significant events affecting a flight. The FSA message can only be sent by ATC and is normally generated automatically by an ATC system. FSA for holding of flight is also considered.

<sup>2</sup>. **CPRs** are extracted from surveillance data (radar derived positions).

- b) The decision to enable Flight Activation Monitoring will be taken per Area from which CPRs are received and it will only be enabled after complete evaluation of the CPRs. All users will be notified by **the** by means of AIM whenever an area will have Flight Activation Monitoring enabled or disabled.

#### 4.6. Management of Unusual Situations

##### 4.6.1. Low Visibility

Reduced landing rates at certain busy European airfields during low visibility conditions can lead to excessive holding and a reduction in ATC capacity in adjacent ATC sectors during periods of high demand. The impact of reduced arrival rates as a result of low visibility operations at a major hub airport impacts a large geographic area. Departure airports, en-route airspace, diversion airports and adjacent smaller airports can all be significantly impacted from the reduction of capacity at the primary destination. The costs associated with the resultant delays, cancellations and diversions are substantial.

To prevent this, selective ATFCM measures may be applied.

The measures applied will take account of the total demand, the mixture of traffic expected (i.e. the proportion able to commence an approach) and the actual and forecast weather conditions as follows:

- a) Depending on the level of demand and the current or forecast visibility situation at the affected airfield, the ATFCM restriction may include an RVR value. This may not be the actual RVR value but will be based on the estimated RVR situation and will take account of likely variations. Aircraft capable of landing in visibility equal to or less than the stated RVR value will be allowed to depart while those not able to land will be delayed to arrive after the low visibility period.
- b) If the demand by traffic able to land is within the reduced aerodrome capacity and not likely to result in excessive en-route holding, aircraft capable of landing may be allowed to depart without delay.

See also section 9.1

##### 4.6.2. Non-availability of Aerodrome or Airspace

In the event of the non-availability of an aerodrome or airspace the **NM** will assess the duration and nature of the closure based on the information received and then take the following actions:

###### a) Non-availability of aerodrome

Accept the FPLs and then deal with them accordingly **and either**  
 Suspend flights in the event of a long non-availability (more than one hour) **or**  
 Delay flights to arrive or depart when the aerodrome is opened.

###### b) Non-availability of airspace

In the event of an airspace non-availability the **NM** will:

1. Close the airspace in the **NM** Environment database and consequently reject all relevant FPLs filed afterwards and suspend relevant FPLs filed before the airspace non-availability as a result of FPL revalidation

**OR**

2. Accept FPLs and regulate them in the ETFMS system as in case of an aerodrome non-availability.

**Note:** The IFPS Revalidation process is validating flight plans up to 1 hour prior to the estimated off blocks time. In case of an ad hoc airspace non-availability request, the same principle as in aerodrome non-availability shall be applied.

**4.6.3. Strikes**

In the event of strikes the **NM** procedures are similar to those for non-availability of aerodrome or airspace and are adapted to specific local conditions.

**4.6.4. Adverse Operating Conditions at Aerodromes**

Normal operating conditions at aerodromes can be affected by events such as emergencies, equipment failures and de-icing problems, which make compliance with ETOTs or CTOTs difficult. The **NM** may be able to minimise the impact of such events by coordinating short-term modifications to the normal criteria for ETOTs or CTOTs and/or releasing individual flights by exempting them.

In situations where departures are affected by a deterioration in local operating conditions such that ETOT or CTOT cannot be met within the approved tolerance windows, the procedure described below may apply. It is designed to be in effect for an agreed 1 hour period but it can be extended if necessary.

**4.6.4.1. Standard Procedure**

The tower must advise the local FMP of the problem and request a temporary increase of the normal tolerance criteria applied to ETOTs or CTOTs and/or exemption for one or more of any affected regulated aircraft. The FMP shall seek approval from the **NM** for any exemptions they may identify.

The **NM** shall analyse such requests and approve where appropriate. However, in exceptional circumstances (e.g. sector loads are already close to or at their limit) the **NM** shall, in coordination with the FMP, devise alternative solutions.

In the event of the **NM** approving the extension of the Slot Tolerance Window (STW) for regulated flights and the Departure Tolerance Window (DTW) for non-regulated flights, this modification, together with the period of application of this change shall be input in the ETFMS by the FM Supervisor on duty.

Default, minima and maxima values are:

	Default		Minima		Maxima	
	Before	After	Before	After	Before	After
DTW	15	15	0	0	30	30
STW	5	10	5	10	30	30

The start and end times of the validity period are set by default to 'clock' to 'clock + 1 hr'. The end time may be changed to anything between 'clock + 1 mn' to 'clock + 1 hr'. If necessary, the process may be repeated for further extensions to the validity period.

The **NM** shall log the corresponding agreement to facilitate post-operational analysis.

Departing flights from DPI-transmitting aerodromes, affected by this procedure shall have their profiles updated by the TTOTs if they fall within the new STWs and DTWs.

Updates coming from E-DPI, T-DPI, T-DPIs falling within STW shall be accepted and profile updated. Should the updates bring take off time after STW, the ETFMS shall consider it as DLA message and may recalculate the CTOT.

T-DPIs bringing the flight before STW will be taken as No slot before that time. The flight should not be forced before that time.

A-DPI bringing the flight outside STW shall be rejected.

#### 4.6.4.1.1. Situations that Qualify

The following are examples of events which may require special coordination between the FMP and the **NM**:

- a) Emergencies at the aerodrome
- b) ATC system failures at the aerodrome or at the ACC not yet reflected in ATFCM measures but which may prevent departures for a short period.
- c) Extreme adverse weather situations in winter
- d) Any other situations that may be identified as affecting the operation of the aerodrome.

#### 4.6.4.1.2. Situations that do NOT Qualify

Individual aircraft which cannot make their ETOT or CTOT due to 'one off' events delaying their taxi/departure are not covered by this procedure. They are to be treated like any other aircraft whose ETOT or CTOT is about to expire or has expired.

Low Visibility conditions do not qualify as they are managed by the imposition of 'Exceptional Conditions' by the **NM**, neither do conditions requiring routine de-icing procedures.

#### 4.6.5. FLS Triggered by DPI-Transmitting Aerodromes

Airports that provide accurate Take-Off-Time (TTOTs) to the **NM** via DPI messages (e.g. CDM airports) may also occasionally send Cancel DPI (C-DPI) messages. This is done in case when there is an interruption in the departure/turn-around process for a particular flight and the new Off-Block-Time is not yet known. The C-DPI message will result in an FLS being sent by ETFMS.

**The flight will be de-suspended at reception of a DLA/CHG updating the EOBT or a new DPI message triggered by a TOBT update. An A-DPI message will also de-suspend the flight when suspension is due to the reception of a C-DPI. The AO is expected to send a DLA/CHG or communicate the updated TOBT with the A-CDM platform. The message will be followed by a SAM (indicating the CTOT) or a DES which indicates the departure requirements. If the flight has already departed, the first received ATC message (DEP/FSA) or the first received CPR will automatically de-suspend the flight.**

#### 4.6.6. NM Contingency

In the event of the ETFMS failure, a number of appropriate procedures have been put in place to minimise the impact on the **NM** customers.

For each contingency procedure instructions will be issued by the **NM**. In order to permit an effective and orderly resumption of slot allocation by the ETFMS following recovery, flight plan and flight plan update messages will continue to be sent to the IFPS throughout the whole period of operation of the contingency plan.

##### 4.6.6.1. ETFMS Fall-Back System (EFS)

An attempt will be made to restart the computer. If that fails, the **NM** may decide to activate the ETFMS Fall-Back System (**EFS**), which contains the basic ETFMS data. The impact would be that some conflicting messages may be issued (e.g. wrong sequence of message such as SAM followed by SAM instead of SRM, etc.).

##### 4.6.6.2. ATFCM Procedural Contingency

If EFS activation fails, the ATFCM procedural contingency will be initiated. This is a phased operation, whereby nominated airports will apply predetermined departure intervals. In this case AOs concerned may expect high delays. Flights departing from non-nominated airfields are not affected by the ATFCM procedural contingency plan.

**4.6.6.3. NM Building Evacuation**

In the event where the **NM** facilities at Haren have to be evacuated, the **NM** operations would be moved to a contingency site. If this occurs, procedural contingency will be in force until the **NM** staff and the system become available.

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## 5. SLOT ALLOCATION PROCEDURES

The following sections describe the sequence of possible actions from initial flight plan filing to final slot allocation for a flight subject to ATFCM measures. Included are descriptions and examples of the relevant ATFCM messages exchanged between AOs/ATC/FMPs and the **NM**.

### 5.1. Flight Plans

The **NM** requirements for the submission of flight plans conform to the ICAO EUR Region supplementary procedures (Doc 7030 part 1 Chapter 3) for flight planning.

AOs filing flight plans for flights departing from within the ATFCM area or from within the ATFCM Adjacent area and entering the ATFCM area, shall assume their flight is subject to ATFCM Measures and subject to the requirement to submit a flight plan at least **three hours before EOBT** unless:

- a) The flight is exempted from ATFCM slot allocation as defined in the ICAO EUR Regional Supplementary Procedures (Doc 7030).
- b) The flight is taking place in an area or under conditions specified in the AIP of the State from which the flight is departing as not subject to ATFCM Measures.

It should be noted, however, that effective application of ATFCM measures depends on an accurate assessment of air traffic demand which, in the Tactical Phase is based on flight plan information. AOs are, therefore, urged to file flight plans more than three hours before EOBT whenever possible.

Where applicable, flight plans shall be submitted in accordance with the route restrictions and specific requirements published in **RAD** in force, taking into account any change of validity.

If required by exceptional circumstances, Operators may submit a flight plan for a route normally forbidden in RAD but only after its availability has been confirmed by the **NM**. (e.g. tactical rerouting scenarios).

If operators, in conjunction with the **NM** decide to use a route other than that contained in their previously submitted flight plan (RPL or FPL) it is mandatory to file either a Modification (**CHG**) message or use Replacement Flight Plan Procedure (**RFP**) (see IFPS Users Manual for details) to that effect.

Flight plan submission procedures, including cancellation and replacement procedures, within the Flight Planning Messages (**FPMs**) Distribution area are described in the IFPS Users Manual.

**Note that the IFPS shall not accept DLA and CHG messages for those flight plans that have been ATC\_Activated.**

#### 5.1.1. 'Ghost' and Duplicate Flight Plans

'Ghost' is the term used to refer to the flight plans of flights which do not take place i.e. flight plans that were not cancelled by the originators.

**Only one Flight Plan shall exist at any given time for the same flight.**

It is absolutely essential that flight plan originators:

- Cancel a flight plan as soon as they know that the flight is not going to take place.
- Cancel an existing flight plan before filing a replacement flight plan for the same flight.

The existence of ghost or multiple flight plans is to be condemned as they will:

- Present ATC with false information.
- Impair the efficiency of the **NM**.
- Be responsible for the issuance of unnecessary new slots.
- Cause additional unnecessary delays to regulated flights.
- Lead to an under utilisation of ATC capacity.

### 5.1.2. Reception of REJ Message

Message originators shall always react to the reception of a REJ message by amending the original message as appropriate and re-submitting it to the IFPS.

Therefore, if a REJ message is received from IFPS, then no flight plan will exist.

IFPS distributes flight plan and associated messages to all states within the FPM Distribution area as well as to the **NM** ETFMS. Therefore, should the flight be subject to flow restrictions, **no slot will be issued**.

Failure to receive an ACK message means no flight plan has been received by the **NM** or by the ATC Units which will result in significant delays.

### 5.1.3. Modification of Flight Plan (DLA, CHG, RFP)

#### When do I send a DLA?

A DLA message shall be sent for any change of EOBT greater than 15 minutes. The new EOBT must be in the future.

#### What is the response of the **NM**?

The **NM** will inform all other ATC Units concerned with the flight and will re-calculate the flight profile. The resulting calculation may lead to the issuance of a slot revision such as an SRM or an SLC.

#### What is the subsequent response of AOs?

Comply with the relevant ATFCM message.

Any revision to a flight plan by means of DLA, CHG or the Replacement Flight Plan Procedure (**RFP**) is taken into account by the ETFMS system. As a result, messages such as SAMs, SRMs and SLCs may be sent. SAMs or SRMs will be issued immediately if the new EOBT is within the ETFMS Slot Issue Time (SIT1 - refer to Annex 8) or at Slot Issue Time if the new EOBT is outside SIT1.

If the flight plan revisions do not alter the ETFMS calculation any SAM or SRM already sent remains valid. In that event ETFMS will **not** send new messages and the AO is expected to comply with messages already received.

### 5.1.4. EOBT Requirements

It is a requirement for both ATC and ATFCM, that the EOBT of a flight shall be an accurate EOBT. This applies to all flights, whether subject to a flow management regulation or not.

Any change to the EOBT of more than 15 minutes for any IFR flight within the FPM distribution area shall be communicated to the IFPS.

An AO should not modify the EOBT to a later time simply as a result of an ATFCM delay (**CTOT**). When an AO submits an amendment message (e.g. DLA or CHG) to IFPS, they must always give as EOBT the earliest EOBT they may comply with. This time is not directly related to the (new) CTOT provided in the SAM/SRM. The EOBT in IFPS should always reflect the time at which the AO actually wants to be off-blocks. The EOBT should always be changed if the original EOBT established by the AO cannot be met by the AO for reasons other than ATFCM delay.

The following procedures are to enable an AO to meet the above requirements whenever they know that the EOBT of a flight will require modification.

#### 5.1.4.1. Procedure for Modifying the EOBT of a Flight not having received an ATFCM Slot

Procedure:

- To amend the EOBT to a **later** time, a DLA or CHG message shall be sent to IFPS.
- To amend the EOBT to an earlier time, a CNL message shall be sent to IFPS, which, on receipt of ACK message, shall be followed by a new flight plan with the new EOBT indicated.

**Note** The replacement flight plan procedure shall not be used.

#### 5.1.4.2. Procedure for Modifying the EOBT of a Flight which has received an ATFCM Slot

If the EOBT of a flight has changed or is no longer realistic, for reasons other than ATFCM, then the following procedure shall be used<sup>3</sup>:

- If a flight has a CTOT which cannot be met, then the AO shall send a DLA message to IFPS with the new EOBT of the flight. This may trigger a revised CTOT.
- If a flight has a CTOT with some delay and the AO is aware that the original EOBT cannot be met but the existing CTOT is acceptable then a DLA message shall be sent to IFPS with the new EOBT of the flight. However, in order not to trigger a new CTOT with a worse delay, the following formula should be used:
  - Take the current CTOT, minus the taxitime, minus 10 minutes and send the new EOBT, which must not be after this time e.g. EOBT 1000, CTOT 1100, but the flight cannot go off blocks until 1025. The taxitime is say 15 minutes.  
1100 minus 15, minus 10 = 1035. The new EOBT must be earlier than 1035. If it is, then this action will not trigger a revised CTOT.  
However, as **NM** systems are continuously seeking to give zero delay, the CTOT of the flight will never be earlier than the new EOBT plus the taxitime. If a flight has had a CTOT but now receives a Slot Cancellation (**SLC**) message but the original EOBT can no longer be met, then the AO shall communicate the new EOBT by use of a DLA message. ATC/ATFCM will now have the 'true' EOBT of the flight.
  - Some States outside the **NM** area of responsibility still require AOs to update the EOBT regardless of why the flight's original EOBT may have changed. AOs should bear in mind the formula explained above when doing this. Where it is known that ATC send Departure (**DEP**) messages for all flights, then this DEP message will suffice.
  - It is not possible to amend (via CHG or DLA) the EOBT to an **earlier** time than the EOBT given in the flight plan however, if a flight is ready to go off blocks earlier than the current EOBT, then there are two options available:

<sup>3</sup>. If, by changing EOBT, the flight gets affected by another more penalising regulation, its CTOT will be recalculated.

- The AO may ask the local ATC Unit (**TWR**) or the FMP to send a Ready (**REA**) message. In this case, the flight is considered as 'ready to depart' from the filing time of the REA message.
- The AO may contact Central Flow Helpdesk who have the possibility to input an earlier EOBT into the ETFMS (max –30 minutes). Each case is treated on its merits and may be refused if it is considered that 'abuse' is involved.
- **Note** In both cases, to keep track of the difference between the filed Off-Block Time and the effective one in ETFMS all subsequent ATFCM messages include the fields IOBT and possibly IOBD (IOBT = EOBT filed in FPL/DLA).

#### 5.1.4.3. Procedure in case of non-compliance with take-off time (estimated or calculated) – Flight Activation Monitoring (FAM)

With the development of the ETFMS, the **NM** is now receiving updates on flights once they have departed. These updates are provided by the ATC systems and based on ATC radar and flight plan updates. The benefit of this information is a better knowledge of the present traffic situation.

To take advantage of this information and to improve the prognosis of the traffic pattern, the ETFMS:

- monitors flights, regulated or non-regulated, which should have been airborne but have not been reported as such at the expected time;
- takes action on these flights through an internal update of the Actual take-off time (internal shift every 5 minutes), in order to improve the traffic forecast;
- suspends them, after a time parameter, unless a message which confirms that the flight is airborne, has been received in the meantime;
- informs the AOs and local ATC of the suspension by sending an FLS message with the comment 'NOT REPORTED AS AIRBORNE', enabling them to react.

The expected results is to release the slots unduly occupied by these flights and to create an incentive for the AOs to update their flights in due time.

FAM is applied on all flights, whether regulated or not, departing from and/or landing at areas where CPRs are received by the **NM** and FAM activated. Flights departing from and landing in non CPR-covered areas are not affected by FAM, irrespective if they fly through CPR covered or non CPR-covered areas en-route.

When such an FLS is received by the AO and the Tower of aerodrome of departure the following cases may occur:

- The flight is still effectively on the ground either on stand or already taxiing:  
 The AO should then ensure that the flight plan is re-initiated in ETFMS by means of a DLA message with a correct EOBT. ETFMS will then respond with a DES or SAM message depending whether the flight is non-regulated or regulated respectively.  
 The tower of aerodrome of departure should not let the aircraft start-up/depart before such a message (DES or SAM) is received.
- The flight is already airborne:  
 No action is needed from the AO or from the Tower of aerodrome of departure. The continuous re-occurrence of the above may mean a lack of proper information sent to **NM**. A possible solution would be in a DEP message sent by the aerodrome of departure.

## 5.2. Slot Allocation

### 5.2.1. ATFCM Message Exchange

The slot allocation and slot modification process relies to a large extent on an exchange of ATFCM Messages between the AO, the NM and ATC Units. NM ATFCM messages conform to the EUROCONTROL Standard Document, the ATS Data Exchange Presentation (**ADEXP**), edition 3.0.

AOs requiring assistance should refer to the AIP of the State from which the flight is departing for FMP/ATC contact telephone numbers and any local procedures.

All CTOT revisions or cancellations are to be made preferably using the ATFM message exchange procedures described in this section.

In all cases, it is in the best interest of AOs to initiate prompt revisions/cancellations thus permitting the system to maximise use of available capacity and minimise delay.

General information on ATFM messages including the FORMAT, messages fields and addressing procedures are included in section 14 of this Manual. A summary of all messages is set out in Annexes 2 and 3.

### 5.2.2. Central Flow Helpdesk Services

The Central Flow Helpdesk is established to provide assistance to those AOs who have critical operational problems which cannot necessarily be solved by use of ATFM message exchange.

An E-Helpdesk has been developed to handle queries faster than the telephone and to minimise the amount of calls to the telephone Help Desk.

The E-Helpdesk is a portlet of the Protected NOP Portal which by default can be accessed by ALL aircraft operators who have access to **NM** systems, by using secure id tokens

The E-Helpdesk is now the principle tool for dealing with requests for help from aircraft operators and flight handling agents. For this reason E-Helpdesk has priority over Helpdesk calls. E-Helpdesk queries will be answered before the telephone.

Neither the E-Helpdesk nor the telephone helpdesk should be used to systematically request improvement for every flight which has a delay. The Help function is provided to assist with critical flights only

#### 5.2.2.1. Slot Extensions

Slot extensions are limited to a maximum of 10' and are considered under the following circumstances:

##### If requested by a TWR:

- For operational reasons the slot extension should normally be given. The appropriate tactical staff should be informed if there is an adverse impact on the load. It will then be the responsibility of the ATFCM to either negotiate extra capacity from the affected FMP or to rectify the load.
- If an unacceptable overload is unavoidable, a slot extension should be refused. Co-ordination with the appropriate tactical staff will be necessary to ensure that nothing can be done prior to refusing a request from a TWR.

##### If requested by an AO:

- If present clock time is still 20 minutes or more before the EOBT required to achieve the CTOT (CTOT –Taxi time) no slot extension should be given. The customer should be instructed to send a DLA message.
- If a flight has already been given a slot extension no further extension should be given. The customer should be instructed to send a DLA message
- If it is within 20' of the EOBT required to achieve the slot (CTOT -Taxi time - less than 20') and no prior slot extension has been given:

- 1) Check the load. If the extension would create an overload no slot extension should be given unless a swap is possible with a later flight.
- 2) If the extension would not generate an overload a 10 minute slot extension may be given.

The capacity should be respected in ALL regulations, not just the most penalizing.

#### 5.2.2.2. E-Helpdesk Procedures for AOs

Only one request per flight should be submitted. Do not send repeated requests for the same flight concerning the same problem, this will result in the response 'Unable' being sent.

There is a drop down menu with the most frequently asked questions. If a question does not appear in the drop down menu it may be submitted as a free text message.

Some of the queries will provide answers without submitting them to the **NM**, for example: "My flight is suspended what should I do". The correct actions are already described in the drop down menus.

It is not necessary to follow up an REA message with a query to the E-Helpdesk. The **NM** receives more than 300 REA messages per hour and, in any case, the ETFMS will automatically look for improvements for flights in REA status or RFI status.

Automatic submissions will be rejected with the response 'Unable'.

Do not request improvements for flights which have no delay.

#### 5.2.2.3. Telephone Help Desk

Whenever possible, customers should use the E-helpdesk to contact the Central Flow Helpdesk services.

However, for where no other option exists, a telephone service will be retained. If it is possible to access the E-Helpdesk do not use the telephone help desk.

For those who do not have access to the internet the Help Desk telephone number is:

**++32 (0) 2 745.19.01**

When connected to the HelpDesk, callers are requested to provide the flight's callsign before stating the problem. This enables the HelpDesk to display the relevant data concerning the flight before any problem solving takes place.

Callers who have no specific operational flight critical problem to resolve, should not call the HelpDesk. Business jet users should contact EBAA (European Business Aviation Association) for details on how to access help services at info@EBAA.org. Use **NM** HELPDESK in the subject line.

#### 5.2.2.4. Manual Improvement of Slots

The FM staff shall respect Minlineup value, when improving REA flights to earlier slots.

The FM staff shall respect TIS+Taxi time value, when improving RFI flights to earlier slots.

For A-CDM airports the FM staff shall not force flights to an earlier time than the TTOT, unless coordinated and agreed with the tower concerned.

### 5.2.3. ATFCM Messages

#### 5.2.3.1. Slot Allocation Message (SAM)

**When does the **NM** send a SAM ?**

A SAM is sent to AOs/ATS any time a flight becomes regulated (new flight entering the system, new period of regulation in the system, in response to an FCM or CHG providing new RVR after a suspension) but at the earliest 2 hours before the last received EOBT.

The SAM is used to inform AOs and ATS of the Calculated Take-Off Time (**CTOT**) for an individual flight.

#### What is the normal response of AOs/ATS ?

They must comply with the CTOT. A slot is issued as a Calculated Take-Off Time (**CTOT**). The CTOT is defined as a time at which the aircraft shall take-off.

The calculation of take-off times takes into account the off-block times and an average taxiing time for the runway in use at the airfield concerned. For the rules related to the slot adherence see § 4.4.

### 5.2.3.2. Slot Revision Message (SRM)

#### When does the NM send an SRM ?

An SRM may be sent by the **NM**:

- a) To notify all concerned of either a significant change (>5') to the original CTOT or a modification of the most penalising regulation or both. Such changes are due to circumstances unrelated to the flight e.g. the introduction of a new restriction or a change to the parameters of an existing restriction. By default, only flights in an **RFI** status or in a Ready (**REA**) status are considered for improvement but if the situation requires it, the **NM** Flow Controllers are able to let all flights, **including those in SWM status**, be considered for improvement.
- b) In response to a DLA or CHG when the current CTOT is no longer compliant with the new information.
- c) To notify all concerned of a routine improvement of the CTOT by the revision process for a flight in an **RFI** status or in a Ready (**REA**) situation.
- d) In response to a valid SPA to notify all concerned of the improvement of the CTOT.

#### What is the response of AOs/ATS ?

They must comply with the NEWCTOT.

### 5.2.3.3. REGUL Field

The **—REGUL** field indicates the name of the regulation affecting the flight.

Several **—REGUL** fields may be present, the first one being the most penalising regulation i.e. the regulation giving the biggest contribution to the delay. The other regulations are those with the calculated time of entry inside the regulation period.

The name of the regulation is built with the following elements:

- Location of the regulation (ATC sector, aerodrome, ...).
- Date of the regulation.
- Period in the day:
 

M	=	Morning
A	=	Afternoon
N	=	Night
E	=	Early morning
X	=	Other

### 5.2.3.4. REGCAUSE Field

In order to provide more specific nomenclature for delay causes and, at the same time, to assist the post-flight analysis, the ADEXP field **—REGCAUSE** comprises:

- a) Regulation cause code (one letter code corresponding to the cause assigned by the **NM** to the most penalising regulation).
- b) Regulation Location code - one letter code: **D**, **E** or **A**), describing the phase of the flight (**D**eparture, **E**nroute and **A**rrival) affected by the most penalising regulation.
- c) A space.
- d) The IATA Delay Code in numerics (81, 82, 83, 84, or 89) or 00 when no IATA Code available.

The **—REGCAUSE** appears in the SAM and SRM messages, and is associated only with the most penalising regulation. The code appearing in the message is the code valid at the time the delay was given to the flight. (see Annex 8)

### 5.2.3.5. Slot Requirement Cancellation (SLC) Message

#### When does the **NM** send an SLC?

An SLC is sent to AOs/ATS to advise that a flight which has received a CTOT is no longer subject to an ATFCM restriction.

It may be due to the change in parameters of an existing restriction or its cancellation, or to the reception of a message from AOs such as DLA, CHG, and FCM.

**Note** When the current EOBT is more than 15 minutes in the past a **—COMMENT PLEASE UPDATE EOBT WITH A DLA MSG** will be included in the SLC reminding the AO to update its EOBT by sending a DLA. In the meantime the flight will be counted as if departed taxitime + TIS after the slot requirement cancellation.

It may also be due to the reception of a CNL message from AOs.

**Note** In this example the field **—COMMENT FLIGHT CANCELLED** is present because the slot is cancelled as a result of the cancellation of the flight plan.

An SLC does not guarantee that the flight will not be subject to further restrictions. If following receipt of the SLC, a new restriction is imposed which affects the flight, the AO will receive a new SAM.

#### What is the response of AOs/ATS?

A flight may normally depart without an ATFCM restriction. When the SLC is issued after EOBT + 15 minutes the AO must update its EOBT by sending a DLA to IFPS.

### 5.2.3.6. Slot Improvement Proposal (SIP) Message

#### When does the **NM** send a SIP?

A Slot Improvement Proposal (**SIP**) message is sent to the AO by the **NM** for a flight not being in an RFI status to propose a new take-off time if it is possible to improve the existing CTOT by a significant amount (due to slots being released by other flights, improvements in flow rates, etc.).

#### What is the response of AOs?

An AO responds by means of either a Slot Improvement Proposal Acceptance (**SPA**) message or a Slot Improvement Proposal Rejection (**SRJ**) message.

A SIP expires if either:

- a) no response is received :  
then the flight retains the last received CTOT.
- or
- b) the response is sent after the **RESPBY** (respond by) time:



then the message is discarded and an error message is sent by the **NM**. The flight also retains the last received CTOT.

or

- c) the AO sends a CHG, CNL, DLA, etc. before the end of the RESPBY period providing the revised take-off time is after the **NM** proposed one in the SIP.

When AOs do not wish the improvement offered in a SIP, they are requested to use the SRJ rather than allow the SIP to lapse so that the slot may be offered to another AO.

### 5.2.3.7. RFI Message

#### What is the use of an RFI?

The RFI message can be sent by the **AO** in order to receive improvements directly with an SRM.

#### When do I send a RFI?

An RFI can be sent when the AO can again accept any improvement to the allocated CTOT. As the RFI status is the default status, this message should be sent only after having sent a SIP Wanted Message (**SWM**).

#### What is the response of the **NM**?

The **NM** will send an SRM if an improvement is possible for this flight.

#### How do I receive a SIP ?

By sending a SIP Wanted Message (**SWM**), the AO will receive a SIP instead of SRM when an improvement is possible.

### 5.2.3.8. SIP Wanted Message (SWM)

#### What is the use of an SWM?

The SWM allows the flight to receive a SIP when there is a possibility to improve the flight.

#### When do I send an SWM?

When the AO is not ready to accept direct improvement for the flight concerned. This message can be sent at any time after the flight is known by ETFMS.

#### What is the response of the **NM**?

The **NM** will send a SIP if there is any possibility to improve the flight.

**Note** In case of modification of the most penalising regulation, by default, only flights in an **RFI** status or in a Ready (**REA**) situation will be considered for improvement by SRM. However, if the situation requires it, the **NM** controllers will be able to let all flights be considered for improvement by SRM, including flights for which an SWM has been received.

### 5.2.3.9. Slot Improvement Proposal Acceptance (SPA) Message

#### When do I send an SPA?

An SPA is a positive response to a SIP which is received from the **NM**.

The AO will send an SPA if the proposed NEWCTOT in the SIP is acceptable.

The SPA must be sent before the RESPBY time in the SIP.

If it is sent after the RESPBY time the message is discarded and an ERROR message is sent stating the REASON i.e. VOID.

#### What is the response of the NM?

The **NM** confirms a NEWCTOT with an SRM.

### 5.2.3.10. Slot Improvement Proposal Rejection (SRJ) Message

#### When do I send an SRJ?

An SRJ is a negative response to a SIP received from the **NM**.

The AO will send an SRJ if they are unable to accept the proposed improvement.

In this event the AO will comply with the slot sent prior to the SIP.

**Note** AOs should return SRJs promptly in order to allow the **NM** to re-allocate the slot to another flight.

#### What is the response of the NM?

No response should be expected from the **NM** unless the SRJ is sent after the RESPBY time in the SIP.

In that case the message is discarded and an ERROR message is sent stating the REASON i.e. VOID.

### 5.2.3.11. Ready (REA) Message

#### When do I send an REA message?

The REA message relates to the regulated flights only. If it is sent for a non-regulated flight an error message will be generated by the ETFMS with the COMMENT MESSAGE RECEIVED BUT NO SLOT HAS BEEN ISSUED.

The REA message can only be sent by ATC following a request from AO. AO may ask ATC to send REA in 2 situations:

1. The flight is ready to depart before the EOBT (maximum 30 minutes before).
2. The flight is ready to depart before its CTOT.

ATC may include a MILINEUP time in the REA to indicate the minimum time needed to get from its present position to the take-off.

#### How does the NM check the REA message originator?

There are 2 possibilities to send an REA:

1. Via **NM** Client Application.
2. Via AFTN or SITA.

### NM CLIENT APPLICATION

Access to the REA message is permitted according to the User Id. Only ATC Units (i.e. TWR, ARO) are granted this permission. The FMP responsible for the ADEP is also able to send a REA message.

### AFTN/SITA

When a REA message is received, the **NM** systems check to see if the originator of the message is the TWR/ARO of the aerodrome of departure.

In the ENV database, each TWR/ARO definition has an address to which the ATFM messages are sent. It is this address that will be checked.

Some other units may receive, for information, a copy of the ATFCM message. They are not permitted to send the REA.

For some aerodromes, no addresses are indicated for the TWR as the messages are transmitted, for consideration, to the address of another unit(s) (usually an ARO) or a central system. The ATC authority may use the same unit address to send REA. In addition they may provide the **NM** with the relevant address for the TWR/ARO (It will not change the distribution process of the ATFM message).

If the check fails, the REA message will be rejected by the **NM** systems and an ERR message will be issued.

### What will the NM do ?

The **NM** will use the REA message to try to improve the CTOT of the flight up to present time plus the duration indicated in the —MINLINEUP (if included in the REA, otherwise the **default** taxitime of the ADEP is used).

If the regulated flight is READY before its EOBT, the **NM** will consider the filing time as a new EOBT and the MINLINEUP, if any, as a revised taxitime.

### Why is ATC sending this message ?

Because ATC needs to know that the flight may receive a CTOT improvement with short notice in order to insert it in the departure sequence.

### What is the reply to an REA ?

If a CTOT improvement is possible the **NM** will send an SRM.

### Can I suppress an REA ?

Yes by sending any other message changing the EOBT.

#### 5.2.3.12. Slot Missed Message (SMM) - new EOBT is NOT Known

### When do I send an SMM ?

An SMM is sent when the last received CTOT issued cannot be met and a new EOBT is **NOT** known.

**Note** The **NM** attempts to reallocate the slot made available by an SMM and thereby reduce overall delays. It is important, therefore, to send an SMM as early as possible.

### What is the response of the NM ?

The **NM** will cancel the original CTOT, issue the suspension with a Flight Suspension (**FLS**) message and await the response of the AO.

### How does an AO respond to such an FLS ?

The AO will send a new EOBT by using a CHG or DLA message.

**What is the response of the NM to receipt of a new EOBT?**

The **NM** responds with a Slot Allocation Message (**SAM**) or a De-Suspension (**DES**) message.

**5.2.3.13. De-Suspension (DES) Message****When does the NM send a DES ?**

The **NM** sends a DES when a flight not subject to ATFCM restrictions is de-suspended.

The original suspension could have been due to e.g. receipt of an SMM, the effect of exceptional conditions, non-availability of aerodrome, termination of the activation monitoring.

**Note** When the current EOBT is more than 15 minutes in the past a —COMMENT PLEASE UPDATE EOBT WITH A DLA MSG will be inserted to remind the AO to update his EOBT by sending a DLA.

**What is the response of AOs/ATS ?**

The required action is to amend the EOBT by more than 15 minutes later than the EOBT given in the flight plan by sending a DLA message to IFPS.

**5.2.3.14. Error (ERR) Message****When does the NM send an ERR ?**

The **NM** sends an ERR message when a message is received where:

- Its syntax is incorrect and, therefore, cannot be processed.

or

- The message or a part of the message is not relevant.

In the following example the EOBD is not correct:

The message will not be processed and the following ERR message will be answered:

**What is the Response of AOs/ATS ?**

A correct message should be sent to the **NM** where appropriate.

## 6. REROUTEING PROCEDURES

During the Tactical Phase, the **NM** monitors the delay situation and where possible, identifies flights subject to delays that would benefit from a reroute.

This is achieved by selecting a flight and then either:

- a) Choosing an alternative route. or
- b) Asking ETFMS to process all possible options.

In both cases ETFMS considers the routes as well as the possible flight level limitations and give the consequent result in terms of delay, miles to fly and CRCO route charge information.

The **NM** may, depending on the circumstances, consult the AO concerned about their final selection. Once the final decision is taken, the **NM** will then propose the selected route which will result in the booking of a slot for that flight and at the same time trigger the sending of a Rerouteing Proposal (**RRP**) message to the originator. AOs who wish to benefit from the offer shall consequently modify their flight plan (either with a CHG or a CNL and refile using the RFP procedure).

To secure the new CTOT, the CHG / new FPL should be received before the Respond By (**RESPBY**) time in the RRP. Upon the reception of the new route in the flight plan, the ETFMS shall merge the new route with the proposal. Then SLC, SAM or SRM messages shall be transmitted by the **NM** as appropriate.

Alternatively, an AO may respond to an RRP by sending ETFMS a Rerouteing Rejection (**RJT**) message. In this case the last received slot remains valid.

AOs not wishing to take up an RRP are requested to use the RJT so as to enable the proposed improvement to be re-offered to another AO.

### 6.1. Rerouteing Proposal (RRP) Message

#### When does the **NM** send an RRP ?

A sudden deterioration across the network would certainly be noticed when one of the ACCs reduces capacity resulting in excessive delays for example. ATFCM staff shall assess the situation before any decision is made. Assessment would include the best and worst case scenarios with alternatives to both. RRP will be one of the solutions to mitigate potential delays.

The RRP may be issued after the transmission of a slot (i.e. SAM) or prior to the slot transmission i.e. when a Provisional Take-Off Time (**PTOT**) has been allocated to the flight.

#### FOUR CASES MUST BE CONSIDERED

1. The flight has already received a CTOT corresponding to its original route.  
A new CTOT is offered provided the flight is re-filed along the proposed New Route (**NEW RTE**).  
**ACTION**      **An RRP with a NEW RTE and a NEW CTOT is proposed.**
2. The flight has already received a CTOT corresponding to its original route.  
A New Route (**NEW RTE**) **without a regulation** (**REASON OUTREG**) is offered.  
**ACTION**      **An RRP with a NEW RTE and REASON OUTREG is proposed.**
3. The flight has not yet received a CTOT, only a PTOT was calculated.  
A New Provisional Take-Off (**NEW PTOT**) is offered provided the flight is re-filed along the proposed New Route (**NEW RTE**).

**ACTION**      **An RRP with a NEW RTE and a NEW PTOT is proposed.**

4. The flight has not yet received a CTOT, only a PTOT was calculated.

A New Route (**NEW RTE**) with no regulation active at the time of the proposal is offered.

**ACTION**      **An RRP with a NEW RTE is proposed.**

## 6.2. Rerouting Rejection (RJT) Message

**When do I send an RJT ?**

An RJT is a negative response to a Rerouting Proposal (**RRP**) message.

The AO will send an RJT to indicate that the proposed new route (**NEW RTE**) is not a preferred option. In this event the AO shall comply with the slot sent prior to the RRP. AOs should use an RJT rather than allow the RRP to lapse so that the new CTOT may be offered to another flight.

**What is the response of the NM ?**

If no response is received from the AO, the booked slot is released after the RRP RESPBY time.

**What is the Response of AOs ?**

An AO who wishes to benefit from a reroute proposal must modify the relevant flight plan either with a:

—**CHG** (this solution is preferred where the flight is conducted wholly within the IFPS/ATFCM area of responsibility).

or

—**CNL** and refile using the Replacement Flight Plan Procedure (**RFP**).

Either of the above actions must be performed before the RESPBY time in the RRP otherwise the last received CTOT, where relevant, remains valid.

AOs are requested to respond to an RRP which they do **not** wish to take up by means of the RJT message to enable the available slot to be re-used by the **NM**.

**What is the Subsequent Reaction of the NM ?**

The **NM** shall respond by issuing SLC, SAM or SRM messages as appropriate.

## 6.3. Aircraft Operator 'WHAT-IF' Reroute (AOWIR)

### 6.3.1. Initial Steps

This **NM** function allows an **AO** to request a modification of a filed flight plan (**FPL**) routing within the **NM** system, via **NM** Client Application (only routings, which are entirely within the FPM\_DIST area may be modified by means of AOWIR).

Via AOWIR AO can either generate a new route by means of the dynamic route generator or enter manually their preferred route.

The user initially makes a series of consultations in order to assess different scenarios. The number of reroutings for a flight is limited to one.

On identifying an acceptable rerouting possibility, the user has two FPL refiling options:

**CASE 1.** Allow the **NM** to simultaneously initiate an FPL change (**CHG** or **CNL/FPL**) on successful acceptance.

**CASE 2.** Allow the **NM** to simultaneously initiate an FPL cancellation (**CNL**) and **slot booking** on successful acceptance, **but, in addition the user must then refile the FPL via AFTN/SITA.**

Users should note that an APPLY requires manual refile or an APPLY/FILE initiates an automatic refile.

- If the AUTOMATIC filing was selected by using the Reroute Apply File option, then no action is required from the user if the 'Apply File' process is successful.
- If the MANUAL filing was selected by using the Reroute Apply option, if the 'Apply' process is successful, a new slot will be booked and the user will have to REFILE a new FPL via SITA or ATFN networks.

#### 6.3.1.1. CASE 1. NORMAL: The Flight Plan is Changed

The IFPS proceeds as if a Change (**CHG**) message had been submitted by the user.

As a consequence the following actions are initiated by the **NM**:

- The original FPL is updated and all IFPS messages indicating this change (**FPL**, **CHG**) including a flag '**AWR/Rn**' in FIELD18 or FIELD22, are distributed to the appropriate ATC addresses.
- A (long) Acknowledgement (**ACK**) message, with '**—MSGTYP IFPL**', is dispatched to the address associated to the **NM** Client Application having made the rerouting acceptance **AND to the originator of the initial flight plan, if identifiable AND** to the originator of the latest Flight Plan message received prior to the **AOWIR**, if any. The ACK contains all the flight plan details of the rerouted flight as accepted by the **NM** and a FIELD18 flag '**AWR/Rn**' is also inserted.

**In addition, the ACK will contain a field:**

**—COMMENT FLIGHT PLAN CHANGED AS A RESULT OF AOWIR**

In order to be consistent with the existing ICAO Replacement Flight Plan procedure, the IFPS additionally inserts or increments an '**RFP/Q**' indicator in FIELD18 of the FPL in accordance with the following rules:

- If no '**RFP/Q**' indicator is given in the FPL which is being treated for rerouting, the IFPS inserts both '**RFP/Q1**' and '**AWR/R1**' in FIELD18.
- If an '**RFP/Q**' indicator is given in the FPL which is being treated for rerouting, the IFPS increments the '**RFP/Q**' indicator and inserts '**AWR/R1**' in FIELD18.

e.g.:      received FPL gives      RFP/Q3  
              output FPL will give      RFP/Q4 + AWR/R1

Appropriate ATFM messages (SRM, SLC, FLS, DES...) corresponding to the new Flight Plan are dispatched according to existing addressing rules.

**These messages may include a field:**

**—COMMENT FLIGHT REROUTED BY AO**

**What is the response of AOs / ATS ?**

No action is required.

#### 6.3.1.2. CASE 1. SPECIAL: The System Cancels the Flight Plan & a New Flight Plan is Generated

In certain circumstances there could be a mismatch between the last known EOBT stored in IFPS and the latest known EOBT stored in ETFMS. If such a case occurs then the IFPS will NOT proceed as if a CHANGE (**CHG**) message had been submitted by the user but will:

- Distribute an FPL Cancellation (**CNL**) to appropriate ATC addresses.
- Dispatch a (short) Acknowledgement (**ACK**) message, with '**—MSGTYP ICNL**' including the flag '**AWR/Rn**' to the address associated to the **NM** Client Application having made the rerouting acceptance **and** to the originator of the initial flight plan

if identifiable **and** to the originator of the latest flight plan message received prior to the **AOWIR**, if any.

In addition, the **ACK** contains a field:

—**COMMENT FLIGHT PLAN CANCELLED AS A RESULT OF AOWIR**

- A Slot Cancellation (**SLC**) message is distributed in accordance with the existing addressing rules for this message.

The message will include the fields:

—**COMMENT FLIGHT REROUTED BY AO FPL CANCELLED** and

—**REASON RRTE**

- Wait for an appropriate period (to allow adequate time for the transmission of the **CNL**).
- Distribute a new FPL to appropriate ATC addresses using the latest known **OBT** from **ETFMS** in **FIELD13** and including the flag '**AWR/Rn**' in **FIELD18**.
- Dispatch a (long) Acknowledgement (**ACK**) message with '**—MSGTYP IFPL**' to the address associated to the **NM** Client Application having made the rerouting acceptance. The **ACK** contains all the flight plan details of the rerouted flight as accepted by the **NM** and **FIELD18** flags '**RFP/Qn**' and '**AWR/Rn**' are also inserted therein.

In order to be consistent with the existing ICAO Replacement Flight Plan procedure, the **IFPS** additionally inserts or increments an '**RFP/Q**' indicator in **FIELD18** of the FPL in accordance with the rules detailed in § 6.3.1.1. above.

Appropriate **ATFM** messages (**SAM, FLS**) are dispatched according to the existing rules for these messages.

### 6.3.1.3. CASE 2. The Flight Plan is Cancelled & a New Slot is Booked

The **IFPS** proceeds as if an FPL Cancellation (**CNL**) message had been submitted by the user i.e.:

- An FPL Cancellation (**CNL**) message is distributed to the appropriate ATC addresses.
- As a consequence of the FPL cancellation (**CNL**) an acknowledgement (**ACK**) message with '**—MSGTYP ICNL**', including the flag '**AWR/Rn**', is dispatched to the address associated to the **NM** Client Application having made the rerouting acceptance **and** to the originator of the initial Flight Plan message, **if identifiable and** to the originator of the latest flight plan message received prior to the **AOWIR**, if any.

In **addition**, the **ACK** contains a field:

—**COMMENT FLIGHT PLAN CANCELLED AS A RESULT OF AOWIR**

A Slot Cancellation (**SLC**) message is distributed in accordance with the existing addressing rules for this message.

The message will include the fields:

—**COMMENT FLIGHT REROUTED BY AO FPL CANCELLED** and

—**REASON RRTE**

A Rerouting Notification (**RRN**) message is generated by **ETFMS** to the address associated to the **NM** Client Application having made the rerouting acceptance **AND** to the same addresses as for a Rerouting Proposal (**RRP**)/Slot Improvement Proposal (**SIP**) messages.

This message includes the new route description and the new slot calculation result e.g:



—NEWCTOT 1130

or

—REASON OUTREG when the new route is not submitted to ATFCM regulation.

#### What is the response of AOs / ATS ?

After the reception of ACK for the CNL, the user is required to file a new Flight Plan to the IFPS Units in accordance with the normal rules and where appropriate to all relevant units outside the IFPS distribution area. The FPL shall include the flags '**RFP/Qn**' and '**AWR/Rn**' in FIELD18.

**Note** The route in the new FPL shall be fully consistent with the one provided within the RRN message.

The booked slot will be used only if the profile of the FPL matches with the profile of the booked flight representing the accepted rerouting.

The matching is using the following rules:

- Only the aerodromes and 'en-route' points of the point profile are used in the matching. Points on the departure or arrival procedure are ignored.
- There can be more points in the route of the replacement FPL than in new route description of the provisional flight plan reserved in ETFMS. Any additional points found in the FPL are ignored.
- The sequence of the 'en-route' points must be identical.
- The levels and the timing on the points must be similar (a very small tolerance is accepted).
- The criteria indicated above are intended to give a reasonable flexibility (i.e. additional points for level/speed, SID/STAR free choice) without being too permissive.

Processing of the New Flight Plan by **NM**.

#### IFPS

- a) When the new FPL is received and has been processed successfully by IFPS:
  - An ACK message is dispatched to the address(es) associated to the originator of the flight plan. The ACK will give the complete flight plan concerning the rerouted flight and will include the flags '**RFP/Qn**' and '**AWR/Rn**', as provided by the AO, in FIELD18.
  - The FPL (including the flags '**RFP/Qn**' and '**AWR/Rn**' as provided by the AO) is distributed to the appropriate ATS Units.
- b) In the exceptional case that the new FPL fails automatic processing in the IFPS, the user upon receipt of the Manual (**MAN**) message is expected to call the responsible IFPS Unit (**IFPU**).
- c) In the case of an FPL being rejected by IFPS a rejection (**REJ**) message is sent back to the originator according to normal rules. The user must resubmit a correct FPL.

#### ETFMS

Once processed by IFPS the new FPL is sent to ETFMS.

- a) In the case where the new FPL and in particular the new route, successfully matches the 'booked' flight in ETFMS:
  - Appropriate ATFCM messages (**SAM**, **FLS**) are dispatched according to the existing rules for these messages.

**A field : —COMMENT FLIGHT REROUTED BY AO**

**may be inserted in these messages.**

- When the new flight is not subject to regulation, no further message will be generated by ETFMS.
- b) In the case that the match in ETFMS fails, a new slot allocation may be executed. No account is taken of the 'booked' slot associated to the rerouteing, which is released.

**A field : —COMMENT REROUTE CONDITION CHANGED**

**may be inserted in the relevant ATFCM message.**

After a time parameter in which no new FPL has been received the 'booked' slot is released.

An Error (**ERR**) message including a field: **—COMMENT REROUTE TIMEOUT** is distributed to the relevant addresses including the one associated to the **NM** Client Application where the rerouteing was originated.

**Note** There may be slot revisions for rerouted flights as a consequence of new or revised ATFCM regulations with the result that the delay expected with the rerouteing is modified.

## 7. ATFCM DELAY ATTRIBUTION

Alternative delay attribution, i.e. the attribution of all or a percentage of delay to a reference location other than that where the regulation is applied has been identified as a contributor for optimising network performance and a mitigation strategy for reducing excessive delays.

- a. For the purposes of this procedure attribution of **all** delay to a traffic volume set of an FMP other than that where the regulation is applied shall be known as Case 1a
- b. Attribution of **a percentage** of delay to a traffic volume set other than that where the regulation is applied shall be known as Case 1b

The mechanism may also be used to assess, in a post operations phase, the amount of delay generated where one ATS unit has been obliged to accept or has accepted a significant increase in traffic directly generating delays due to a chronic short term lack of capacity in an adjacent unit due to factors such as industrial action.

For the purposes of this procedure this post operations assessment shall be known as Case 2.

**NM** systems are currently capable of assigning the total delay from one ATFCM regulation to another reference location. There is currently no system supported means of assigning a percentage of delay to another unit, or of adjusting official records of delay in a post operations phase.

This procedure defines the processes to be followed by **NM** and concerned ANSPs in the application of the procedures.

Case 1a combines both the application of the ATFCM measures and the delay attribution before the event.

The operational application of Case 1b may also be executed in advance. However, **the NM** shall produce (via the DNM Performance and Monitoring Unit) reports assessing the appropriate delay allocation where Cases 1b and 2 have been applied and could be applicable. Such reports shall be included in the monthly Network Operations report.

### 7.1. CASE 1a

#### 7.1.1. CONDITIONS FOR APPLICATION OF CASE 1a

The following conditions shall be met before use of the procedure

1. Applicable only for ATFCM situations that have been identified and agreed by CDM in the strategic ATFCM phase by the **ATFCM managers of the ANSPs** concerned. Applicable scenarios shall be published in advance on the NOP. This CDM activity can take place from several months to a few days in advance of the scenario activation.
2. Used only when the scenario is expected to generate delay in the on-load area; and where no other delay generating ATFCM measures were anticipated in the pre-tactical phase for this on-load area.
3. Decision for actual use made at latest before end of Pre-Tactical phase (publication of D-1 plan) via the normal CDM process.
4. To be used only when prior assessment by **NM** operations has shown that overall delay will be reduced and the CDM process considers that there is an overall network benefit taking into account penalties to AOs in terms of additional mileage, level caps, etc..
5. The results of simulations carried out in the strategic or pre-tactical phases to evaluate scenario shall be stored for subsequent validation and analysis.
6. All measures involved, including that for the on-loaded sector, must be applied at D-1 (otherwise the rerouted flights will be adversely disrupted)

### 7.1.2. PROCEDURE FOR APPLICATION IN PRE-TACTICAL PHASE

1. Measure the delay in the offloaded and the on-loaded sectors without the application of any scenarios (Retain a copy of the ATFCM Situation Display for delay recording and post operations purposes)
2. Reroute the flights captured by the Scenario
3. Measure the new delay in the offloaded and the on-loaded sectors (Retain a copy of the ATFCM Situation Display for delay recording and post op. purposes)
4. Establish that the overall delay in 3) is less than in 1) above
5. Share and agree the results with the affected FMPs
6. Agree application of
  - regulation for sector to be offloaded,
  - regulation for sector to be on-loaded and
  - Scenario to move traffic from offloaded into on-loaded sector (Note: to ensure stability, all measures must be applied at D-1)

### 7.1.3. MEASUREMENT OF DELAY SHARING

All delay caused in the on-loaded sector is re-attributed to the causal (offloaded) sector.

### 7.1.4. MONITORING DURING TACTICAL OPERATIONS

Dynamic, active monitoring of on-loaded sector is required to mitigate all delays and in particular it must be ensured that rerouted flights do not suffer from disproportionate delay

Dynamic active monitoring of the offloaded sector is also required to mitigate delay. In the event that the capacity problem is solved then consideration must be given to cancellation of the Scenario and offering the rerouted flights the option of using the original route

Measures may be suspended in the tactical phase following a CDM process with affected FMPs where it is detected that the potential network benefit is not being attained or where the on-loaded area is no longer able to accept the additional traffic.

## 7.2. CASE 1b

### 7.2.1. CONDITIONS FOR APPLICATION OF CASE 1b

Same conditions as case 1a)

### 7.2.2. PROCEDURE FOR APPLICATION AT D-1

Same conditions as case 1a)

### 7.2.3. MEASUREMENT OF DELAY SHARING

Pre-tactical and post operations assessments of the amount of additional delay caused in the on-loaded sector are carried out by **the NM** as follows:

1. Assess the additional delay in the on-loaded sector (e.g. 400 minutes)
2. Divide by the total delay in the on-loaded sector (e.g. 1100 minutes)
3. The result is expressed as a percentage  $400/1100 = 36\%$
4. In this case the 36% additional delay is assessed as being due to the causal sector, up to a maximum of 400 minutes

Post operations assessment reports of the proportion of additional delay in the on-loaded are and the delay saving in the off-loaded area shall be published by the **NM** in the monthly Network Operations reports.

#### 7.2.4. MONITORING DURING TACTICAL OPERATIONS

Same conditions as Case 1a

### 7.3. CASE 2

#### 7.3.1. CONDITIONS FOR APPLICATION OF CASE 2

Normal strategic and pre-tactical CDM processes apply in agreeing the pre-tactical plan that attempts to optimise network performance including consideration of off-load routes that mitigate severe delays that could otherwise be expected due to a chronic lack of capacity in a particular area.

#### 7.3.2. PROCEDURE FOR APPLICATION AT D-1

Normal pre-tactical CDM processes apply in agreeing the pre-tactical plan that attempts to optimise network performance including consideration of off-load routes that mitigate severe delays that could otherwise be expected due to a chronic lack of capacity in a particular area.

#### 7.3.3. MEASUREMENT OF DELAY SHARING

The mechanism may also be used to assess, in a post operations phase, the amount of delay generated where one ATS unit has been obliged to accept or has accepted a significant increase in traffic directly generating delays due to a chronic short term lack of capacity in an adjacent unit due to factors such as industrial action.

Post operations assessments of the amount of additional delay caused in the on-loaded sector are carried out by the **NM** as follows:

1. Identify the additional traffic in the on-loaded area
2. Assess the additional delay in the on-loaded sector (e.g. 400 minutes)
3. Divide by the total delay in the on-loaded sector (e.g. 1100 minutes)
4. The result is expressed as a percentage  $400/1100 = 36\%$
5. In this case the 36% additional delay is assessed as being due to the causal sector, up to a maximum of 400 minutes

Post operations assessment reports of the proportion of additional delay in the on-loaded are and the delay saving in the off-loaded area shall be published by the **NM** in the monthly Network Operations reports.

#### 7.3.4. MONITORING DURING TACTICAL OPERATIONS

Same conditions as Case 1a

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## 8. COLLABORATIVE DECISION MAKING (CDM)

### 8.1. CDM Conferences

**NM** CDM conferences are usually run using EUROCONTROL e-conferencing, .

#### 8.1.1. Planning and Review of ATFCM Situation CDM Conferences

Each day at 15:00 UTC in winter time (1 hour earlier in summer time) the **NM** briefs attendees on the current ATFCM situation in Europe and prospects for the following day based upon the plan the **NM** has constructed that day.

#### 8.1.2. Network Briefings

Briefing on critical situations or traffic load imbalance in the network is carried out through the NOP portal Headline News.

#### 8.1.3. Seasonal CDM Conferences

Seasonal CDM conferences are held during the summer (e.g. South-West Axis, etc.) and winter (e.g. Ski, etc.) seasons on a weekly basis according to the axes to review previous activities and prepare for the following week's activities. Coordination is initiated and led by the **NM**.

#### 8.1.4. Ad-hoc CDM Conferences

Ad-hoc CDM conferences are organised whenever there is a need to discuss a course of action in order to prepare for and monitor events such as industrial actions, etc.

Notification and invitation will be given by AIM and/or NOP Portal Headline News which will give details on how to attend

### 8.2. Publication of ADP and EAUP/EUPP

#### 8.2.1. ATFCM Daily Plan (ADP) Publication

The ATFCM Daily Plan (**ADP**) is a set of tactical ATFCM measures that will be in force in European airspace on the following day.

The **NM** shall coordinate and define the daily plan and inform Aircraft Operators and ATC units about the ATFCM measures. Through the ATFCM Daily Plan the **NM** is trying to optimise available capacity to meet forecast demand and to manage demand to minimise delay and cost. The **NM** shall publish the agreed plan for the day of operations after a collaborative decision making process.

The ATFCM Daily Plan shall be altered if necessary through Real-time optimisation of capacity/demand creating common situational awareness across the Network.

The ADP is promulgated by means of an ANM and the Network News.

##### 8.2.1.1. ANM (ATFCM Notification Message)

The **ANM** (ATFCM Notification Message) is a message issued by the **NM** to notify all concerned of any ATFCM regulations. The ANMs resulting from the ATFCM Daily Plan are sent the day before the day of operations upon finalisation and release of the plan, around 17:00 UTC in winter time (1 hour earlier in summer time). The ANMs are available on the **NM** NOP Portal and a hardcopy is also sent to all registered addresses via the AFTN network.

### 8.2.1.2. Network News

In addition to the ANM, excerpts from the ATFCM Daily Plan in plain text are published at 17:00 UTC in winter time (1 hour earlier in summer time in Network News via an AIM). Through the Network News the **NM** advises ANSPs and AOs of all areas predicted to have a significant impact on the network together with advice offered to AOs on actions to take including routes and/or levels to be filed to contribute to better utilisation of network capacity while avoiding heavy delays.

### 8.2.2. Publication of EAUP/EUUP

The European Airspace Use Plan (EAUP) contains the consolidated list of available CDR2s, and closed CDR1s or permanent ATS routes as repetition of prior notice by NOTAM. It also contains the planned activations of restricted airspaces, but the access to this data is for the moment restricted to certain types of users.

The EAUP is issued by the **NM** each day by 14.00/15.00 UTC (summer/winter time). It covers the 24 hour time period between 06.00 UTC the next day to 06.00 UTC the day after. After the publication of the EAUP, updated Airspace Use Plans may be issued and published as European Updated Airspace Use Plan (EUUP).

EAUPs and EUUPs are available through the NOP Portal, in the EAUP/EUUP portlet. A Compare function enables the user to visualise the changes made between different versions.

In the context of B2B web services, the same data is also available through the e-AMI (electronic Airspace Management Information). A system to system connection can be established to integrate the e-AMI into stakeholders' own applications.

### 8.3. Feedback on ADP Quality

The opinions and comments concerning the ADP quality received from FMPs, AOs as well as from the **NM** units represent very important input for further improvement of the **NM** Pre-Tactical planning. This feedback will help the **NM** to identify the reason(s) and determine corrective actions to avoid reoccurrence.

Systematic feed-back from AOs is gathered via the AO Liaison Cell. FMPs provide their feed-back for specific traffic axes in the preparation of seasonal teleconferences.



## 9. OPERATIONS IN UNUSUAL CIRCUMSTANCES

Flights subject to unusual circumstances:

All flights, including flights exempted from ATFCM slot allocation, will be affected by the measures applied to handle unusual situations, except flights departing from outside the ATFCM area and from outside the ATFCM Adjacent area.

Latest update of the **NM** Area of Responsibility may be found on the website:

<http://www.eurocontrol.int/network-operations>

### 9.1. Low Visibility Operations

Aerodromes that wish to continue operating in poor visibility or are available for instrument approaches in conditions of low cloud are required to develop and maintain Low Visibility Procedures.

LVPs have been devised to allow aircraft to operate safely from and into aerodromes when the weather conditions do not permit normal operations. To this end, they comprehensively cover all relevant issues relating to non-aircraft surface movement within the designated aircraft manoeuvring area. **NM** will assist any effort and facilitate ATFCM measures which will contribute to safe operations.

#### Definition

Low Visibility Procedures (LVP) are procedures applied at an aerodrome for the purpose of ensuring safe operations during Category II and III approaches and Low Visibility Take-offs. (JAR-OPS 1, paragraph 1.435 (a) (2))

Category II and III approaches are discussed under Precision Approach.

A low visibility take-off (LVTO) is a take-off where the RVR is less than 400 m (JAR-OPS 1, paragraph 1.435 (a) (3)).

LVPs are the combination of CAT II/III operations (BKN/OVC 200ft or below, or sky obscured, or IRVR below 600m) and runway safeguarding.

The **NM** may take the following actions:

- a) Implement an XCD (Exceptional Conditions) Low Visibility regulation whereby:
- flights **not able to land** according to a specified RVR will be regulated to arrive after the low visibility period;
  - flights **able to land** according to a specified RVR will be regulated to arrive within the low visibility period;
  - flights for which the RVR capability is unknown will be suspended.

**Note 1** This RVR value relates to the filtering of demand and not to the actual RVR, at the affected aerodrome. Nevertheless, AOs shall respect the minima set in the exceptional condition and the use of minima, which subsequently cannot be met upon arrival, shall be considered as an ATFCM incident.

**Note 2** In certain rare circumstances, where many flights would become delayed to arrive after a long low visibility period, **NM** may choose to suspend flights with insufficient RVR in addition to flight with unknown RVR. In these rare cases AOs will have to confirm their RVR with FCM irrespectively if they have previously provided their RVR. An AIM will be issued to reflect this rare requirement.

- b) Issue revised slots at short notice.

Specific operational procedures for managing Low Visibility situations depend on the local situation. They are coordinated in advance between individual FMPs and the **NM** in accordance with the FMP operational procedures.

**When are the flights going to be suspended ?**

The **NM** will send an AIM message describing the situation, in particular the time period and the minimum RVR required.

The RVR may be provided in different ways:

**either**

- i. via an FPL or CHG message (FIELD18 e.g. RVR/200)

**or**

- ii. via an FCM message if the FPL has already been filed. This message may be sent as soon as the AO is aware that there is a risk of low visibility at an aerodrome.

**The messages issued by the NM** will depend on the RVR status of the flight and whether or not the flight is exempted. Three main scenarios are possible:

**either**

- i. The RVR minima of the flight are known and satisfy the minimum required:

A SAM/SRM is issued for non exempted flights due to a reduction of the landing rate. Exceptionally no message is issued if the current slot is still compatible with the landing rate.

**or**

- ii. The RVR minima of the flight are known and are not sufficient, then the flight is delayed to arrive after the end of the low visibility period and a SAM or an SRM is issued indicating the (new)CTOT, the COMMENT: 'RVR CRITERIA NOT MET' as well as the minimum RVR required.

**Note** The (NEW)CTOT may evolve as the situation requires. When an AO submits an amendment message (e.g. DLA or CHG) to IFPS, they must always give as EOBT the earliest EOBT they may comply with. This time is not directly related to the (NEW)CTOT provided in the SAM/SRM. The EOBT in IFPS should always reflect the time at which the AO actually wants to be off-blocks.

If this delayed flight is also subject to other regulations, the subsequent SAM/SRM will include the —COMMENT: 'RVR CRITERIA NOT MET' as well as the minimum RVR required.

**or**

- iii. The RVR minima of the flight are not known.

The flights are suspended and an FLS is issued indicating the COMMENT: 'RVR UNKNOWN' as well as the minimum RVR. A RESPBY time is also in the message enabling the AO to keep its present CTOT if the FCM with sufficient RVR is received by the **NM** in due time.

**Note** The FLS are sent when the exceptional conditions are implemented but at SIT1 at the earliest.

**What is the Response of AOs?**

An AO must provide the **NM** with the RVR capability of the flight, either by sending an FCM or CHG message.

**Depending on the RVR the result will be:**

**either**

The RVR minima of the flight are sufficient then a SAM or a DES will be issued to the AO:

- SAM with possibly an additional comment if the flight is not exempted.
- DES if the flight is exempted.

**Note** When the current EOBT is more than 15 minutes in the past a —COMMENT PLEASE UPDATE EOBT WITH A DLA MSG will be inserted to remind the AO to update its EOBT by sending a DLA. In the meantime the flight will be counted as if departed taxitime + TIS after the de-suspension.

**or**

The RVR minima of the flight are not sufficient , then the flight is delayed and a SAM is issued indicating the CTOT as well as the minimum RVR required.

**Note** The management of the situation for the flight will be maximised where the RVR information is provided to the **NM** at the earliest possible time.

**What happens if the situation deteriorates?**

- i. Flights having RVR minima which still comply: no message.
- ii. Flights for which the RVR minima do not meet the new minima:
  - the flight is delayed and an SRM is issued indicating the deteriorated CTOT as well as the new minimum RVR required.
- iii. Flight with unknown minima: receive a new FLS with the new RVR.

**What happens if the situation improves?**

- i. Flights that have not been suspended or have not received a SAM: no message.
- ii. Flights whose minima meet those published by the **NM**:
  - for a non-exempted flight that received a SAM, a SRM or SIP will be issued as appropriate;
  - for an exempted flight a SLC is issued.

When the current EOBT is more than 15 minutes in the past a —COMMENT PLEASE UPDATE EOBT WITH A DLA MSG will be included reminding the AO to update its EOBT by sending a DLA.

- iii. Flights whose minima do **NOT** meet those published by the **NM**:
 

the flight remains delayed and an SRM may be issued indicating, if possible, an improved CTOT as well as the new minimum RVR required.
- iv. Flights with unknown minima:
 

the flight is kept suspended and a new FLS is issued indicating the new minimum RVR required.

**What happens when the Exceptional Condition ends?**

The **NM** will cancel or remove the Exceptional Condition. As a consequence:

- i. All suspended flights are de-suspended:
  - if they become non-regulated then non-exempted flights will receive a DES;
  - if they remain regulated, non-exempted flights will receive a SAM;
  - exempted flights will receive a DES.

When the current EOBT is more than 15 minutes in the past a —COMMENT PLEASE UPDATE EOBT WITH A DLA MSG will be included in the DES reminding the AO to update its EOBT by sending a DLA.

- ii. All flights delayed due to insufficient or unknown RVR are repositioned in the slot list:
  - if they become non-regulated then non-exempted flights will receive a SLC;
  - if they remain regulated, non exempted flights will receive a SRM;
  - exempted flights will receive a SLC.

When the current EOBT is more than 15 minutes in the past a —COMMENT PLEASE UPDATE EOBT WITH A DLA MSG will be included in the SLC reminding the AO to update its EOBT by sending a DLA.

**9.2. Non-Availability of Aerodrome****9.2.1. Short Period Non-Availability (Flight Shift)**

When an arrival aerodrome is to be non-available for a short period (normally less than 1h00) the flight will be delayed to arrive after the re-opening time and a SAM or an SRM will be issued indicating the (new) CTOT and including the COMMENT 'CLOSURE'.

**Note** The (NEW)CTOT may be modified as the situation requires. When an AO submits an amendment (e.g. DLA or CHG) to IFPS, it must always give the earliest EOBT they may comply with. This time is not directly related to the (NEW)CTOT provided in the SAM/SRM. The EOBT in IFPS should always reflect the time at which the AO actually wants to be off-blocks.

An AIM is issued to report on the situation and to update it. Either new SAM or SRM or SIP or SLC messages may be issued according to the situation.

**However**, if the flight is not taking place, AOs are requested to send a CNL in order to cancel the FPL in the ATC.

**9.2.2. Longer Non-Availability (Flight Suspension)**

If the non-availability is likely to be long (more than one hour), the **NM** will issue an AIM and all flights will be suspended and an FLS will be issued including the COMMENT 'CLOSURE'. The identifier of the regulation concerned together with the corresponding regulation cause will be inserted in the FLS message.

In exceptional cases, several regulations might be provided (e.g. strike on ADEP, non-availability on ADES). Flights which are suspended in multiple regulations will have to be confirmed for every single regulation. As for a SAM/SRM the REGCAUSE of the first regulation in the list will be provided for information.

Flights still wishing to depart shall send:

**either**

- a) An FCM confirming all or a sub-set of regulations of the FLS in which the flight is still operating. A flight confirmed (by one or several FCM) in all regulations requesting a confirmation will be de-suspended and delayed to arrive after the re-opening time therefore a SAM will be issued indicating the CTOT and including the COMMENT 'CLOSURE'.

Or

- b) A DLA or CHG indicating an EOBT that will bring its Estimating Time Over (ETO) after the re-opening time. A flight confirmed (by one or several FCM) in all regulations requesting a confirmation will be de-suspended and considered according to the new EOBT.

Either immediately or at the earliest 2 hours before the new EOBT, one of the following will occur:

- if the flight becomes non-regulated then a non exempted flight will receive a DES;
- if it remains regulated, a non-exempted flight will receive a SAM;
- exempted flights will receive a DES.

Flights which do not send an FCM or which do not confirm in all regulations requesting a confirmation will remain suspended and will be considered as not flying. An FLS will be issued including the list of remaining regulations affecting the flight still requesting a confirmation and for which ETFMS did not get a confirmation yet. **However**, in order to inform ATC that the flight is not taking place, AOs are requested to send a CNL to cancel the **FPL**.

Flights which are diverted to another aerodrome shall cancel their flight plans and re-file new ones to ensure accurate data to ATC and to avoid wasting capacity.

The **NM** will send an AIM message describing the situation, in particular the time period and the reason.

AIM example:

```

.------.
. ETFMS/CASA MESSAGE: XCD - CLOSURE .
. REF : NON-AVAILABILITY OF AERODROME LSGS .
. DUE TO : AIRSPACE MANAGEMENT .
. REG. ID : LSGSA24A .
. VALID : 26/04/08 FROM: 1225 UTC UNTIL: 1405 UTC .
. TFC : All TFC DESTINATION EDDM A/D .
. REMARKS: .
. - FLIGHTS INTENDING TO OPERATE AFTER THE NON-AVAILABILITY MUST SEND AN .
. FCM AND WILL RECEIVE A SAM/SRM ACCORDING TO THE RE-OPENING TIME. .
. FCM MUST CONTAIN THE REGULATION ID .
. .
. - FLIGHT DIVERTING AND NOT YET DEPARTED MUST CNL THE FPL AND RE-FILE .
. TO ALTERNATE AERODROME. .
. .
. -FLIGHTS NOT INTENDING TO OPERATE MUST CNL THEIR FPL BY SENDING A CNL .
. MESSAGE. .
. NMOC -BRUSSELS .
.------.

```

Figure 9-1 ATFCM Information Message (AIM)

### 9.2.3. Non-Availability due to a Strike (Flight Suspension)

When the non-availability is due to a strike with a list of flights allowed to fly the procedure is identical. In addition, **NM** will manually exclude all the authorised flights according to the request received from the FMP and all the exempted flights according to the NOTAM (emergency, rescue, etc...).

The **NM** will send an AIM message describing the situation, in particular the time period and the reason.

AIM example:

```

.-----
.  ETFMS/CASA MESSAGE: XCD – CLOSURE
.
.  REF : NON-AVAILABILITY OF LIMC AERODROME
.
.  DUE TO : INDUSTRIAL ACTION
.
.  REG. ID: LIMCSTR
.
.  VALID : 26/02/08          FROM: 0600 UTC          UNTIL: 1000 UTC
.
.  REMARKS : - FLIGHTS INTENDING TO OPERATE AFTER THE NON-AVAILABILITY MUST
.              SEND AN FCM AND WILL RECEIVE A SAM/SRM ACCORDING TO THE RE-
.              OPENING TIME
.
.              - FCM MUST CONTAIN THE REGULATION ID
.
.              - FLIGHTS DIVERTING AND NOT YET DEPARTED MUST CANCEL THEIR FPL
.              AND RE-FILE TO ALTERNATE AERODROME
.
.              - FLIGHTS NOT INTENDING TO OPERATE MUST CANCEL THEIR FPL BY
.              SENDING A CNL MESSAGE
.
.
.  NMOC-BRUSSELS
.-----

```

Figure 9-2 ATFCM Information Message (AIM)

### 9.3. Non-Availability of Airspace

The same procedure applies as for the non-availability of an aerodrome.

### 9.4. Diversions to Original Aerodrome of Departure (ADEP)

If a flight diverts back to its original **ADEP** for technical or other reasons, a 'Diversion' Arrival (**ARR**) message shall be sent by ATC. The plan of the diverted flight will be 'closed' in the **NM** systems. The normal practice is to file a replacement flight plan using the **original** Aircraft Identification (**ARCID**). The **NM** system will process this replacement flight plan as a new flight.

If the 'Diversion' Arrival message is not sent, the replacement flight plan will supersede the plan of the diverted flight. To overcome this situation AO should file the new flight plan with a **different** Aircraft Identification (**ARCID**) e.g. ABC123 becomes ABC123A.

## 10. EXEMPTIONS FROM ATFCM SLOT ALLOCATION

### 10.1. Flights that Qualify for Exemption from ATFCM Slot Allocation

The following flights are exempted from ATFCM slot allocation:

- a) flights carrying Head of State or equivalent status ['STS/HEAD'].
- b) flights conducting search and rescue operations ['STS/SAR'].
- c) flights authorised by the relevant States Authorities to include in the flight plan 'STS/ATFMX'.
- d) **flights carrying a life-critical emergency evacuation [STS/MEDEVAC].**
- e) **Flights engaged in fire-fighting [STS/FFR]**

**Note:** These principles are based on the relevant chapter on ATFCM slot allocation as established by ICAO in the Doc. 7030 (points a) to c)) and behaviour of the **NM** system (point d)).

### 10.2. Procedure for Requesting STS/ATFMEXEMPTAPPROVED

In line with the ICAO Doc. 7030 States shall publish the procedures for requesting ATFCM slot allocation exemptions in their national AIPs.

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## 11. REPORTING OF EVENTS IMPACTING ATC/ATFCM

### Requirement

Article 6 – ATFM IR

General obligations of ATS units

4. ATS units shall notify to the central unit for ATFM through the local ATFM unit all events that may impact air traffic control capacity or air traffic demand.

Article 8 – ATFM IR

General obligations of airport managing bodies

Airport managing bodies shall notify to the central unit for ATFM, directly or through the local ATFM unit or ATS units or both, all events that may impact air traffic control capacity or air traffic demand. They shall inform the local ATFM unit and ATS units where the notification is done directly.

### General

Event information is required and provided to facilitate the planning and coordination of these events at network and local level.

Information on events impacting capacity, efficiency or demand enables early identification of issues that may affect the capacity of the ATM Network as a whole, allowing the necessary ATFCM measures to be developed in due time.

The reporting channel to be used varies depending on the type of event, the location, or time when the event is reported (strategic, pre-tactical, tactical phase). Below is an overview of the main reporting channels.

### 11.1. Long term strategic operational planning (OPL - Operational Planning)

The long term strategic operational planning managed by the Directorate Network Management (DNM) encompasses various areas, such as Airspace Design, Procedures, OPS Performance Plan and Airspace Simulation. For any activity or event with regard to the above the unit for Operational Planning should be contacted.

DNM Operational Planning

Phone: +32 2 729 xxxx

Fax: +32 2 729

E-mail: email@eurocontrol.int

### 11.2. Significant En-route ATC/ATFCM Events

Strategic Phase (more than 1 week in advance)

Advance and timely information on any event that is likely to have a significant impact on demand or capacity and to require particular ATFCM, flight planning or airspace measures should be notified well in advance to the DNM Network Operations Unit Strategic cell. Such information should be provided by the FMP manager of the ANSP concerned.

CDM coordination processes and meetings will be subsequently put in place by Network Operations to agree on necessary measures, ensure that all affected parties are well informed of the event and all associated measures via the NOP, and that a post operational analysis is carried out.

### Point of Contact:

Network Operation Strategic Cell

Phone: +32 2 729 4653 / 0028

Fax: +32 2 729 028

E-mail: [nm.ops.support@eurocontrol.int](mailto:nm.ops.support@eurocontrol.int)

#### **Pre-tactical Phase (from 1 week to 1 day in advance)**

Updates to information on such events should be provided to the Network Management pre-tactical function during the pre-tactical phase.

#### **Tactical Phase (less than 1 day in advance)**

Updates to information on such events should be provided to the Network Management tactical function during the tactical phase.

### **11.3. Significant Military Events and Exercises**

Military exercises/activities requiring a special reservation/segregation of airspace may have significant impact on the available routes and capacity within the European ATM network. However, by early notification of such events, advanced assessment of the likely impact, and collaborative planning to define the appropriate ATFCM measures, such events can be accommodated while minimising the effects on other airspace users.

As they are a major actor in the ATM environment, Military Authorities are requested to provide information on military exercises or major flight activities having an impact on the route network structure and its best use. By this, the Military community will further contribute to the overall ATM progress and at the same time benefit from the increased visibility given to the need of airspace for Military operations.

National Military representatives at the MILHAG (Military Harmonization Group) have agreed to support the Military participation in the NOP. Participating States nominated their point of contact responsible for the provision of required data. A central point of contact, responsible for the establishment and the management of data collection procedures and the coordination with the NOP management has been nominated within EUROCONTROL (see details below).

A procedure to collect information on Military activities requiring airspace reservation/segregation affecting the route network structure was established in order to obtain and update relevant data.

#### **Point of Contact:**

MILO (Military Liaison Officer) Cell

Phone: +32 2 729 9844

Fax: +32 2 729 3008

E-mail: [nm.milo@eurocontrol.int](mailto:nm.milo@eurocontrol.int)

### **11.4. Events at Airports impacting Capacity or Demand**

Events impacting air traffic control capacity or air traffic demand shall be notified by Airport Managing Bodies either directly or through the local ATFM unit or ATS unit. The main tool for the provision of strategic information is the Airport Corner tool which is an EUROCONTROL internet-based tool allowing the airport stakeholders to easily provide information at any time.

The Airport Corner covers a set of airport information relevant to the network as current and future airport capacities, local traffic forecasts, weather management info, local operational contacts as well as the "planned events" impacting capacity, efficiency or demand.

This reporting channel supports a coordinated input between ANSP and the Airport Operator.

For detailed information about the process and registration please contact:

**Point of Contact Airport Corner:**

Maria Christina Meyer

Phone: +32 2 7293060

Fax: +32 2 7299193

E-mail: maria-christina.meyer@eurocontrol.int

Events planned or unplanned which have not been reported already via the Airport Corner can be reported directly via:

**Point of Contact:**

DNM Support to Airports

Phone: +32 2 7299840

Fax: +32 2 7299028

E-mail: **nm**.airports@eurocontrol.int

**Events Affecting Tactical Operation**

Significant events on the day of operations are managed by the DNM **NM** Network Operations. Events impacting air traffic control capacity or air traffic demand should be coordinated on the day of operations via the CFM FM Supervisor

**Point of Contact:**

DNM FM Supervisor

Phone: +32 2 7451900

Fax: +32 2 729xxxx

E-mail: **nm**.fm.supervisor@eurocontrol.int

**11.5. Network Publication of Information**

An overview of all events is provided via the NOP. Updates and additions to the overview in the NOP can be provided to the **NM** NOP Office (nop.office@eurocontrol.int) via the nominated NOP focal points per ANSP. Information and their updates on airport events being reported via the Airport Corner will be automatically transferred to the NOP office.

**Time Parameters**

Some events require a modification of either static or dynamic data. For major events and military exercises a pre-validation of the data is recommended, which - for instance - requires an availability of the data at least at AIRAC -49 days. For more details please contact NOS Strategic Cell (**nm**.ops.support@eurocontrol.int).

**ATFCM USERS MANUAL**

11.6. Means of Provision of Information

Time period	NM Unit	Reporting Channel	Email Contact	Tel
-------------	---------	-------------------	---------------	-----

**Significant en-route ATC/ATFCM events**

1– 3 years	OPL	directly	stephanie.vincent@eurocontrol.int	+ 32 2 729 3407
D -1 year – D-7 days	NOS	via FMP/ATS or directly	nm.ops.support@eurocontrol.int	+32 2 729 4653/0028

**Significant airport events (registered Airport Corner User)**

> D-7 days	APT	Airport Corner tool	maria-christina.meyer@eurocontrol.int	+32 2 729 3060
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**Significant airport events (not registered in Airport Corner)**

D -1 year – D -7 days	NOS	Via FPM/ATS or directly	nm.airports@eurocontrol.int	+32 2 729 9840
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**All significant events (except military events)**

D -6 days – D -1 days	NMC	Via FMPs or directly	fmdntwmgr@eurocontrol.int	+32 2 730 2791
-----------------------	-----	----------------------	---------------------------	----------------

**Significant military events and exercises**

any	MILO	via AMC directly	nm.milo@eurocontrol.int	+32 2729 9844
-----	------	------------------	-------------------------	---------------

**Significant event during day of operations**

Day of operations	Tactical Operations (FM Supervisor)	directly via telephone	nm.fm.supervisor@eurocontrol.int	+32 2 745 1900
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## 12. REGULATORY REPORTING PROCESS

All reports referenced in this process description will be published on EUROCONTROL's One Sky OnLine, DNM ATFCM statistics website. The Agency website provides instructions on how to access the portal.

<https://extranet.eurocontrol.int/http://onesky1.eurocontrol.int/amserver/UI/Login?gw=extranet.eurocontrol.int&org=eurocontrol>

### 12.1. Reporting Process for ATFM IR

#### General Principles

There are three phases to the reporting process:

- Phase 1. Monitoring and contributing to the detection of potential problems: DNM is responsible for producing reports on the different indicators and providing them to the accountable entity (e.g. Member State, ATS unit) to inform them of their situation.
- Phase 2. Investigation on the detected problems: the accountable entity is responsible with support provided by DNM.
- Phase 3. Reporting: the accountable entity is responsible.

#### 12.1.1. Non-Compliance to ATFM Departure Slots

##### Requirements

Member States shall ensure that where adherence to ATFM departure slots at an airport of departure is 80 % or less during a year, the ATS unit at that airport shall provide relevant information of non-compliance and the actions taken to ensure adherence to ATFM departure slots. Such actions shall be indicated in a report to be submitted by the Member State concerned to the Commission

##### Process

###### Phase 1:

- A report monitoring the adherence of European aerodromes of departure to ATFM departure slots, according to the yearly target of 80 % (independently of the number of movements), shall be published quarterly by DNM. This report shall present a summary per country and shall include the details of each aerodrome of departure not compliant with the target.

###### Phase 2:

- The ATS units are responsible for investigating the detected problems.
- They have the possibility to use the CIR to investigate and get details (from monthly figures per aerodrome of departure until flight list associated to a day of departure) via the following reports:
  - Monthly Evolution of departure traffic delay and departure compliance
  - Daily slot adherence to ATFM slots per ADEP
  - Slot adherence of flights
  - ATFM Departure slot – list of non compliant aerodromes of departure for a given country of departure based on a specific adherence target (new report)

**Phase 3:**

- The member states are responsible for reporting directly to the EC, copying in DNM.

**12.1.2.****Granted Exemptions****Requirements**

Member States shall ensure that the central unit for ATFM notifies a Member State which grants exemptions in excess of 0,6 % of that Member State's annual departures

**Process****Phase 1:**

- A report monitoring the yearly level of exempted flights per country and their adherence to the target of 0.6% per year shall be published quarterly by the DNM. This report shall present a quarterly evolution per country together with country details (yearly and monthly repartition) about each status of exemption.

**Phase 2:**

- The member states are responsible for leading the investigation of the detected problems.
- The member states have the possibility to use the CIR to investigate and get details: list of exempted flights per country for a period of 1, 2, 3, 7 days or for a full month via the following report:
  - List of exempted flights for a country of departure

**Phase 3:**

- The member states are responsible for reporting directly to the EC, copying in DNM.

**12.2.****Non-Compliance to Flight Plan Suspensions****Requirements**

The ATS unit at the airport concerned shall provide relevant information on any failure to adhere to flight plan suspensions at that airport and of the actions taken to ensure adherence. Such actions shall be indicated in a report to be submitted by the Member State concerned to the Commission.

**Process****Phase 1:**

- A report monitoring the flights activated by ATC, while suspended by the Flight Activation Monitoring (FAM), with airborne data received when temporary suspended (subsequently referred to as unduly activated traffic below) shall be published quarterly by the DNM.
- The report shall present a yearly evolution of the European zone together with a top 30 of the aerodromes of departure (according to their unduly activated traffic). To complete this report, a summary per country will give monthly figures for the country and detail for each aerodrome of departure having unduly activated traffic.

**Phase 2:**

- The ATS unit is responsible for leading the investigation of the detected problems.
- The ATS unit shall have the possibility to use the CIR to investigate and get information via the following reports:
  - FAM Monitoring Document:

- Counts on shifts and suspension induced by FAM
- Counts of flight subject to FAM
- List of flights subject to FAM

**Phase 3:**

- The member states are responsible for reporting directly to the EC, copying in DNM.

**12.3. Missing or Multiple Filed Plans****Requirements**

Member States shall ensure that the central unit for ATFM monitors the occurrences of missing flight plans and multiple flight plans that are filed.

**Process****Phase 1:**

- A report providing a monthly summary of
  - the number of flight plans held by the central route charges office (CRCO) that reference flights having no equivalents in DNM operational systems (ETFMS)
  - the number of flights where DNM was not notified of take off. (i.e. that remained suspended by the Flight Activation Monitoring (FAM))

will be produced every quarter by DNM.

**Phase 2:**

- The member states entities are responsible for leading the investigation of the detected problems.

**Phase 3:**

- The member states shall provide feedback to DNM to be included in the annual report to the EC.

**12.4. Operations Causing Prejudice to ATFM****Requirements**

Member States shall ensure that the central unit for ATFM reports to the airport slot coordinators on repeated operation of air services at significantly different times from the allocated airport slots or with the use of slots in a significantly different way from that indicated at the time of allocation, where this causes prejudice to ATFM.

**Process****Phase 1:**

- When the misuse of an airport slot impacting ATFM is detected, a report to the relevant airport slot coordinator shall be provided directly by DNM.

**Phase 2:**

- The airport slot coordinator shall lead the investigation of the detected problems and report back to DNM with the results.

**Phase 3:**

- The airport slot coordinator shall provide feedback to DNM to be included in the annual report to the EC.

**12.5. Annual Report on the Quality of the ATFM in the EEA Airspace****Requirements**

When implementing Article 11, Member States shall ensure that the central unit for ATFM produces annual reports indicating the quality of the ATFM that shall include details of: (a) causes of ATFM measures;

(b) impact of ATFM measures;

(c) adherence to ATFM measures;

(d) contributions by parties referred to in Article 1(3)<sup>4</sup> to the optimisation of the overall network effect.

**Process****Phase 1:**

- DNM shall produce a report to summarise the effectiveness of ATFM measures on the network over the year.

**Phase 2:**

- DNM shall consult with the parties listed in Article 1(3) that shall provide their input.

**Phase 3:**

- DNM shall publish the report in line with its formal consultation process.

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<sup>4</sup> Parties are: operators of aircraft; ATS units, including ATS reporting offices and aerodrome control services; entities involved in airspace management; airport managing bodies; central ATFM unit; local ATFM units; slot coordinators of coordinated airports.



### 13. SECURITY SENSITIVE FLIGHTS

The STS indicator; **STS/PROTECTED** is used to indicate that a flight should only be available to a restricted audience e.g. a security sensitive flight.

If more than one indicator is to be used, they should be inserted into separate 'STS' fields.

For example, a flight which is 'Head of State' and which is also security sensitive should be filed as: **STS/HEAD STS/PROTECTED**

If some free text is required this should also be entered into a separate field e.g. STS/HEAD STS/PROTECTED STS/NO DEVIATION FROM FPL ROUTE PERMITTED

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## 14. GENERAL INFORMATION ON ATFCM MESSAGES

### 14.1. NM ATFM Message Addresses

The **NM** Addresses for **ATFM** messages are:

- AFTN: EUCHZMTA
- SITA: BRUEA7X

### 14.2. General Format of Messages

**NM** ATFM messages conform to the EUROCONTROL standard message format for use within the ECAC States, the ATS Data Exchange Presentation (**ADEXP**).

This format is based on a sequence of fields each of which is identified by a hyphen ('-') followed by a keyword (e.g. 'ADEP' for Aerodrome of Departure), a separator (a space ' ') and the information (e.g. 'LEMD').

It is important that the exact format is used in all messages. For example, a hyphen must always be used at the start of a field but cannot be used in the content of a field. Failure to use the exact format will result in rejection and, in some cases, an error message being sent.

### 14.3. Message Fields

Each **ATFM** message comprises a number of fields, some of which are mandatory and some are optional. This may vary from message to message. Specific requirements are given in this document according to the principles of the **ADEXP** Standard document already mentioned.

All ATFM messages shall begin with the TITLE field. The order of other fields is optional.

The field IFPLID, the unique identifier assigned to a flight by IFPS<sup>5</sup>, will be in all ADEXP messages issued by the **NM**. ETFMS will accept the IFPLID when provided in an incoming message in ADEXP format. Therefore, messages originated by AOs may include the IFPLID, preferably only if generated automatically.

AOs may extract the IFPLID from the ACK message.

### 14.4. Addressing by the NM

ATFM messages are distributed to:

- The **AO**: either to the Flight Plan Originator address (this could be an ARO) or to an address (SITA or AFTN) notified in advance to the **NM** by the operator. The AO is responsible for making arrangements to ensure receipt of any CTOT issued by the **NM**.
- **ATC** at the aerodrome of departure.
- Enroute ATC Centres.

<sup>5</sup> 2 alphabetic characters followed by 8 digits, e.g. —IFPLID AA12345678.

**14.4.1. Addressing of ATFM Messages by the NM to AOs**

The AO is identified either from the aircraft identification or from Item 18 (**OPR**) of the ICAO filed flight plan.

In the case where both are present, but different, the concerned AO is recognised by the aircraft identification unless the AO has expressly requested a default to Item 18 (**OPR**). If so requested, both AOs may receive the ATFM messages.

The choice of the addresses belongs to the AO. Any request for modification should be issued by the central operations and sent to the **NM**.

**Initiation of Messages by the NM**

- a) The **NM** may, depending on the requirements of **AOs**, send all **ATFCM** messages:
- either
- i. to a **unique centralised address** (the AO control centre AOCC);
  - or
  - ii. to an **AOs representative office** for the aerodrome of departure (the AO control unit ADEP-AOCU) or to the AOs local Handling Agent for this ADEP;
  - or
  - iii. **to both** a centralised address and a representative office for the aerodrome of departure (AOCC and ADEP-AOCU).
- b) In the cases where no AO has been identified or the **NM** has not found either a centralised nor a local address for an AO (although requested), messages are sent to:
- i. the **ATS Reporting Office** at the aerodrome of departure (ADEP-ARO);
  - and**, if different
  - ii. the address of the originator of the last flight plan related message (FPL and related MSGs).

In addition to the above mechanism the **NM** addresses the **MSG ORIGINATOR** in response to an ATFCM MSG which has been previously received (e.g. an SRM in response to an RFI).

**14.4.2. Addressing of Messages by the NM to Air Traffic Services****Messages Resulting from Slot Allocation** (SAM, SRM, SLC, FLS)

They are transmitted:

- a) Systematically to the **Tower** responsible for the aerodrome of departure (**ADEP-TWR**) and/or to any addresses associated to this Tower (FMP).
- b) Optionally to **Air Traffic Control Units** e.g. approaches, Area Control Centres (**APPs**, **ACCs**) along the route of the flight.

A Central Flight Processing Unit (**CFPU**) in national services may be used to substitute this addressing mechanism. In that case the CFPU takes up the responsibility and **shall** readdress the data to appropriate units.

ATS may receive all kinds of **NM** messages as default addressees for unidentified AOs representative offices at the aerodrome of departure.

The default addressees may be:

- a) the **ATS Reporting Office** in charge of the aerodrome of departure (ADEP-ARO);  
and, if different
- b) the **originator** of the last flight plan related message.

#### Response to ATS previous **NM** Messages

(an ATS Unit is active on behalf of an AO)

In addition to the above mechanism, **NM** addresses the **MSG ORIGINATOR** in response to an **ATFCM** MSG which has been previously received (e.g. an **SRM** in response to an **RFI**).

### 14.5. **ATFCM Notification Message (ANM) and ATFCM Information Message (AIM)**

#### 14.5.1. **ATFCM Notification Message ANM**

The ANM is published in hardcopy via AFTN and is also available on line on the NOP Portal:

<https://www.public.cfm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>

The hardcopy version is presented in the same format as the **NM** Client Application version but whereas the entire ANM is available to terminal users, only those pages requested will be sent to AOs or ATC units via AFTN.

**The ANM is also online through the CHMI Notifier and ATM Messages.**

14.5.1.1. Description

Type: All	FMP: <input type="text"/>	Sort by: FMP Identifier and Regulation Number
		Valid on 10/02/2010 Released 10/02/2010 04:57
10/02/2010 08:22:38 - 22 regulations		
Seq No	001	State NEW
FMP	EBBUFMP	Published 10/02/2010 04:56
Regulation Id	EBBRA10M	WEF 10/02/2010 06:20
Flight Level	ALL	UNT 10/02/2010 09:00
Reason	Weather	
RMK	DUE TO FORECAST WEATHER CONDITIONS SNOW AND LOW VISIBILITY EXPECTED EBBR+MB ARRIVALS	
Seq No	016	State NEW
FMP	EDGGFMP1	Published 10/02/2010 04:57
Regulation Id	EDDFA10	WEF 10/02/2010 05:30
Flight Level	ALL	UNT 10/02/2010 08:00
Reason	Weather	
RMK	SNOW EDDF ARRIVALS	
Seq No	014	State NEW
FMP	EDGGFMP2	Published 10/02/2010 04:57
Regulation Id	EDADL210	WEF 10/02/2010 04:40
Flight Level	245-	UNT 10/02/2010 17:00
Reason	ATC Staffing	
	APPROACH DUSSELDORF	
Seq No	020	State NEW
FMP	EDMMFMPA	Published 10/02/2010 04:57
Regulation Id	EDDMA10	WEF 10/02/2010 06:00
Flight Level	ALL	UNT 10/02/2010 10:30
Reason	Weather	
RMK	SNOW	

Figure 14-1 ATFCM Notification Message (ANM)

The elements included in the ANM are described below:

**Header:**

**Valid** Validity date for the ANM. It is important to ensure that the ANM referred to is the correct one.( i.e.: current or applicable for the next day)

**Released** Date and time of release. As the ANM is regularly updated it is important to ensure that the one being used is the latest.

**FORMAT OF REGULATION DESCRIPTION**

**Seq No** The sequence number of the regulation which is valid for a specific date (the number is not reused if the regulation is cancelled)

**State** (NEW, CANCEL, or CHANGE).

**FMP** Flow Management Position (FMP) identifier (first four characters of the traffic volume set identifier).

**Published** Date and time of the REGULATION release

- Regulation ID** The regulation identifier.
- WEF** The time of validity of the restriction.
- Flight Level** Flight levels affected.
- UNT** The time of validity of the restriction.
- Reason** The regulation cause
- RMK** Any remarks relevant to the regulation. This line is optional.

14.5.2. **ATFCM Information Message (AIM)**



**Figure 14-2 ATFCM Information Message (AIM)**

The elements included in the AIM are:

- DESCRIPTION** Summary description of the AIM message.
- VALIDITY** Start and end date of the AIM message.
- RELEASED** Released date and time of the AIM message (in brackets).
- DETAIL** The message in detail.

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## 15. SUGGESTION FOR EVOLUTION OF SYSTEM AND PROCEDURES

It is already possible for a **NM** client to propose an Operational User Requirements (**OUR**) in respect of any of the **NM** systems and procedures by means of the current procedure which is:

Complete an Operational User Requirements (**OUR**) Form:

<http://www.eurocontrol.int/network-operations/library>

and submit it with the relevant available data.

Proposals will be considered in coordination with the appropriate stakeholder groups and decisions will be implemented by the DNM.

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## 16. DICTIONARY OF ABBREVIATIONS

ACRONYM	DEFINITION
ACC	Area Control Centre
ACK	IFPS Acknowledgement Message
ADDR	Address
ADEP	Aerodrome of Departure
ADES	Aerodrome of Destination
ADEXP	ATS Data Exchange Presentation
ADID	Aerodrome Identification
ADP	ATFCM Daily Plan
AEA	Association of European Airlines
AFTN	Aeronautical Fixed Telecommunication Network
AIC	Aeronautical Information Circular
AIM	Air Traffic Flow and Capacity Management Information Message
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information, Regulation and Control
AMC	Airspace Management Cell
AME	ATM Msg Exchange
ANM	ATFCM Notification Message
AO	Aircraft Operator
AOCC	Aircraft Operator Control Centre
AOCU	Aircraft Operator Control Unit
AOLO	Aircraft Operation Liaison Officer
AOWIR	Aircraft Operator WHAT-IF Reroute
APP	Approach Control (Office/Service)
APR	Aircraft Operator Position Report
ARCID	Aircraft Identification
ARCTYP	Aircraft Type
ARO	Air Traffic Services Reporting Office
ATC	Air Traffic Control
ATFCM	Air Traffic Flow and Capacity Management
ATFM	Air Traffic Flow Management
ATO	Actual Take-Off
ATOT	Actual Take-Off Time
ATS	Air Traffic Services
AUA	ATC Unit Airspace
CASA	Computer Assisted Slot Allocation
CDM	Collaborative Decision Making
CFPU	Central Flight Processing Unit (in a State)
CHAMAN	Chaotic Situation Management
CHG	Modification Message

ACRONYM	DEFINITION
CNL	Cancellation Message
CPR	Correlated Position Report
CSO	<b>Customer technical Service desk &amp; Operations</b>
CTOT	Calculated Take-Off Time
DEP	Departure Message
DES	De-Suspension Message
DEST	Destination
DLA	Delay message
DMR	Data Modification Request
DNM	Directorate of Network Management
EAUP	European Airspace Use Plan
ECAC	European Civil Aviation Conference
EFS	ETFMS Fall-Back System
EMER	Emergency
ENV	<b>NM</b> - Environment Database
EOBD	Estimated Off-Block Date
EOBT	Estimated Off-Block Time
ERR	Error Message
ETFMS	Enhanced Tactical Flow Management System
ETO	Estimated Time Over
EUR	The ICAO European Region
EUROCONTROL	European Organisation for the Safety of Air Navigation
EUUP	European Updated Airspace Use Plan
FAM	Flight Activation Monitoring
FCM	Flight Confirmation Message
FILTIM	Date and Time Stamp of original Message
FIR	Flight Information Region
FL	Flight Level
FLS	Flight Suspension Message
FMP	Flow Management Position
FPL	Filed Flight Plan
FPM	Flight Planning Messages (FPL, CHG, CNL, ...)
FSA	First System Activation Message
HOSP	Hospital
HUM	Humanitarian
IACA	International Air Carrier Association
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICNL	Individual Cancellation Message
IFPL	Individual Flight Plan Message
IFPS	Integrated Initial Flight Plan Processing System
IFPU	IFPS Unit

ACRONYM	DEFINITION
IFPU1/RPL	<b>NM</b> - IFPS Unit Section - Haren Brussels (BELGIUM)
IFPU2	<b>NM</b> - IFPS Unit Section - Brétigny-sur-Orge (FRANCE)
IOBD	Initial Off-Block Date
IOBT	Initial Off-Block Time
LOA	Letter Of Agreement
MAN	Manual
MFS	Message from Shanwick/Santa Maria
MINLINEUP	Minimum time to line-up for take-off
MSG	Message
NEWCTOT	New Calculated Take-Off Time
NEWETOT	New Estimated Take-Off Time
NEWPTOT	New Provisional Take-Off Time
NEW RTE	New Route
<b>NM</b>	<b>Network Manager</b>
NOP	Network Operations Plan
NOTAM	Notice to Airmen
OBT	Off-Block Time
OCG	Operations Coordination Group
OLR	Off-Load Route
OPR	Operator
ORGMSG	Original Message
ORGRTE	Original Route
OUTREG	Out of Regulation
PTID	Point Identification
PTOT	Provisional Take-Off Time
RAD	Route Availability Document
REA	Ready Message
REF	Reference
REG or REGUL	Regulation
REJ	Reject Message
REJCTOT	Reject Calculated Take-Off Time
RESPBY	Respond by (time out to give a response)
RFI	Ready/Request For (direct) Improvement Message
RFP	Replacement Flight Plan Procedure
RJT	Rerouting Rejection Message
RMK	Remark
RPL	Repetitive Flight Plan
RRN	Rerouting Notification Message
RRP	Rerouting Proposal Message
RRTEREF	Reroute Reference designation
RSO	Route per State Overflown
RVR	Runway Visual Range

ACRONYM	DEFINITION
SAL	Slot Allocation List
SAM	Slot Allocation Message
SAR	Search and Rescue
SIP	Slot Improvement Proposal Message
SIT	Slot Issue Time
SITA	Société Internationale de Télécommunications Aéronautiques
SLC	Slot Cancellation Message
SMM	Slot Missed Message
SPA	Slot Improvement Proposal Acceptance Message
SRJ	Slot Improvement Proposal Rejection Message
SRM	Slot Revision Message
STS	Status Indicator
SWM	SIP Wanted Message
TFC	Traffic
TIS	Time to Insert into the Sequence
TRS	Time to Remove from the Sequence
TWR	Tower
UFN	Until Further Notice
UIR	Upper Flight Information Region
UNT	Until
UTC	Coordinated Universal Time
WEF	With Effect From
XCD	Exceptional Conditions

## 17. DEFINITIONS

### 17.1. General

Terms and definitions included in this document have the following meanings:

### 17.2. Terms and Meanings

**Air Traffic Flow Management (ATFM).** A service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that air traffic control capacity is utilised to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate air traffic services authority.

**Air Traffic Flow and Capacity Management (ATFCM).** ATFM extended to include the optimisation of traffic patterns and capacity management. Through managing the balance of Capacity and Demand the aim of ATFCM is to enable flight punctuality and efficiency, according to the available resources with the emphasis on optimising the network capacity through the collaborative decision making process.

**ATFCM Daily Plan.** The set of tactical air traffic flow management measures prepared during the Pre-Tactical phase.

**ATFCM Slot Allocation Exemption.** The exemption of a flight from air traffic flow management slot allocation.

**ATFCM Incident.** A significant occurrence affecting an air traffic services unit, an aircraft operator or a central management unit resulting from the application of air traffic flow management measures or procedures.

**ATFCM Measures.** Actions taken to accomplish air traffic flow and capacity management.

**Aircraft Operator.** A person, organisation or enterprise engaged in, or offering to engage in, an aircraft operation.

**Capacity [for ATFCM purposes].** The operationally acceptable volume of air traffic.

**Central Management Unit (CMU).** A centralised unit providing air traffic flow management services within a specified area of responsibility.

**Central Management Unit (CMU) Contingency Plan.** Arrangements made to ensure the continued provision of the air traffic flow management service in the event of a failure of one or more of the central management unit components.

**Collaborative Decision Making (CDM).** Process which allows decisions about events to be taken by those best positioned to make them on the basis of most comprehensive, up-to-date and accurate information. This in turn will enable decisions about a particular flight to be made according to the latest information available at the time, thereby enabling the flight to be dynamically optimised to reflect near or real-time events.

**Critical Event.** An unusual situation or crisis involving a major loss of EATMN capacity, or a major imbalance between EATMN capacity and demand, or a major failure in the information flow in one or several parts of EATMN.

**Directorate Network Management (DNM).** Directorate in Eurocontrol where the central unit for ATFM is located.

**Flow Management Position (FMP).** A working position established in appropriate air traffic control units to ensure the necessary interface between local ATFCM partners (i.e. ATCs, AOs and Airports) and a central management unit on matters concerning the provision of the air traffic flow and capacity management service.

Depending on the internal organisation within a State, in addition to FMP staff some ATFCM activities may be carried out by other national units such as a Headquarters (HQ) Section. Where tasks are carried out by such units, coordination procedures must be established between the units concerned and the FMP(s) so that full account is taken of the situation in the FMP's area of responsibility before decisions are made or agreements reached.

**Monitoring Value (MV).** An agreed number of flights entering a sector, aerodrome or point that triggers the initial traffic assessment during a rolling 1 hour period from which coordinated actions may be considered. The monitoring value should not be confused with the capacity, and the monitoring value shall never be greater than the capacity.

**Network Manager. Function provided by the Eurocontrol Directorate of Network Management (DNM) as described in the Network Manager Implementing Rule of the European Commission.**

**Over-Delivery.** An occurrence when the declared rate is exceeded by the actual number of aircraft that enter a regulated sector during a particular period.

**Overload.** An occurrence when an air traffic controller reports that he/she has had to handle more traffic than they consider it was safe to do so.

**Post Operations.** An ATFCM phase that takes place after the day of operation for analysis of planning procedures and coordination, the results of which are fed back into the planning process for further consideration.

**Pre-Tactical.** An ATFCM phase which takes place during six days prior to the day of operation and consists of planning and coordination activities.

**Rate.** A value, required as input to slot allocation.

**Rerouting [for ATFCM purposes].** An ATFCM measure which requires an aircraft operator to file an alternate route/flight level in order to resolve ATC capacity problems and minimise delays.

**Route Availability Document (RAD).** A sole source planning document that combines AIP route flow restrictions with ATFCM routing requirements designed to make the most effective use of ATC capacity.

**Slot [for ATFCM purposes].** CTOT issued by the **NM**.

**Slot Adherence.** Compliance with a CTOT by the aircraft operator and ATC, taking into account the slot tolerance.

**Slot Allocation.** An ATFCM measure implemented by means of a departure slot in order to balance traffic demand against available ATC capacity.

**Slot Tolerance.** A window of time around a CTOT available to ATC for which the aircraft must not depart outside.

**Strategic.** An ATFCM phase which takes place seven days or more prior to the day of operation and includes research, planning and coordination activities.

**Suspension [for ATFCM purposes].** An ATFCM measure resulting in the suspension of a flight.

**Tactical.** An ATFCM phase, which takes place on the day of operation.

**Volume of Air Traffic [for ATFCM purposes].** The number of aircraft within a defined airspace or aircraft movements at an aerodrome, within a specified period of time.



# **ANNEXES**

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## The Message Fields, Abbreviations and Definitions

KEYWORD	DEFINITION
ARCTYP	Aircraft type.
ADEP	ICAO indicator for Aerodrome of Departure.
ADES	ICAO indicator for Aerodrome of Destination.
ARCID	ICAO Aircraft Identification.
COMMENT	This field provides additional information.
CTOT	Calculated Take-Off Time.
EOBD	Date of Flight (this field can optionally be used in messages from AOs to the <b>NM</b> when an ambiguity may exist with the date). The format is and will remain YYMMDD (i.e. no century).
EOBT	Estimated Off-Block Time.
ERRFIELD	ADEXP name of erroneous field(s).
FILTIM	Date and Time Stamp of original message.
FURTHRTE	Further route, i.e. the route to be followed after the reference point (It may optionally repeat the reference point).
IFPLID	IFPS Identification. This is the unique flight plan identification which is issued by IFPS. It is only available in flight plans which have been distributed in ADEXP format.
IOBD	Initial Off-Block Date. The format is and will remain YYMMDD (i.e. no century).
IOBT	Initial Off-Block Time.
MINLINEUP	Minimum time to line-up for take-off.
NEWCTOT	Revised CTOT.
NEWPTOT	New Provisional Take-Off Time.
NEWRTE	New Route (when a Rerouting is proposed).
ORGMSG	Reference to the title of a message originally received.

## The Message Fields, Abbreviations and Definitions

KEYWORD	DEFINITION
ORGRTE	Original Route (when a Rerouteing is proposed).
POSITION	The actual position of the aircraft. The POSITION field is a composite field, which may consist of the following subfields: ADID : Aerodrome Identification, i.e. ICAO location indication of the airfield. PTID : Point identification, i.e. the name of the route point. : For Aerodromes, this field contains the Actual-Take-Off time and for route points, this field contains the actual Time-Over the point. FL : For Aerodromes, this field shall (if present) contain the airfield elevation and for route points, this field contains the actual flight level over the point.
PTOT	Provisional Take-Off Time.
REASON	Reason to explain an action by ETFMS (e.g. rejection, cancellation, etc.).
REGCAUSE	Reason of Regulation.
REGUL	Identifier for the restriction imposed.
REJCTOT	Rejection of a new CTOT where a Slot Improvement has been proposed by the <b>NM</b> .
RESPBY	Latest time by which a Response must be received.
RRTEREF	Reroute Reference designation.
RVR	Runway Visual Range (this field is optional in certain messages).
TAXITIME	The average taxiing time for the runway in use which was considered by ETFMS to derive the take-off times from the off-block times when calculating the last flight profile.
TITLE	Message name.

## ANNEX 2 SLOT RELATED MESSAGES - ORIGINATED BY THE NM

The following table gives examples of all ATFCM messages currently in use. The table includes a brief description of each message and subsequent actions.

SLOT RELATED MESSAGES - ORIGINATED BY THE NM		
MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p><b>-TITLE SAM</b> (1)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBT</b> 0945  <b>-CTOT</b> 1030  <b>-REGUL</b> UZZU11  <b>-TAXITIME</b> 0020  <b>-EOBD</b> 080901  <b>-REGCAUSE</b> CE 81</p>	<p><b><u>SAM</u> : SLOT ALLOCATION MESSAGE</b></p> <p>The <b>SAM</b> is used to inform AOs &amp; ATS of the Calculated Take-Off Time (CTOT) computed by CASA for an individual flight, to which AOs/ATC must adhere.</p>	<p>Sent to AOs/ATS 2 hours before the last received EOBT. AOs/ATC must comply with the CTOT.</p>
<p><b>TITLE SAM</b> (2)  <b>-ARCID</b> AMC 101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0945  <b>-CTOT</b> 1200  <b>-REGUL</b> LMMLA01  <b>-COMMENT</b> CLOSURE  <b>-TAXITIME</b> 0010  <b>-REGCAUSE</b> AA 83</p>	<p><b><u>SAM</u> : SLOT ALLOCATION MESSAGE</b>  <b><u>In the case of</u> : Closure</b></p> <p>A <b>SAM</b> message is sent by the <b>NM</b> when a problem occurs on the flight path requiring a modification of the take off time e.g. non-availability of aerodrome for a short period.</p>	<p>In the event of a non-availability for a short period the <b>NM</b> activates exceptional condition mechanism to inform AOs individually of the delay of their flight(s).</p> <p>The AO and ATC shall comply to the(NEW)CTOT according to the usual ICAO rules. The (NEW)CTOT may be modified as the situation requires. When an AO submits an amendment (e.g. DLA or CHG) to IFPS, he must always give as EOBT the earliest EOBT he may comply with. This time is not directly related to the (NEW)CTOT provided in the SRM. The EOBT in IFPS should always reflect the time at which the AO actually wants to be off-blocks. The flight plan may be modified to avoid the problem area. Reference shall be made to AIM/ANM and NOTAM.</p>

**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p><b>-TITLE SAM</b> (3)  <b>-ARCID</b> AMC 101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0945  <b>-CTOT</b> 1200  <b>-RVR</b> 100  <b>-REGUL</b> LMMLA01  <b>-COMMENT</b> RVR CRITERIA NOT MET  <b>-TAXITIME</b> 0010  <b>-REGCAUSE</b> WA 84</p>	<p><b>SAM : SLOT ALLOCATION MESSAGE</b>  <u>In the case of Runway Visual Range (RVR)</u>                      An SAM message is sent by the <b>NM</b> when a problem occurs at or around aerodromes requiring a modification of the take off time e.g. low visibility conditions which affect ATC capacity. The flight is delayed to arrive when RVR requirement is met (the RVR field will be added in the SAM message indicating the minimum RVR required as well as the related comment).</p>	<p>ETFMS sends individual Slot Allocation Messages to inform AOs and/or ATC that a flight has been delayed to arrive when RVR requirement is met.                      An SAM will be sent immediately at or after the moment of slot issue.                      AOs/ATC must conform to the SAM and, where required, the relevant AIM.                      Flight delayed due to insufficient RVR are repositioned in the slot list at reception of messages from AOs (see FCM below). The message will be followed by a SRM (indicating the NEWCTOT) or an SLC which indicate the departure requirements.</p>
<p><b>-TITLE SAM</b> (4)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0945  <b>-CTOT</b> 1240  <b>-RVR</b> 100  <b>-REGUL</b> LMMLA01  <b>-COMMENT</b> RVR CRITERIA NOT MET  <b>-TAXITIME</b> 0020  <b>-REGCAUSE</b> WA 84</p>	<p><b>SAM : SLOT ALLOCATION MESSAGE</b>  <u>In the case of Runway Visual Range (RVR)</u>                      When a flight delayed due to an insufficient RVR is also affected by another regulation the RVR field will also be added in SAM message indicating the minimum RVR required as well as the related comment as currently provided in the SAM flight delayed only because of weather conditions.</p>	<p>Flights affected by weather conditions may become subject to ATFCM regulation.                      Sent to AOs/ATS 2 hours before the last received EOBT.                      AOs/ATS must comply with the CTOT.                      The CTOT may evolve as the situation requires. When an AO submits an amendment message (e.g. DLA or CHG) to IFPS, he must always give as EOBT the earliest EOBT he may comply with. This time is not directly related to the CTOT provided in the SAM. The EOBT in IFPS should always reflect the time at which the AO actually wants to be off-blocks.</p>
<p><b>-TITLE SRM</b> (1)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0020  <b>-NEWCTOT</b> 0050  <b>-REGUL</b> UZZU12  <b>-TAXITIME</b> 0020  <b>-REGCAUSE</b> CE 81</p>	<p><b>SRM : SLOT REVISION MESSAGE</b>                      After CASA has issued an initial <b>SAM</b>, subsequent updates may be notified via the <b>Slot Revision Message (SRM)</b>.                      This message may be used to indicate a delay increase or decrease.</p>	<p>The <b>SRM</b> notifies a significant change of slot It is issued not earlier than 2 hours before the last received EOBT. This EOBT may be provided by DLA or CHG.                      AOs/ATC must comply with the NEWCTOT.</p>

**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<b>TITLE SRM</b> (2) -ARCID AMC 101 -IFPLID AA12345678 -ADEP EGLL -ADES LMML -EOBD 080901 -EOBT 0945 -NEWCTOT 1200 -REGUL LMMLA01 -COMMENT CLOSURE -TAXITIME 0010 -REGCAUSE AA 83	<b>SRM : SLOT REVISION MESSAGE</b> <u>In the case of : Closure</u>  An SRM message is sent by the NM when a problem occurs on the flight path requiring a modification of the take off time e.g. non-availability of aerodrome.	In the event of a non-availability for a short period the NM activates exceptional condition mechanism to inform AOs individually of the delay of their flight(s).  The AO and ATC shall comply to the(NEW)CTOT according to the usual ICAO rules. <b>The (NEW)CTOT may be modified as the situation requires. When an AO submits an amendment (e.g. DLA or CHG) to IFPS, he must always give as EOBT the earliest EOBT he may comply with. This time is not directly related to the (NEW)CTOT provided in the SAM/SRM. The EOBT in IFPS should always reflect the time at which the AO actually wants to be off-blocks.</b> The flight plan may be modified to avoid the problem area. Reference shall be made to AIM/ANM and NOTAM.
<b>-TITLE SRM</b> (3) -ARCID AMC 101 -IFPLID AA12345678 -ADEP EGLL -ADES LMML -EOBD 080901 -EOBT 0945 -NEWCTOT 1200 -RVR 100 -REGUL LMMLA01 -COMMENT RVR CRITERIA NOT MET -TAXITIME 0010 -REGCAUSE WA 84	<b>SRM : SLOT REVISION MESSAGE</b> <u>In the case of Runway Visual Range (RVR)</u>  An SRM message is sent by the NM when a problem occurs at or around aerodromes requiring a modification of the take off time e.g. low visibility conditions which affect ATC capacity. The flight is delayed to arrive when RVR requirement is met (the RVR field will be added in the SRM message indicating the minimum RVR required as well as the related comment).	ETFMS sends individual Slot Allocation Messages to inform AOs and/or ATC that a flight has been delayed to arrive to arrive when RVR requirement is met.  <b>A SRM will be sent immediately</b> <b>AOs/ATC must conform to the SRM and, where required, the relevant AIM.</b> Flights delayed due to insufficient RVR are repositioned in the slot list at reception of messages from AOs (see FCM below). <b>The message will be followed by a SRM (indicating the NEWCTOT) or an SLC which indicate the departure requirements.</b>
<b>-TITLE SLC</b> (1) -ARCID AMC101 -IFPLID AA12345678 -ADEP EGLL -ADES LMML -EOBD 080901 -EOBT 0945 -REASON OUTREG -TAXITIME 0020	<b>SLC : SLOT REQUIREMENT CANCELLATION MESSAGE</b>  Sent to AOs/ATS to advise that a flight which has received a CTOT is no longer subject to an ATFCM restriction.	The flight is no longer subject to ATFCM measures and may depart without delay.  <b>If the EOBT of the flight is not realistic (e.g. more than 15 minutes in the past) the SLC will indicate a COMMENT PLEASE UPDATE EOBT WITH A DLA MSG reminding the AO to update its EOBT by sending a DLA).</b>

**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p><b>-TITLE SLC</b> (2)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0945  <b>-REASON</b> VOID  <b>-COMMENT</b> FLIGHT CANCELLED  <b>-TAXITIME</b> 0020</p>	<p><b><u>SLC</u> : SLOT REQUIREMENT CANCELLATION MESSAGE</b></p> <p><b><u>In the case of</u> Cancel</b></p> <p>Sent to AOs/ATS to confirm that the slot of a regulated flight has been released as a result of a CNL.</p>	<p>When an SLC is issued as a result of an CNL, the field -COMMENT FLIGHT CANCELLED will be included in the SLC.</p>
<p><b>-TITLE SIP</b>  <b>-ARCID</b> AMC 101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0945  <b>-CTOT</b> 1030  <b>-NEWCTOT</b> 1010  <b>-REGUL</b> UZZU11  <b>-RESPBY</b> 0930  <b>-TAXITIME</b> 0020</p>	<p><b><u>SIP</u> : SLOT IMPROVEMENT PROPOSAL MESSAGE</b></p> <p>The <b>SIP</b> proposes a NEWCTOT. A response is expected from the AO.</p> <p>If no response is given, the proposal expires at the respond by (RESPBY) time and the last published CTOT remains valid.</p>	<p>If CASA is able to improve the CTOT by a significant amount, by using the slots freed due to a revised EOBT, Slot Missed Message or an improved flow rate, etc., a proposal is put to the AO before the NEWCTOT becomes firm.</p> <p>The AO accepts the proposal with an <b>SPA</b> or rejects with an <b>SRJ</b>.</p>
<p><b>-TITLE FLS</b> (1)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0945  <b>-REGUL</b> LMMLA01  <b>-COMMENT</b> CLOSURE  <b>-TAXITIME</b> 0020  <b>-REGCAUSE</b> AA 83</p>	<p><b><u>FLS</u> : FLIGHT SUSPENSION MESSAGE</b></p> <p><b><u>In the case of</u> : Closure</b></p> <p>ETFMS indicates with <b>FLS</b> that this flight is considered as not taking off. The flight data are kept in the database but suspended (non-availability of an aerodrome for a long period).</p>	<p>In the event of a non-availability for a long period the <b>NM</b> activates the exceptional condition mechanism to inform AOs individually of the suspension of their flight(s).</p> <p>The identifier of the regulation(s) concerned together with the corresponding regulation cause are inserted in the FLS message</p> <p>AO must confirm their intent to operate in the provided regulation(s) with an FCM, in order to receive a slot after re-opening.</p>



**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p>(2)</p> <p><b>-TITLE FLS</b>  <b>-ARCID AMC101</b>  <b>-IFPLID AA12345678</b>  <b>-ADEP EGLL</b>  <b>-ADES LMML</b>  <b>-EOBD 080901</b>  <b>-EOBT 0945</b>  <b>-RVR 350</b>  <b>-RESPBY 0855</b>  <b>-REGUL UZZU11</b>  <b>-COMMENT RVR UNKNOWN</b>  <b>-TAXITIME 0020</b>  <b>-REGCAUSE WA 84</b></p>	<p><b>FLS : FLIGHT SUSPENSION MESSAGE</b>  <u><i>In the case of</i></u> <b>Runway Visual Range (RVR)</b></p> <p>The flight is suspended (comment will be RVR UNKNOWN) until the flight's RVR is provided to the <b>NM</b>.</p>	<p>ETFMS sends individual Flight Suspension Messages to inform AOs and/or ATC that a flight has been suspended. <b>A RESPBY time is also in the message enabling the AO to keep its present CTOT if the CHG/FCM with sufficient RVR is received by the NM in due time.</b></p> <p>An <b>FLS</b> will be sent immediately where a flight has already received a CTOT. The <b>FLS</b> is sent instead of a <b>SAM</b> at the moment of slot issue.</p> <p>The identifier of the regulation concerned together with the corresponding regulation cause are inserted in the FLS message.</p>
<p>(3)</p> <p><b>-TITLE FLS</b>  <b>-ARCID AMC101</b>  <b>-IFPLID AA12345678</b>  <b>-ADEP EGLL</b>  <b>-ADES LMML</b>  <b>-EOBD 080901</b>  <b>-EOBT 0945</b>  <b>-COMMENT SMM RECEIVED</b>  <b>-TAXITIME 0020</b></p>	<p><b>FLS : FLIGHT SUSPENSION MESSAGE</b>  <u><i>In the case of :</i></u> <b>Slot Missed Message (SMM)</b></p> <p>After the reception of a <b>SMM</b>, the flight is put in suspension and ETFMS originates an <b>FLS</b>. The flight will be de-suspended after the reception of a DLA.</p>	<p><b>The flight will be de-suspended at reception of a DLA/CHG updating the EOBT or a new DPI message triggered by a TOBT update. An A-DPI message will also de-suspend the flight when suspension is due to the reception of a C-DPI. The AO is expected to send a DLA/CHG or communicate the updated TOBT with the A-CDM platform. The message will be followed by a SAM (indicating the CTOT) or a DES which indicates the departure requirements. If the flight has already departed, the first received ATC message (DEP/FSA) or the first received CPR will automatically de-suspend the flight.</b></p> <p>AOs/ATC must conform to the FLS and, where required, the relevant AIM. The message will be followed by a SAM (indicating the CTOT) or a DES which indicate the departure requirements.</p>
<p>(4)</p> <p><b>-TITLE FLS</b>  <b>-ARCID AMC101</b>  <b>-IFPLID AA12345678</b>  <b>-ADEP EGLL</b>  <b>-ADES LMML</b>  <b>-EOBD 080901</b>  <b>-EOBT 0945</b>  <b>-COMMENT NOT REPORTED AS AIRBORNE</b>  <b>-TAXITIME 0020</b></p>	<p><b>FLS : FLIGHT SUSPENSION MESSAGE</b>  <u><i>In the case of :</i></u> <b>Flight Activation Monitoring</b></p> <p>The flights, which are expected to be airborne but are not actually reported as airborne will be regularly 'shifted' then suspended and ETFMS will originate an FLS. The flight will be de-suspended after the reception of a DLA.</p>	<p>Flights may be reactivated at reception of DLA or CHG messages from AOs. AOs/ATC must conform to the FLS and, where required, the relevant AIM. The message will be followed by a SAM (indicating the CTOT) or a DES which indicates the departure requirements.</p> <p>If the flight has already departed, the first received ATC message (DEP/FSA) or the first received CPR will automatically de-suspend the flight.</p>

**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p><b>-TITLE FLS</b> (5)  <b>-ARCID</b> BEL2CC  <b>-IFPLID</b> AA00126947  <b>-ADEP</b> EBBR  <b>-ADES</b> LIPZ  <b>-EOBD</b> 120119  <b>-EOBT</b> 0543  <b>-COMMENT</b> <i>SUSPENDED BY DEPARTURE AIRPORT</i>  <b>-TAXITIME</b> 0016</p>	<p><b>FLS</b> : FLIGHT SUSPENSION MESSAGE  <i>In the case of</i> : <b>Cancel DPI</b></p> <p>At airports transmitting DPI messages the Cancel DPI (C-DPI) is sent when there is an interruption to the departure planning process and a new Off-Block-Time is not (yet) known, triggering the FLS.</p>	<p>The flight will be re-activated if a new TOBT (Target-Off-Block-Time) is provided at the CDM airport or if a new EOBT is provided by a DLA or CHG message by the AO.                      The message will be followed by a SAM (indicating the CTOT) or a DES which indicates the departure requirements.                      If the flight has already departed, the first received ATC message (DEP/FSA) or the first received CPR will automatically de-suspend the flight.</p>
<p><b>-TITLE DES</b>  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 0945  <b>-TAXITIME</b> 0020</p>	<p><b>DES</b> : DE-SUSPENSION MESSAGE</p> <p>This NM message indicates that a flight which was previously suspended is now de-suspended.</p>	<p>The flight is de-suspended by ETFMS and is no longer subject to ATFCM measures. No action is normally required of AOs/ATS <b>but if the EOBT of the flight is not realistic (e.g. more than 15 minutes in the past) the DES will indicate a COMMENT PLEASE UPDATE EOBT WITH A DLA MSG</b> reminding the AO to update its EOBT by sending a DLA. In the meantime the flight will be counted as if departed taxitime + TIS after the de-suspension. AO shall update the EOBT by sending a DLA/CHG</p>
<p><b>-TITLE RRP</b> (1)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 1030  <b>-ORGRTE</b> MID UA1 RBT UG32 TOP UA1 ELB UA12 PAL UA18 EKOLA A18 MLQ  <b>-CTOT</b> 1230  <b>-RRTEREF</b> ELLLLMML1  <b>-NEW RTE</b> MID UA1 RBT UG32 BAJKO UA21 NIZ UA2 AJO UA9 CAR UB21 PANTA B21 MLQ  <b>-NEWCTOT</b> 1105  <b>-RESPBY</b> 0900  <b>-TAXITIME</b> 0020</p>	<p><b>RRP</b> : REROUTEING PROPOSAL MESSAGE</p> <p>This message is sent to an AO to offer a different CTOT or to avoid the need for a slot on a new route.                      A 'respond by time' is also added.</p> <p><b>Example 1</b></p> <p>The flight had already received a CTOT corresponding to its original route (ORGRTE). A new CTOT is offered provided the flight is refiled along the proposed new route (NEW RTE).</p>	<p>This issue follows a what-if reroute and 'apply' made at the NM. The AO who wishes to benefit from the offer shall consequently modify its flight plan either with a CHG (this solution preferred when the flight is conducted wholly within the IFPS/NM area of responsibility) or a CNL and refile using the Replacement Flight Plan procedure (RFP). This should be received before the RESPBY time.</p> <p>At the reception of the new route in the flight plan ETFMS will merge it to the proposal.</p>

**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p><b>-TITLE RRP</b> (2)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 1030  <b>-ORGRTE</b> MID UA1 RBT UG32 TOP UA1 ELB UA12 PAL UA18 EKOLA A18 MLQ  <b>-CTOT</b> 1230  <b>-RRTEREF</b> ELLLLMML2  <b>-NEW RTE</b> MID A1 BOGNA UA1 RBT UG32 TOP UA1 ELB UA12 UA18 EKOLA A18 MLG DCT MLQ  <b>-RESPBY</b> 0900  <b>-REASON</b> OUTREG  <b>-TAXITIME</b> 0020</p>	<p><b>Example 2</b></p> <p>This flight is rerouted from a route which is crossing a regulated area(s) to a new route without a regulation.</p> <p>The REASON OUTREG indicates that there is no slot required, for that route.</p>	<p>Then SLC, SAM, SRM messages will be transmitted as appropriate.                      The possible combination of optional fields is as follows :</p> <p>-CTOT -NEWCTOT                      -CTOT -REASON                      -PTOT -NEWPTOT                      -PTOT -REASON                      -PTOT -NEWCTOT                      -NEWCTOT                   only                      -NEWPTOT                   only</p>
<p><b>-TITLE RRP</b> (3)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 1030  <b>-ORGRTE</b> MID UA1 RBT UG32 TOP UA1 ELB UA12 PAL UA18 EKOLA A18 MLQ  <b>-PTOT</b> 1230  <b>-RRTEREF</b> ELLLLMML1  <b>-NEW RTE</b> MID UA1 RBT UG32 BAJKO UA24 NIZ UA2 AJO UA9 CAR UB21 PANTA B21 MLQ  <b>-NEWPTOT</b> 1100  <b>-RESPBY</b> 0730  <b>-TAXITIME</b> 0020</p>	<p><b>Example 3</b></p> <p>This flight has not yet received its slot, only a provisional take-off (PTOT) time was calculated. A new provisional take-off (NEWPTOT) time is calculated which corresponds to the new proposed route. This value may be modified until the final slot is issued.</p>	<p>This issue follows a what-if reroute and 'apply' made at the <b>NM</b>. The AO who wishes to benefit from the offer shall consequently modify its flight plan either with a CHG or a CNL and refile using the Replacement Flight Plan procedure (RFP). This should be received before the RESPBY time.</p> <p>At the reception of the new route in the flight plan ETFMS will merge it to the proposal. Then SLC, SAM, SRM messages will be transmitted as appropriate.</p>

**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p><b>-TITLE RRP</b> (4)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 1030  <b>-ORGRTE</b> MID UA1 RBT UG32 TOP UA1 ELB UA12 PAL UA18 EKOLA A18 MLQ  <b>-PTOT</b> 1230  <b>-RRTEREF</b> ELLLLMML2  <b>-NEW RTE</b> MID A1 BOGNA UA1 RBT UG32 TOP UA1 ELB UA12 UA18 EKOLA A18 MLG DCT MLQ  <b>-RESPBY</b> 0730  <b>-REASON</b> OUTREG  <b>-TAXITIME</b> 0020</p>	<p><b>Example 4</b></p> <p>Same as above. The flight has not yet received a slot and is proposed a route with no regulation active at the time of the proposal.</p>	<p>The possible combination of optional fields is as follows :</p> <p>-CTOT -NEWCTOT                      -CTOT -REASON                      -PTOT -NEWPTOT                      -PTOT -REASON                      -PTOT -NEWCTOT                      -NEWCTOT                   only                      -NEWPTOT                   only</p>
<p><b>-TITLE RRN</b> (1)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 1030  <b>-ORGRTE</b> MID UA1 RBT UG32 TOP UA1 ELB UA12 PAL UA18 EKOLA A18 MLQ  <b>-CTOT</b> 1230  <b>-RRTEREF</b> ELLLLMML1  <b>-NEW RTE</b> MID UA1 RBT UG32 BAJKO UA21 NIZ UA2 AJO UA9 CAR UB21 PANTA B21 MLQ  <b>-NEWCTOT</b> 1105  <b>-RESPBY</b> 0900  <b>-TAXITIME</b> 0020</p>	<p><b>RRN : REROUTEING NOTIFICATION MESSAGE</b></p> <p>This message is sent to an AO to notify a rerouteing triggered through the <b>NM</b> Client Application.</p> <p><b>Example 1</b></p> <p>The flight had already received a CTOT corresponding to its original route (ORGRTE). A new CTOT is offered provided that the flight is refilled along the proposed new route (NEW RTE).</p>	<p>The RRN message is issued in case of an acceptance of the rerouteing with option 'CNL original FPL', book slot and flight plan refile by the AO via SITA/AFTN.</p> <p>The flight plan is cancelled in the <b>NM</b> system and a new slot may be booked :</p> <p>The IFPS proceeds exactly as if a cancel(CNL) message had been submitted by the user. SLC are distributed with the FPL cancellations. RRN messages are sent by ETFMS to AO addresses in accordance with the addressing rules in the ATFCM Users Manual and, in addition, to the address associated to the <b>NM</b> Client Application having made the Apply.</p>

**SLOT RELATED MESSAGES - ORIGINATED BY THE NM**

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p><b>-TITLE RRN</b> (2)  <b>-ARCID</b> AMC101  <b>-IFPLID</b> AA12345678  <b>-ADEP</b> EGLL  <b>-ADES</b> LMML  <b>-EOBD</b> 080901  <b>-EOBT</b> 1030  <b>-ORGRTE</b> MID UA1 RBT UG32 TOP UA1 ELB UA12 PAL UA18 EKOLA A18 MLQ  <b>-CTOT</b> 1230  <b>-RRTEREF</b> EGLLLMML2  <b>-NEW RTE</b> MID A1 BOGNA UA1 RBT UG32 TOP UA1 ELB UA12 UA18 EKOLA A18 MLG DCT MLQ  <b>-RESPBY</b> 0900  <b>-REASON</b> OUTREG  <b>-TAXITIME</b> 0020</p>	<p><b>Example 2</b></p> <p>This flight is rerouted from a route which is crossing a regulated area(s) to a new route without a regulation.</p> <p>The REASON OUTREG indicates that there is no slot required, for that route.</p>	<p>This message includes the new route description and e.g. :</p> <p><b>-NEWCTOT</b> 1105                      the new slot calculation result  <b>-REASON</b> OUTREG                      when the new route is not subject to ATFCM regulation or</p> <p><b>The user is now expected to file a new flight plan in order to match the new conditions.</b></p> <p><b>This shall be received before RESPBY time.</b></p> <p>The route should be fully consistent with the one provided within the RRN message and also displayed on the <b>NM</b> Client Application.</p> <p>Then SAM or FLS messages will be transmitted as appropriate.</p> <p>The possible combination of optional fields is as follows :</p> <p>-CTOT -NEWCTOT          -CTOT -REASON          -NEWCTOT    only</p>
<p><b>-TITLE</b> ERR  <b>-ARCID</b> AMC101  <b>-FILTIM</b> 0915  <b>-ORGMMSG</b> SMM  <b>-REASON</b> SYNTAX ERROR</p>	<p><b>ERR : ERROR MESSAGE</b></p> <p>The error message indicates that an error has been found in a message previously received by ETFMS.</p> <p>The erroneous field or the reason for rejection may be indicated.</p>	<p>This message is sent by ETFMS when a message is received but its syntax is incorrect and cannot be processed.</p> <p>It can also be sent when a message is received with a correct syntax but the message cannot be correlated to an existing flight plan or the message is not relevant (e.g. an EOBT earlier than the previous one).</p> <p>AOs/ATS resend the correct message.</p>

## ANNEX 3 SLOT RELATED MESSAGES – ORIGINATED BY AOs/ATS

SLOT RELATED MESSAGES - ORIGINATED BY AOs/ATS		
ATFCM messages originated by AOs/ATS may include the IFPLID, preferably only if generated automatically.		
MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
-TITLE SMM -ARCID AMC101 -ADEP EGLL -ADES LMML -EOBD 080901 -EOBT 0945 -CTOT 1020	<p><b>SMM</b> : SLOT MISSED MESSAGE</p> <p>This message is originated by an AO when a slot time given in the <b>SAM</b> cannot be achieved but where a new EOBT cannot be supplied.</p>	<p><b>NM</b> cancels the issued CTOT and issues the suspension with an FLS message. The flight is suspended until :</p> <p>AOs/ATS will advise new EOBT (when known) via a Change (<b>CHG</b>), Delay (<b>DLA</b>) or CNL and refile into IFPS.</p> <p>The <b>NM</b> responds with an SAM or a DES.</p>
-TITLE SPA -ARCID AMC101 -ADEP EGLL -ADES LMML -EOBT 0945 -NEWCTOT 1010	<p><b>SPA</b> : SLOT IMPROVEMENT PROPOSAL ACCEPTANCE MESSAGE</p> <p>This message is a positive response to a Slot Improvement Proposal (<b>SIP</b>) message.</p>	<p><b>NM</b> confirms thereafter NEWCTOT with an SRM if an SPA is received within the RESPBY time.</p> <p>If an <b>SPA</b> outside RESPBY time or if parameters of restriction have changed, an error message will be sent stating the REASON i.e. VOID. AOs/ATC comply with the NEWCTOT or SRM.</p>
-TITLE SRJ -ARCID AMC101 -ADEP EGLL -ADES LMML -EOBT 0945 -REJCTOT 1010	<p><b>SRJ</b> : SLOT PROPOSAL REJECTION MESSAGE</p> <p>This message is confirmation that an AO cannot comply with a Slot Improvement Proposal (<b>SIP</b>) message.</p>	<p>Use of this message will allow the SIP slot to be released back into the system for potential use elsewhere.</p> <p>The AO keeps the original slot received before the <b>SIP</b>.</p>
-TITLE RFI -ARCID AMC101 -ADEP EGLL -ADES LMML -EOBD 080901 -EOBT 1030	<p><b>RFI</b> : RFI MESSAGE</p> <p>The RFI message is used by the AO to change the flight's readiness status from SWM (RFI NO) to RFI. The RFI status of the flight will be set to YES.</p>	<p>The AO operating a flight having its RFI status set to YES will receive an SRM if any improvement is possible. ATC will also receive the same message.</p> <p>AO and ATC shall comply with the NEWCTOT.</p>
-TITLE SWM -ARCID AMC101 -ADEP EGLL -ADES LMML -EOBD 080901 -EOBT 1030	<p><b>SWM</b> : SIP WANTED MESSAGE</p> <p>The SWM message is used by the AO to indicate that it cannot accept SRM when an improvement is possible but wants to be in a position to refuse an improvement. The RFI status of the flight will be set to NO.</p>	<p>The AO operating a flight having its RFI status set to NO will receive a SIP if any improvement is possible.</p> <p>The AO will accept the proposal with an SPA or reject it with an SRJ.</p>

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p>-TITLE REA -ARCID ABC101 -ADEP EGLL -ADES LMML -EOBD 080901 -EOBT 1030 -MINLINEUP 0005</p>	<p><b>REA : READY MESSAGE</b></p> <p>For flights having already received their slot and being in a situation to depart before their CTOT (doors closed and ready to depart), the AO may ask local ATC to send a Ready (REA) message. In the REA local ATC may also include a MINLINEUP time, to indicate the minimum time needed for that flight to get from its position to take-off.</p>	<p>Only ATC/ATFCM units can send a REA message.</p> <p>REA may be sent between EOBT minus 30 minutes and the CTOT of the flight. When the REA is filed before the EOBT, the flight is considered as having a new EOBT at this filing time and the MINLINEUP as a revised taxi time. To keep track of the difference between the filed off block time and the effective one in ETFMS all subsequent ATFCM messages include the field(s) IOBT and possibly IOBD (IOBT = latest EOBT filed before the REA was sent).</p> <p>The MINLINEUP is constrained in the range [0 min, 90 min]</p> <p>If an improvement is possible AO and ATC will receive an SRM.</p>
<p>-TITLE FCM (1) -ARCID AMC101 -ADEP EGLL -ADES LMML -EOBT 0945 -RVR 200</p>	<p><b>FCM : FLIGHT CONFIRMATION MESSAGE</b></p> <p>An AO indicates to ETFMS the RVR capability of a flight with an EOBT in the future.</p> <p>A suspended flight with an EOBT in the past or an obsolete EOBT must first be amended by a DLA and then confirmed by an FCM, which includes the flight's RVR capability . When the route has also to be changed it must be amended by a CHG, which will include an amended route and the flight's RVR capability.</p>	<p>An AO may send an <b>FCM</b> in response to a selective AIM or to an individual FLS message to provide the RVR operating minima which should be given in metres.</p> <p>When the flight's RVR capability is requested, the flight is kept suspended within ETFMS until this RVR capability is provided by CHG or FCM message or until the <b>NM</b> releases the RVR requirement or until a DLA/CHG message pushes the flight outside the period requesting the RVR.</p>
<p>-TITLE FCM (2) -ARCID AMC101 -ADEP EGLL -ADES LMML -EOBT 0945 -REGUL LMMLA01</p>	<p><b>FCM : FLIGHT CONFIRMATION MESSAGE</b></p> <p>An AO indicates to ETFMS that a flight with an EOBT in the future is now confirmed for the regulation(s) provided in this FCM.</p> <p>A suspended flight with an EOBT in the past or an obsolete EOBT must first be amended by a DLA and then confirmed by an FCM. When the route has also to be changed it must first be amended by a CHG and then confirmed by an FCM.</p>	<p>An AO may send an <b>FCM</b> in response to a selective AIM or to an individual FLS message.</p> <p>When a confirmation is requested, the flight is kept suspended within ETFMS until FCM message(s) confirm the flight in all affecting regulation(s) requesting a confirmation or until the <b>NM</b> releases the confirmation requirement or until a DLA/CHG message pushes the flight outside the period requesting the confirmation.</p>

MESSAGE & <i>example</i>	DEFINITION	PROCEDURE & ACTION
<p>-TITLE FCM (3)            -ARCID AMC101            -ADEP EGLL            -ADES LMML            -EOBT 0945            -RVR 200            -REGUL LMMLA01</p>	<p><b>FCM</b> : FLIGHT CONFIRMATION MESSAGE</p> <p>An AO indicates to ETFMS that a flight with an EOBT in the future is now confirmed for the regulation(s) provided in this FCM. The message may include the flight's RVR capability.</p> <p>A suspended flight with an EOBT in the past or an obsolete EOBT must first be amended by a DLA and then confirmed by an FCM. When the route has also to be changed it must first be amended by a CHG and then confirmed by an FCM.</p>	<p>An AO may send an <b>FCM</b> in response to a selective AIM or to an individual FLS message. If so required, it includes the RVR operating minima which should be given in metres.</p> <p>When both a confirmation and a flight's RVR capability are requested, the flight is kept suspended within ETFMS until FCM message(s) confirm the flight in all affecting regulation(s) requesting a confirmation and provide the flight's RVR capability or until the <b>NM</b> releases the confirmation and the RVR requirement or until a DLA/CHG message pushes the flight outside the period requesting the confirmation and the RVR.</p>
<p>-TITLE RJT            -ARCID AMC101            -ADEP EGLL            -EOBT 0945            -ADES LMML            -RRTEREF ELLLLMML1</p>	<p><b>RJT</b> : REROUTEING REJECTION MESSAGE</p> <p>Used by an AO to reject an <b>RRP</b> message.</p>	<p>Use of the <b>RJT</b> will enable the slot potentially associated with the RRP, to be released back into the system for possible use elsewhere.</p>



## ANNEX 4 PRIMARY FIELD COMPOSITION OF TACTICAL ATFCM MESSAGES EXCHANGE

PRIMARY FIELD COMPOSITION OF TACTICAL ATFCM MESSAGES EXCHANGE (1)														
Message Field	SAM	SRM	SLC	SIP	FLS <sup>6</sup>	DES	RRP	RRN	ERR	SMM	SPA	SRJ	FCM	RJT
-TITLE	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-IFPLID	1	1	1	1	1	1	1	1	(1)	(1)	(1)	(1)	(1)	(1)
-ADDR	(1)	(1)	(1)	(1)	(1)	(1)								
-ARCID	1	1	1	1	1	1	1	1	(1)	1	1	1	1	1
-ADEP	1	1	1	1	1	1	1	1	(1)	1	1	1	1	1
-EOBD	1	1	1	1	1	1	1	1	(1)	(1)	(1)	(1)	(1)	(1)
-EOBT	1	1	1	1	1	1	1	1	(1)	1	1	1	1	1
-IOBD	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
-IOBT	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
-CTOT	1			1			(1)	(1)		1				
-NEWCTOT		1		1			(1)	(1)			1			
-NEWPTOT							(1)	(1)						
-REJCTOT												1		
-REASON	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)					
-ADES	1	1	1	1	1	1	1	1	(1)	1	1	1	1	1
-REGUL	1<	1<		1<	0<								0<	
-ORGRTE							1	1						
-PTOT							(1)	(1)						
-NEW RTE							1	1						
-RRTEREF							(1)	1						(1)
-RVR	(1)	(1)			(1)								(1)	
-RESPBY				1	(1)		1	1						
-ORGMMSG									(1)					
-FILTIM									1					
-ERRFIELD														
-MINLINEUP														
-COMMENT	0<	0<	0<	0<	0<	0<	0<	0<	0<					
-TAXITIME	1	1	1	1	1	1	1	1	(1)					
-REGCAUSE	1	1			(1)									

'1' means : exactly one field of the specified type is required

'(1)' means : a single optional field of the specified type is allowed

a 'blank cell' means

'n<' means

: this field is not in a message

: n or more occurrences of this field can appear in a message

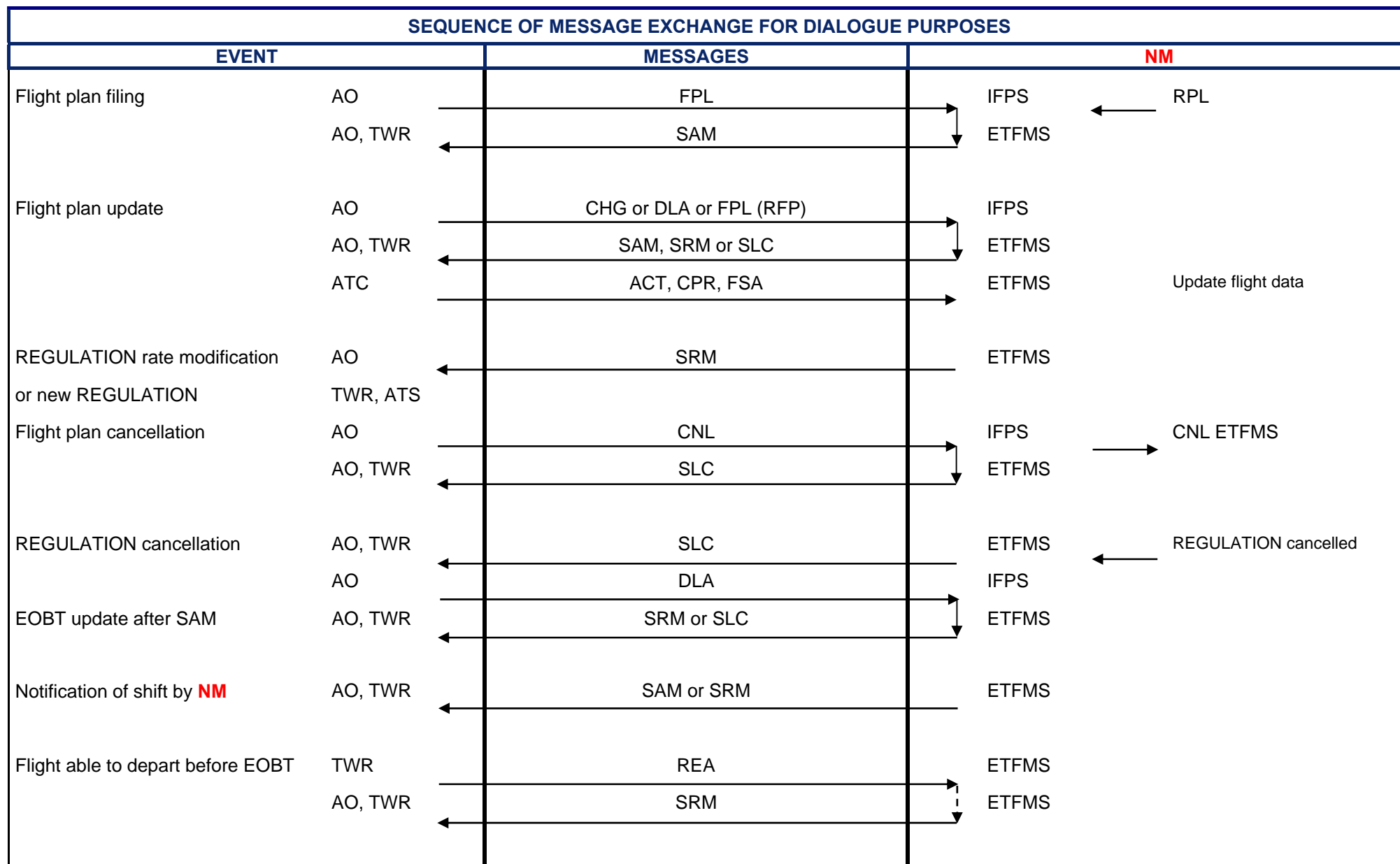
<sup>6</sup> Refer to IFPS Users Manual for the format of FLS message used in Flight Planning.

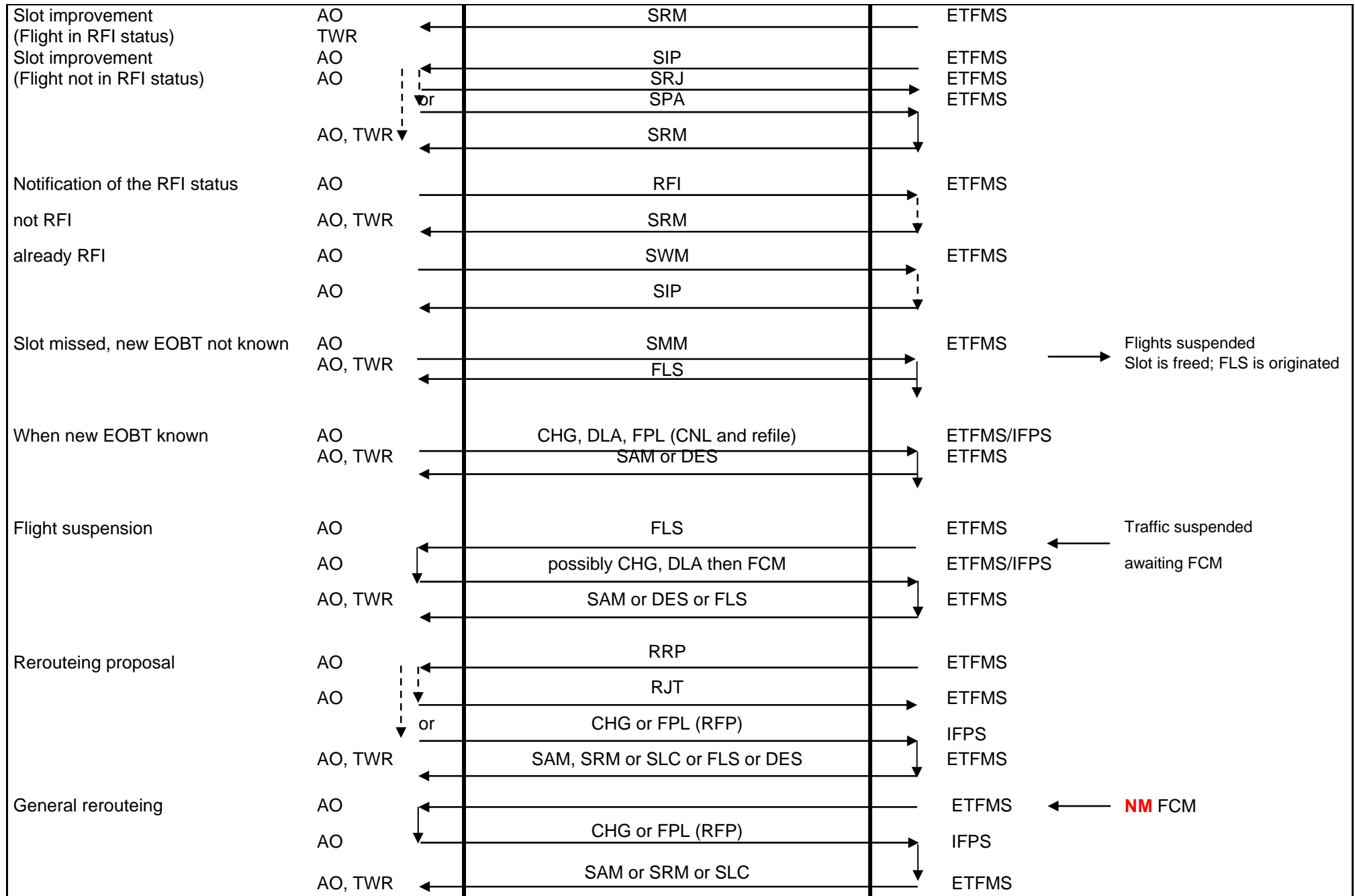
PRIMARY FIELD COMPOSITION OF TACTICAL ATFCM MESSAGES EXCHANGE (2)								
Message Field	SWM	RFI	REA					
-TITLE	1	1	1					
-ADDR								
-ADEP	1	1	1					
-ADES	1	1	1					
-ARCID	1	1	1					
-COMMENT								
-CTOT								
-EOBD	(1)	(1)	(1)					
-EOBT	1	1	1					
-ERRFIELD								
-FILTIM								
-IFPLID	(1)	(1)	(1)					
-IOBD	(1)	(1)	(1)					
-IOBT	(1)	(1)	(1)					
-MINLINEUP			(1)					
-NEWCTOT								
-NEWPTOT								
-NEW RTE								
-ORGMSG								
-ORGRTE								
-PTOT								
-REASON								
-REGCAUSE								
-REGUL								
-REJCTOT								
-RESPBY								
-RRTEREF								
-RVR								

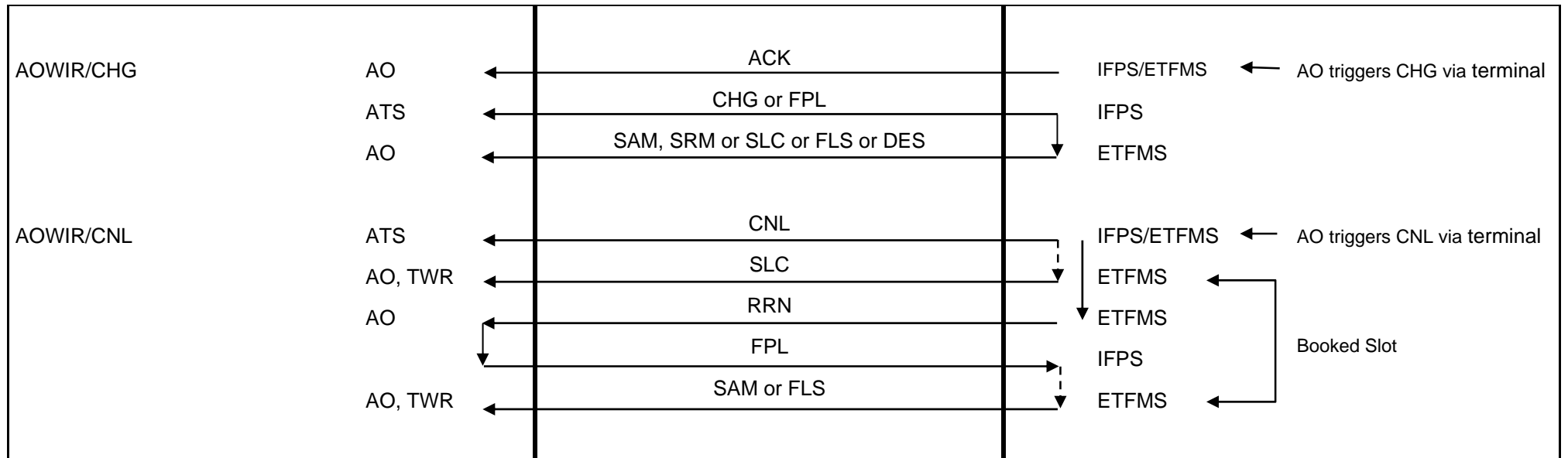
'1' means : exactly one field of the specified type is required  
 '(1)' means : a single optional field of the specified type is allowed

a 'blank cell' means : this field is not in a message  
 'n<' means : n or more occurrences of this field can appear in a message

# ANNEX 5 SEQUENCE OF MESSAGE EXCHANGE FOR DIALOGUE PURPOSE







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## ANNEX 6 CORRELATION BETWEEN IATA DELAY CODES AND THE NM REGULATION CAUSES

Correlation between IATA Delay Codes and the NM Regulation Causes					
NM			IATA		
Regulation cause	CODE	Regulation Location	GUIDELINES	Code	Delay Cause
ATC capacity	C	D	<i>Demand exceeds the capacity; Planned staff shortage</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC industrial action	I	D	<i>Controllers' strike</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC routeings	R	E	<i>Phasing in of new procedures; ATFCM scenarios, Network Solutions</i>	81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
ATC staffing	S	D	<i>Unplanned staff shortage</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC equipment	T	D	<i>Radar failure; RTF failure</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Accident / incident	A	D	<i>RWY23 closed due accident</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Aerodrome capacity	G	D	<i>Lack of parking; taxiway closure; areas (runways, taxiways) closed for maintenance; demand exceeds the declared airport capacity; runway configuration (winds)</i>	87	AIRPORT FACILITIES
		A		87	AIRPORT FACILITIES
De-Icing	D	D	<i>De-Icing</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
Equipment NON-ATC	E	D	<i>Runway or taxiway lighting failure</i>	87	AIRPORT FACILITIES
		A		87	AIRPORT FACILITIES
Industrial action NON-ATC	N	D	<i>Firemen's strike</i>	98	INDUSTRIAL ACTION OUTSIDE OWN AIRLINE
		A		98	INDUSTRIAL ACTION OUTSIDE OWN AIRLINE
Airspace management	M	D	<i>Airspace availability; Military exercise</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Special event	P	D	<i>European football cup; Heads of Government meetings; Upgrade of ATM systems#</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT

Correlation between IATA Delay Codes and the <b>NM</b> Regulation Causes					
<b>NM</b>			<b>IATA</b>		
Regulation cause	CODE	Regulation Location	GUIDELINES	Code	Delay Cause
Weather	<b>W</b>	D	<i>Thunderstorm; low visibility; <b>Strongcross</b> winds, <b>CBs</b></i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		73	WEATHER EN ROUTE OR ALTERNATE
		A		84	ATFM due to WEATHER AT DESTINATION
Environmental issue	<b>V</b>	D	<i>Noise</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Other	<b>O</b>	D	<i>To be used only if no other reason can fit</i>	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT

# This category should only be used during the planned duration of transition measures to implement upgrades of ATM systems.



ATFCM USERS MANUAL

ANNEX 7 ATFCM RTF PHRASEOLOGY

	CIRCUMSTANCES	PHRASEOLOGY
<b>SLOT</b>	Calculated Take-Off Time ( <b>CTOT</b> ) delivery resulting from a Slot Allocation Message ( <b>SAM</b> ). (The CTOT shall be communicated to the pilot on first contact with ATC).	SLOT ( <i>time</i> )
	Change to CTOT [resulting from a Slot Revision Message ( <b>SRM</b> )].	REVISED SLOT ( <i>time</i> )
	CTOT cancellation (resulting from a Slot Cancellation Message ( <b>SLC</b> )).	SLOT CANCELLED, REPORT READY
<b>SUSPENSION</b>	Flight suspension until further notice. (resulting from an FLS).	FLIGHT SUSPENDED UNTIL FURTHER NOTICE, DUE ( <i>reason</i> )
	Flight de-suspension (resulting from a De-Suspension Message ( <b>DES</b> )).	SUSPENSION CANCELLED, REPORT READY
<b>DENIAL</b>	Denying start-up when requested too late to comply with the given CTOT.	UNABLE TO APPROVE START-UP CLEARANCE DUE SLOT EXPIRED, REQUEST A NEW SLOT
	Denying start-up when requested too early to comply with the given CTOT.	UNABLE TO APPROVE START-UP CLEARANCE DUE SLOT ( <i>time</i> ), REQUEST START-UP AT ( <i>time</i> )

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## ANNEX 8 SUMMARY OF CASA PARAMETERS

PARAMETER	BASIC DEFINITION	VALUE
Filing Time	The minimum time before EOBT for flight plan filing when a flight may be subject to ATFCM.	At least 3 hours before EOBT
Slot Issue Time (SIT1)	The time at which the <b>NM</b> issues the SAM to the AO and ATC at the aerodrome of departure.	2 hours before EOBT
Slot Window	A slot is issued as a Calculated Take-Off Time ( <b>CTOT</b> ). The CTOT is defined as a time when the aircraft must take-off. The slot tolerance (-5' to +10') is available only to ATC and only to organise the departure sequence. If there is no departure sequence, the CTOT shall be strictly adhered to.	-5' to +10' around CTOT
Minimum Revision for SIP (min REV)	This parameter is the minimum improvement that can trigger a Slot Improvement Proposal ( <b>SIP</b> ).	15 minutes
SIP Time-Out	A SIP expires if no response is received from an AO by the respond by ( <b>RESPBY</b> ) time included in the message.	15 minutes after the SIP issue time
Minimum Revision for Direct Improvement	This parameter is the minimum improvement that will trigger a revision to the previous slot of a flight in RFI or REA situation.	5 minutes
Ready (REA) MINLINEUP	The —MINLINEUP is the minimum time needed for that flight, which has declared itself ready to depart, to get from its position to take-off.	0 minutes (minimum) 90 minutes (maximum)
RRP Time-Out	A RRP expires if no response is received from an AO by the 'Respond by Time' ( <b>RESPBY</b> ) included in the message.	30 minutes
RVR response time	If a flight with a CTOT becomes suspended due to an RVR requirement, the current CTOT will be booked for the RVR response time parameter.  The RVR capability must be confirmed (with an FCM) within the time-out period.	20 minutes

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