

A photograph of the Munich Airport air traffic control tower, a tall, cylindrical structure with a glass-enclosed observation deck at the top. The tower is set against a clear blue sky. In the foreground, the airport terminal building is visible, featuring a large glass facade and a white metal structure. Several vehicles are parked in front of the terminal.

**AIRPORT
COLLABORATIVE
DECISION
MAKING
- AIRPORT CDM
MUNICH -**

FLIGHT CREW BRIEFING

Version 4



Airport CDM München

Version: V4.0
Author: Airport CDM Team München
Date: 7th May 2007

Number of pages: 6

TABLE OF CONTENTS

1. General	3
2. Automated target off-block time (TOBT), previously COB	3
2.1. Person responsible for TOBT	3
2.2. TOBT reporting routines	4
3. Target start-up approval time – TSAT acknowledgement.....	4
3.1. TOBT und TSAT in extreme situations.....	4
4. Start-up und push-back.....	4
4.1. Datalink Clearance - DCL.....	5
4.2. Changes within the sequence	5
4.3. De-icing	5
4.4. Coordination with the CFMU	6
4.5. Remote holding	6
5. Aeronautical Information Publication – AIP –.....	6
6. Persons responsible for the process/contact persons	6



Airport CDM München

1. General

The turnround process at Munich Airport has been reorganised on the basis of the existing confirmed off-block (COB) procedure in Munich and the activities concerning the Airport Collaborative Decision Making (CDM).

The improved quality of the inbound and outbound information is used to optimise the chain process from arrival to departure. This optimisation led to the so-called "target start-up approval time (TSAT)", i.e. the time at which a Pilot in command / Flight Crew can expect the start-up approval at the latest. This TSAT is an essential factor for the preparation of a "pre-departure sequence" which takes the requirements of all involved parties into account.

A permanent and fully automated data exchange with the Central Flow Management Unit (CFMU) will be implemented to connect the local airport CDM procedure with the European air traffic flow and capacity management (ATFCM) in the best possible manner. Due to this process, reliable estimated landing and in-block times can be given at an earlier time and the calculated take-off time (CTOT) will be more reliable.

2. Automated target off-block time (TOBT)

At final approach (12 minutes out), the system automatically generates a TOBT. The earliest possible time for automatic TOBT generation is 75 minutes before TOBT (provision).

TOBT: Automatically generated point of time, whose supervision and updates are in the responsibility of the Airline/Handling Agent. TOBT is the time when all ground handling processes will be finished, the aircraft doors closed and the boarding bridge removed. At this time the start-up approval could be received and the push-back/taxi clearance can be given. TOBT is a reference time used for all ground handling processes except for aircraft push-back and de-icing. This time is used for coordination purposes, since it is the best available time.

For aircraft which are not part of a direct turnround and which do not park on their outgoing position, the TOBT is generated at "off-block from the direct preceding position".

2.1. Person responsible for TOBT

Once the TOBT has been generated, the handling agent, the airline (for flights without handling agents) or the pilot-in-command / flight crew (for general aviation flights without



Airport CDM München

handling agent) is responsible for the TOBT correctness and adherence.

If it becomes obvious that the TOBT cannot be respected or shall be brought forward, it must be corrected or re-entered by the person responsible for the TOBT.

2.2. TOBT reporting routines

TOBT is reported in one of the following ways:

- the SEPL dialogue
- the internal system of the aircraft operators/the handling agent
- HTML interfaces at all gates
- via telephone at the FMG traffic operations centre (+49 (0)89 975-21135)
- Internet Dialog "WEASEL"

3. Target start-up approval time – TSAT acknowledgement

The TSAT is calculated 40 minutes before the reported TOBT. The TSAT is the time at which the start-up approval and the en-route clearance can be expected at the latest.

The TSAT acknowledgement is made using the same reporting routines as the TOBT. The TSAT will be transmitted internally by the airline to the flight crew or in case of data link clearances directly into the cockpit with the relevant uplink message.

3.1. TOBT and TSAT in extreme situations

If TOBT and TSAT differ by more than 90 minutes, the handling process has to be completed at TOBT. But in such an exceptional case, end of handling process does not include passenger boarding. The boarding must be completed at TSAT-60 minutes.

4. Start-up and push-back

The "Pre Departure Sequence" will be compiled in accordance with TSAT and not in accordance with the start up request.

At TOBT, the aircraft **must** be ready for start-up or for apron de-icing.

If there are any significant changes to the TSAT, the pilot will be informed accordingly by the airline / handling agent. In the case of general aviation flights, this task will be performed by clearance delivery.

If the handling process is completed **5 minutes or less** before the TOBT, the Start Up approval and En Route Clearance may be requested. Depending on the TSAT as well as on the actual operational traffic situation, Clearance Delivery will grant Start Up approval



Airport CDM München

and En Route clearance.

As the Pre Departure Sequence and the TOBT are triggering additional processes at the airport, TOBT adaptations (also shifting to an earlier TOBT of more than 5 minutes) have to be performed by the person responsible for the TOBT using the published TOBT reporting routines.

The approval for push-back/taxi has to be requested not later than 5 minutes after the start-up approval has been issued. Otherwise, clearance delivery shall be informed about the delay. The TOBT will be cancelled and has to be input again.

4.1. Datalink Clearance - DCL

For data link departure clearance (DCL), the published procedures and the time parameters published in AIP AD 2 EDDM 1-19 continue to apply. The TSAT is transmitted („**Start Up approved according TSAT <hh:mm>**“). using CLD (departure clearance uplink message – issuance of start-up approval and en-route clearance by clearance delivery). The push-back/taxi request shall be made at TSAT +/-5 minutes.

Example:

DCL with Start up approval and En route clearance	DCL only with En route clearance
<pre> QU QXSXMXS .MUCDFYA 110454 CLD AN D-AHFX/MA 767A - /MUCDFYA.DC1/CLD 0454 070311 EDDM PDC 001 HLF111 CLRD TO LPFR OFF 26L VIA AMPEG1S SQUAWK 3553 ADT MDI NEXT FREQ 121.775 AT IS D STARTUP APPROVED TSAT 05:00 </pre>	<pre> QU QXSXMXS .MUCDFYA 110818 CLD AN D-ACPQ/MA 891A - /MUCDFYA.DC1/CLD 0818 070311 EDDM PDC 001 DLH06M CLRD TO LFBO OFF 08R VIA AMPEG1E SQUAWK 3545 ADT MDI NEXT FREQ 121.725 AT IS J STANDBY ON 121.725 FOR STARTUP TSAT 08:30 </pre>

4.2. Changes within the sequence

It is possible to swap the flights within the area of responsibility of a handling agent after the TSAT has been calculated.

If flights have a CTOT, it must be adhered to despite the changes within the sequence.

4.3. De-icing

The de-icing times are not taken into consideration when the TOBT is defined. They are, however, considered in the TSAT calculation based on the request for de-icing. Therefore, the request for de-icing should be made as early as possible.

In the case of an apron de-icing, the aircraft must have been de-iced before the TSAT.



Airport CDM München

4.4. Coordination with the CFMU

The general CFMU procedures remain the same.

In addition during the turnround process local Target Take Off Times (TTOT) will be automatically calculated and transmitted to the CFMU. In case of longer delay, which is under the responsibility of the airline, the standard CTOT allocation will apply, but will be fine tuned by the local TTOT. Generally CFMU will take the local TTOT into consideration for CTOT calculation and try to adjust it accordingly.

If an adjustment/extension is not sufficient, DFS (clearance delivery) offers to coordinate a new CTOT in consultation with the pilot in command / flight crew.

4.5. Remote holding

Remote holding can be requested with the SEPL system if the TOBT is at least 30 minutes before the CTOT.

5. Aeronautical Information Publication – AIP –

The Airport CDM procedure at Munich Airport is published in AIP Germany, Volume II, AD2-EDDM, section AD 2.20 “Local Traffic Regulations”, page 1-14 and following.

6. Persons responsible for the process/contact persons

Flughafen München GmbH
Peter Kanzler
Tel. +49 (0)89 975-21160
airport-cdm@munich-airport.de