ECA Piloting Safety

ECA's Spot-on 1.3

EASA FTL

Commander's Discretion

ORO.FTL.205 (f)

„... is a bet on the future with a high degree of uncertainty"

Commander's Discretion (further referred to as 'CD') must be understood as a very exceptional 'fix' for some of the uncertainties in commercial aviation. Even an operator's most cautious planning of flight pattern cannot cover all circumstances causing delay or excessive fatigue – although good planning can greatly help to reduce such situations.

At this point, the commander, as being the airline's representative on scene, is entitled to evaluate the situation and decide on best judgement as regards flight safety, the customers' need for transport and the crew's health. The regulator's original idea was to entitle the commander to *extend or reduce* an FDP under the aspect of suitability, necessity and proportionality.

However, 'cautious planning' is understood in different ways by different people. To prevent mis-use, EASA has built a requirement for the operator to provide their crews with 'robust' rosters, i.e. rosters that under normal circumstances are realistically achievable in real operations, and to improve the planning when missing this target.

"Operators should ensure that sufficient margins are included in schedule design so that commanders are not expected to exercise discretion as a matter of routine."

EASA FTL FAQ, 12 JUL 2018

This is, where a potential miss-use comes into the picture. Commander's discretion is frequently seen as a welcome extension of the limits. Reasonable buffers to cover uncertainties cost money. At last the wish to reduce cost drifts into the urge to reduce buffers.

Commander's discretion may be safe – but shall never be a must.

Being able to safely exercise CD without exposing oneself to operational or disciplinary criticism becomes ever more important in today's environment. This ECA 'Spot-on' provides guidance on this matter.

At first glance the provision for the use of CD seem to be quite simple. Upon close examination we will discover, that the use CD need's thorough mental preparation. Before we delve in the depths of CD, here a quick bullet-point overview:

PROCEDURE:

- CD may only be used **in case of unforeseen circumstances** which occur **after reporting time.**
- Premise is a **safe operation** through avoiding fatigue as much as possible.
- The CMD may **decide to either go above or even stay below the limits for the FDP or rest period**, (i.e. extend or reduce) as necessary to battle severe fatigue.
- The use of CD shall stay **exceptional** & should be **avoided at home base and company hubs.**
- All **crew members** involved have to be actively **consulted about their fitness** for duty by the commander for the very purpose to base the decision on hands on information and all other relevant fatigue-related circumstances.
- The responsibility and **decision** lies exclusively with **the commander alone.** An established **'non-punitive' company environment** shall guarantee that the management will **refrain from any negative** response related to the outcome of the CD to the crew or its individual crew members.
- The responsibility to avoid situations, where the use of CD is the last way to avoid flight cancellation, is a **shared responsibility**, including all levels within an operator's organization.
- The use of CD is to be **formally reported** by the commander to the operator.

LIMITS:

- The **actual number of sectors and the crew configuration** have to be used for calculations.
- The extension of maximum FDP is **limited by 2h**. This may be increased to 3h if in-flight rest facilities are used.
- The minimum rest period must **not be reduced below 10h** (8h sleep opportunity!), but all fatigue-relevant circumstances must be considered.

THE DECISION PROCESS

Fatigue[1] *A physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, and/or workload (mental and/or physical activity) that can impair a person's alertness and ability to perform safety related operational duties.*

Exercising discretion is a complex process and requires the use of a decision-making model (e.g. FORDEC[2]). The option to extend or reduce an FDP shall be checked against the suitability, the necessity and the proportionality.

- ***Suitability – This is the easy part***

When there is already doubt about the alertness level of a crewmember, Regulation EC 965/2012 states clearly that this crewmember shall not perform duties on an aircraft (CAT.GEN.MPA.100 c) (5)). The suitability of reducing the max. FDP through CD is obvious (as per ORO.FTL.205 (f) (2)). Therefore, the commander's margin of discretion in this case is reduced to zero.

Concerning the extension, a CD is the only way to extend a FDP under the specific circumstances as described in ORO.FTL.205 (f) (1) without violating the limits. Therefore, the suitability is given.

- ***Necessity***

The use of a CD to extend a FDP is limited to the general requirement of using the *instrument of least impact*. The extension of a FDP by the use of a CD interferes with the interest of safety defined within the basic regulation. Before using a CD all other means with a lesser impact on safety have to be used. Consequently, the use of a CD at the operator's home base or company hubs is limited to an extraordinary case and has to be avoided (see AMC1 ORO.FTL.205 (f) (a)). Consequently, where no less impacting means are available, necessity is at hand.

- ***Proportionality – This is the most important part.***

The impact of the extension of a FDP using a CD must be in a reasonable relationship to the purpose. Thus, a CD used for extending the FDP might be the right instrument where the safety of passengers and crew is endangered when not using it. Whereas the use of a CD to extend the FDP is not the right method to fulfil overly ambitious flight schedules. Careful assessment is necessary as safety must never be compromised by the pursuit of commercial considerations or scheduling conveniences.

THE CAUSE

Plans frequently have to be adjusted and in regards to flight operation different tools apply at different times. Initially the operator sets the FDPs environment and determines:

- the type of operation (basic FDP or the use of extensions)
- the crew complement (e.g. augmented crew)
- time of reporting

Reporting time sets the border line between the planning and the operating stage. Once this line is crossed, the planning tools are not available anymore and the parameters above are and remain fixed. For example, an extension or split duty that hasn't been planned cannot be applied after reporting.

At this stage the planed duration of an FDP may "grow" and extend up to the applicable FDP limit. Additional sectors must be respected and the length of the succeeding rest potentially adjusted. At last, the *most limiting* FDP limit of the *individual* crew member applies to *all* members of the minimum crew required.

Once the FDP limit is reached, CD is the exclusive option to continue.

However, in practice CD may provide much less flexibility than anticipated since it is to be applied to the basic FDP limits from *ORO.FTL.205(b).* As an example: an additional sector above the first two sectors and with an already planned extended FDP (*ORO.FTL.205(d)*, i.e. +1h), the resulting flexibility is just as little as 30 minutes above the originally planned FDP limit.

THE EVALUATION

The commander may extend only the applicable non-extended limit (i.e. the limit without a planned extension) by...

"...not more than 2 hours" unless *"...the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours".*

EASA does not stipulate that "plus 2 hours" is safe. EASA allows the commander to investigate whether it could be safe. To do so, EASA provides some guidance in *AMC1 ORO.FTL.205(f).* While this AMC *(acceptable means of compliance)* originally provides guidance to the operator to develop its operating manual provisions, this AMC is a good base already for the commander's decision. Due consideration shall be given to the ...

(1) WOCL encroachment;
(2) weather conditions;
(3) complexity of the operation and/or airport environment;
(4) aeroplane malfunctions or specifications;

[1] ICAO → Fatigue Management Guide for Airline Operators, 2nd Edition 2015

[2] (F)acts – (O)ptions – (R)isk – (D)escision – (E)xecution – (C)ontrol

(5) flight with training or supervisory duties;
(6) increased number of sectors;
(7) circadian disruption; and
(8) individual conditions of affected crew members (time since awake, sleep-related factor, workload, etc.).

The use of the **3 hours extension** as foreseen in the Regulation is based on the augmentation of the **flight crew** alone. The safety risks associated with fatigue-related impairment are different for flight and cabin crew members, and some mitigation strategies may be different. However, to date, flight crew fatigue has received much more scientific, operational, and regulatory attention than cabin crew fatigue. Therefore, until more specific advice on managing cabin crew fatigue will become possible as research and fatigue management experience with cabin crew increases, it seems **not advisable** to apply a 3 hours extension on a **cabin crew** max. FDP if the cabin crew had no possibility to use an in-flight rest facility.

THE DECISION

A thorough evaluation must include speaking to all individual crew members. An assessment of the crews' alertness level constitutes quite a challenge and may become time consuming. Latest for the report it is a good idea to take notes (e.g. on the progress of the FDP, along with the steps through the decision process).

Note that CD is not all about flying longer FDPs. It is also about reducing a planned FDP and to adjust or even terminate flight operations early...

"...In case of unforeseen circumstances, which could lead to severe fatigue ... in order to eliminate any detrimental effect on flight safety".

CD is also about adjusting the succeeding rest period. It may be shortened - but never below 10 hours. Where severe fatigue occurred and additional recovery is required, a planned rest shall be extended by the commander as necessary.

THE LIMITS

A CD always applies exclusively to the duration of a single FDP and/or a single rest period. A CD may never be applied in a way that would cause accumulated limits or accumulated rest requirements to be exceeded. This is not a negligible matter because many other restrictions have to be observed:

- limitation of the number of sectors *CS.FTL.1.205(c)(1) + (4)*
- length of in-flight rest *CS.FTL.1.205(c)(2)*
- accumulation of disruptive schedules *CS.FTL.1.235(a)*
- accumulated duty and flight time limits *ORO.FTL.210*
- split duty restrictions *CS.FTL.1.210*
- standby restrictions *CS.FTL.1.225*
- rest requirements; in particular RecRest[3] *ORO.FTL.235(d)*

THE RESPONSIBILITY

Our task is to fulfil the promise of transporting passengers and goods to their planned destination. However, no matter how much we feel obligated to do so – safety it the key argument.

Flight safety is a shared responsibility between the operator and the commander. An operator shall plan as reasonably and realistically as possible. With reporting the commander takes over the on-scene responsibility.

This however does not set the operator free from taking appropriate action whenever the planning cannot be met anymore.

Once changes to the planing are required, CD is one out of many possible measures to cope with the unplanned. A shared evaluation of the situation and a thorough risk assessment is a good approach to select the best solution. Under no circumstances direct or indirect pressure from central flight ops on the commander or other crew members to extend the FDP is acceptable.

At the end though, CD is the commander's final and exclusive decision.

The crew has to work as a team and as such mitigation measures may be applied where available within the crew among individuals to assure its function. However, the commander's decision is taken for the team to cover the entire team.

„We don't set targets but provide limits "

(EASA – disclosed but competent source)

We will never remain free from fatigue but we will face a high degree of likeliness that we will exceed our abilities when we operate above the legal limits ...

... a "NO" from the commander must always be accepted.

[3] RecRest = recurrent extended recovery rest period

ORO.FTL.205 Flight Duty Period (FDP)

…

(f) Unforeseen circumstances in flight operations — commander's discretion

(1) The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time, shall comply with the following:

(i) the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 2 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours;

GM1 ORO.FTL.205 (f)(1)(i) COMMANDER'S DISCRETION

The maximum basic daily FDP that results after applying ORO.FTL.205 (b) should be used to calculate the limits of commander's discretion, if commander's discretion is applied to an FDP which has been extended under the provisions of ORO.FTL.205 (d).

(ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and

(iii) the rest period following the FDP may be reduced but can never be less than 10 hours.

(2) In case of unforeseen circumstances, which could lead to severe fatigue, the commander shall reduce the actual flight duty period and/or increase the rest period in order to eliminate any detrimental effect on flight safety.

(3) The commander shall consult all crew members on their alertness levels before deciding the modifications under subparagraphs 1 and 2.

(4) The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his or her discretion.

(5) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which the operator shall add its comments, shall be sent by the operator to the competent authority not later than 28 days after the event

(6) The operator shall implement a non-punitive process for the use of the discretion described under this provision and shall describe it in the operations manual.

AMC1 ORO.FTL.205(f)

UNFORESEEN CIRCUMSTANCES IN ACTUAL FLIGHT OPERATIONS – COMMANDER'S DISCRETION

(a) As general guidance when developing a commander's discretion policy, the operator should take into consideration the shared responsibility of management, flight and cabin crew in the case of unforeseen circumstances. The exercise of commander's discretion should be considered exceptional and should be avoided at home base and/or company hubs where standby or reserve crew members should be available. Operators should asses on a regular basis the series of pairings where commander's discretion has been exercised in order to be aware of possible inconsistencies in their rostering.

(b) The operator's policy on commander's discretion should state the safety objectives, especially in the case of an extended FDP or reduced rest and should take due consideration of additional factors that might decrease a crew member's alertness levels, such as:

(1) WOCL encroachment;

(2) weather conditions;

(3) complexity of the operation and/or airport environment;

(4) aeroplane malfunctions or specifications;

(5) flight with training or supervisory duties;

(6) increased number of sectors;

(7) circadian disruption; and

(8) individual conditions of affected crew members (time since awake, sleep-related factor, workload, etc.)

Sources (use key words for WEB search)

EASA FTL
Easy Access Rules for Air Operations (IR + AMC + GM; CS+ GM)

CAT.GEN.MPA.100 Crew Responsibilities
Commission Regulation (EU) No 965/2012, October 05, 2012

ORO.FTL. [...] (IR → implementing rules)
Commission Regulation (EU) No 83/2014, January 29, 2014

CS FTL. [...] (CS → certification specification)
Certification Specifications and Guidance Material for Commercial Air Transport by Aeroplane – Scheduled and Charter Operations, January 31, 2014

AMC1 ORO.FTL. [...] (AMC → acceptable means of compliance)
Acceptable Means of Compliance (AMC) and Guidance Material (GM) to Annex III – Part- ORO / Subpart FTL – Flight Time Limitations (page 197ff)

GM1 ORO.FTL[...] (GM → guidance material)
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