Subject:	IPC Wingsuit Flying Committee Open Meeting Agenda	Annex No. -	37
Author:	John Smyth, Chair Wingsuit Flying Committee & Papers by Espen Fadnes & the Norwegian Acro Team	Agenda ref. -	17.3
Date:	01 December 2017	Total Pages -	6

WINGSUIT FLYING COMMITTEE
OPEN MEETING AGENDA – 2018

1 Introduce Committee, present and absent

2 Chairman's Report

3 2nd FAI World Cup of Wingsuit Flying, Overton, USA: - Video and Stills

4 Rule Clarifications for Performance as a result of lessons learnt at Overton: - To clarify the definitions of Exit procedure and Designated Flight Paths: - Viz. 3.3.3, 3.4.4, 3.5.1 to 3.5.5. Also, to Clarify the definition of official Training Jumps; 5.3.1 to 5.3.3.

5 To discuss a Rule change for Acrobatic: That is Acrobatic in an "Altitude Window". This would be a Major rule change, involving new Scoring Systems (see item 7) and potentially teams requiring different Wingsuits. If decided to change to an Altitude Window, then, to discuss an implementation strategy. Please see the Norwegians Acro Teams Paper, on this subject attached as an Annex.

6 To discuss any other Rule Clarifications arising out of Committee discussions in the 2 Months after writing this agenda.

7 Presentation of a Paralog scoring system for Acro in an Altitude Window or can be used also for Working time. (Klaus Rheinwald to present). NB an invitation has also been sent to "In Time" to present their Scoring system for both Wingsuit Performance and Acrobatic, if it is developed by Sofia. Also, for info, Omniscores system for Performance has been approved by the Judges Committee at Overton. To discuss if required.

8 Update on the Wingsuit Flying World Championships, Prostejov, Czech Republic August 26th – September 2nd 2018.

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9 To discuss any Bids (none received at the time of writing this agenda) for a World Cup in 2019. Also, to discuss a bid received from Russia for a Mondial in 2020, to include Wingsuit Flying and ALL other disciplines.

10 Wingsuit records: - To amend SC-5 in coordination with the R & R committee and the IPC Records officer; if required. Randy Connell (IPC Records Officer and Vice Chair of the Wingsuit Committee to advise).

11 AOB: - To discuss any issues arising in the 2 Months after this Agenda had to be published, given the Wingsuit WC was in November.

12 Confirm members of the 2018 Wingsuit Flying Committee to plenary. Dennis Werenskiold to lead as Chairman elect.

Two documents attached : History
Altitude Derived Document

Both are authored and submitted by Espen Fadnes & the Norwegian Acro Team

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History:
Acrobatic Wingsuit-flying has the potential to become the most aesthetic and thrilling FAI discipline. The cutting edge of acrobatic wingsuit flying is closely connected to the latest wingsuit models. The evolution is moving fast. 10 years ago we used small wingsuits giving less than 90 seconds free-
fall while doing acrobatics. Today we see dynamic and acrobatic moves done next to parachutes
on vertical speeds as low as 50 kph. But in FAI, because of the 65 second window teams are using
10 year old wingsuit technology to perform these moves. The only way the discipline of acrobatic wingsuit-flying can represent the development of wingsuits is to use an "altitude" window instead of "time" for judging.

From 2008 Jarno Cordia has been using an altitude window to establish a working time for individuals/teams during acro competitions. Practically this has been done using an alti-track. This would be worn by one person in the team. After the jump this alti-track was given to the judges so that they could figure out how much time it took the team to fall to 7500ft. This time would then be applied to the video to find an accurate working time.

During the competitors meeting after the World Championships in Zhills it was voted by the majority of competitors to use an altitude derived working time. At the subsequent Plenary in Faro at the beginning of this year the Wingsuit Committee chose not to implement the will of the competitors 'due to technical reasons'. Michael Cooper's explanation referred to the current lack of technical capability of synchronising flysight data with video.

Jarno's discussions with L&B established that the altitude window would begin when the alti-track showed a reading of 8m/s. So, this would be when the altitude window would begin. By then finding the time from this to 7500ft below you can determine a working time. The reading from the alti-track and the video does not need to be synchronised. The time is only to be used when watching the video as a reference to the working "time".

New solution:
For the UK Nationals it was tested by using both alti-tracks and fly-sights to gain comparative data. They used the manual method to extract the time from the alti-tracks which took about 30secs. They used a bespoke application written by Eric Dangoor who is one of the Flight Junkies
team. This app gave them the working time along with some other information i.e. exit altitude, end of window, horizontal accuracy etc. They measured from exit to 7500ft (to be precise, when vertical velocity exceeded 8m/s after exit) for all rounds including free round. This works nicely and allows teams to choose how they use their altitude without having to fill a predetermined time.

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The fly-sights MUST have GPS connection before leaving the aircraft. As the reading must come directly after exit. This is not the case in performance as you have a window from exit to 3000m where it can gain connection.

Michael Cooper from Flysight can implement a working time calculator in Flysight Viewer and Klaus Reinwald in Paralog will introduce this into his software if the FAI want it. Klaus actually did this at UK Nationals a few years back and he's working on including Acro judging into Paralog also.

Attached is a visual representation that may be useful as sometimes a picture paints a thousand words.

Let's make a game changer that might lift the upcoming official wingsuit events to the level where it belongs: The spectacular human dream of truly flying.

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Working Time Assessment

Exit Altitude established when PLD vertical velocity exceeds threshold i.e. 8m/s
This starts the Working Time Assessment.

Working Time

Video Judging

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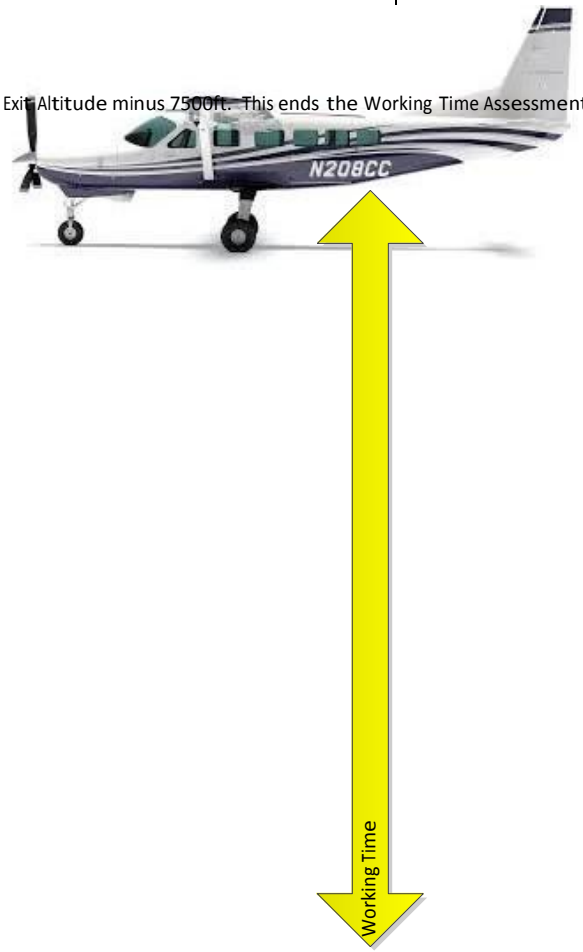
End of Working Altitude calculated as Exit Altitude minus 7500ft. This ends the Working Time Assessment.



Working Time starts when team exits as seen in video.

Judging stops when Working Time ends.