

FPS Working Group Report

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Following the discussions at the 2015 plenary the group has further investigated the two recommended subjects of interest –

1. Smoothness of reaction to data confidence changes
2. Review of the construction of the judges Ranking Index

Item 1

When FPS determines that a judges' figure grade or pilot score falls outside the pre-set confidence range for acceptance (97.5% for figures and 90.0% for scores) it is marked 'missing' and will be replaced by a 'fitted value' calculated in the style of that judge. In classic statistical theory this determination is the result of an all-or-nothing test – within the confidence range the original grade or score survives, beyond that range by even a tiny margin it must be replaced. In human terms however a more gradual move from fully confident through various stages of acceptability to not confident is the norm, and the employment such a gradual change from one state to the other is one objective the group has investigated during 2016.

An initial agreement has now been reached regarding how the arithmetic of this process should be handled, and the FPS code in a trial version of the ACRO software will be modified so that extensive tests can be run to examine the result. It will be essential to evaluate the solution through a wide range of confidence setting options; if this is successful we expect to specify new pairs of high/low confidence settings to handle judges' grades and their individual scores for each pilot.

The aim of this move therefore will be to smooth the go / no-go grade and score replacements that are a significant cause of 'wriggles' in the FPS results rankings as more pilots are brought into the data pool during each programme. If this change achieves the expected improvement the FPS group will report to the CIVA bureau, and a decision can be made regarding its adoption for 2017 championships and the move announced to all delegates.

Item-2

The process of calculating the Ranking Index for each judge is not part of FPS; it is derived from a comparison between each judge's personal ranking of all pilots against the final ranking provided by the scoring system. When FPS is used each judges pilot rankings are calculated

immediately following the initial normalisation or balancing stage to account for their differences in style etc.

To get a good RI therefore you simply have to judge well – always assuming of course that a majority of the other judges do the same. A judge who ranks all pilots in the same order as the final results will receive a perfect RI of zero, but the more a judges ranking of the pilots differs from the official ranking and the more the judges scores differ from those in the final results the higher the judges RI becomes.

This year we also have some proposals which aim to change the way that AV's and HZ's might be used to increment the RI, so that too many AV's or too many missed or wrongly awarded HZ's will raise the judges RI by set increments.

It seems some judges believe that by awarding 'moderate' grades and avoiding use of the full range of downgrades for poorly flown figures should help them to escape receiving a high RI. This can only be true if a majority of the judges work in the same way, and therefore a review of their working style before the event as well as monitoring of their output during it is of great importance. I have therefore proposed that the following should be included in Section-6 Parts 1 and 2:

Prior to commencement of championship operations the organisers shall stage a short trial with a number of representative flights during which all relevant judging and associated systems must be fully tested and the result thoroughly reviewed. All issues detected during this trial must be resolved with full oversight by the International Jury before programme-1 flights will be allowed to begin.

I believe that a critical review of every aspect of these flights by the Chief Judge, making full use the contest video system, can significantly help to encouraging judges toward thorough and accurate use of the correct downgrades throughout the event.



Nick Buckenham
FPS Working Group Chairman