
History
The FPS WG was tasked at the 2012 plenary with establishing whether the existing FPS algorithm setup and criteria were appropriate, and later by general agreement to determine whether the appointment of more than one judge per country might lead to the possibility of any inappropriate effects occurring at a championship.

Following the 2013 plenary membership of this WG was revised to Nick Buckenham (GBR) – Chair, Doug Lovell (USA), Gilles Guillemand (FRA), Mikhail Mamistov (RUS) and Vladimir Machula (CZE), with the single remit to review the process of judges’ evaluation and assessment.

1. FPS algorithms and criteria
There was a lengthy series of exchanges regarding revisions necessary to the wording of the FPS chapter-8 in section-6, and these have been incorporated by Matthieu into the 2014 publication.

2. The number of Judges per country
Some detailed analysis has been carried out by AC, GG and NB and others, using as the basis data from many CIVA championships including the 2013 WAC in Texas, where among the ten international judges appointed by CIVA were two from Russia and two from France – the remaining six judges each being from a single country.

The analysis showed that while there was a detectable shift in the overall favour given to some pilots each time one of the above French or Russian judges was removed from the WAC-13 panel and the results recalculated, it was also clear that the exclusion of any one of the other single country judges was also likely to influence the results to a greater or lesser extent in a variety of different ways. In other words the exclusion of the marks from any judge led to changes in the results, and this influence could be reviewed from a number of different viewpoints:

- By comparison with the Team from the judges’ own country
- When linked to the country of each competitor
- With reference to the type of aeroplane
- With reference to the programme being flown

A further influence throughout this analysis derives from the differing degrees of recognition by each judge of the identity of the pilots they see, indeed whether they even seek to determine the identity or prefer as they should to simply judge what they see. It seems likely that such recognition would prevail more in the major teams than otherwise, though this would be hard to assess in any meaningful way.
While there is clear evidence to show that the interplay between the nationalities of judges and pilots does have a detectable influence in the figure marks that are awarded, this shift may also be a function of aeroplane type and the assumed nationality of its pilot. This effect can be observed at many championships where a non-Team pilot flies a recognisable ‘Team’ aeroplane, and for some judges a possible misinterpretation of the pilots’ nationality can be seen to influence their perception of how well the figures are flown to meet the required criteria.

In summary the WG found that even where a standard CIVA panel of ten judges is in operation, after the judges means and averages have been balanced and with any statistical ‘outliers’ resolved, when any of the judges is excluded and the results re-calculated it is likely that there will be a small but detectable influence on the overall results that will remain unresolved by FPS. It is however equally clear that it is possible for single country judges to exert a more destabilising influence than even two judges from the same country.

It is thus unreasonable to suppose that simply advocating one judge per country on a CIVA panel would necessarily produce a more accurate result. It must also be noted that the term ‘accurate’ is meaningless without taking into account the many other factors that influence the output of every judge – in practice it is thus not possible to determine which judge is right and which is not, our results are rightly an amalgam of the given grades that have been subjected to FairPlay processing.

For CIVA the most appropriate procedure remains to base the selection of judges upon at least three years of cumulated RI data, and take the overall average to create the final result.

As a footnote, the FPS WG would like to make it clear that the data developed in support of the findings reported above can be extracted by anyone through use of the freely obtainable ACRO software in conjunction with the many available championships files, including those where more than one judge has served from a single country as well as those where this is not the case. That supporting data does not however accompany this report due to its sensitive and personal nature.

3. The FPS Working Group in 2014
The remit of the 2014 CIVA FPS Working Group as set by the president is primarily to review the way FPS is used and presented through the scoring software:

- For Pilots: regarding printed check-sheets and the web-page pop-ups, could the printed and web output be revised or improved?
- For judges: especially via the printed analysis and assessment pages, could the output be revised or improved?
- For the general online viewing public: could any of the presentation be simplified or improved to advantage?
As a result the following developments and improvements have been adopted in the ACRO software for the 2014 championships -

- Every online pilots’ score-sheet now bears a diagram of the sequence flown, complete with header description and an indication of the relevant wind direction.

- The whole online page appearance has received a general make-over to present each one in a clearer and more colourful style, and the added sequence diagrams on each pilots score-sheet will also give a broader understanding of how the marks apply to the figures flown.

- The individual judge analysis has been extended beyond the RI analysis page to carry a new graphic that utilises the existing RI data re-modelled to depict the + / - bias determined for each judge by FPS in relation to the pilots of each represented nation. By this means each judges RI based national bias data is shown in a ‘snapshot’, though great care must be taken to view the result within the limited context of the event itself. Here is an example graphic for one judge derived from the WAC-13 programme 1 Known sequence:

![Diagram of Laszlo Liszkay's cumulative RI contributions per team](image)

Nick Buckenham  
CIVA FPS Working Group Chairman, 2014