

AGENDA ITEM 14.2

CONTEST SCORING PROGRAM REPORT

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Version history

The FPS method of calculation of results of competitions was used for the first time in 2006. As with any innovation, it is necessary to make some corrections from time to time to optimize its operation.

Alan Cassidy proposed in November 2006, 3 ways for improvement. These were agreed by the CIVA FPS Development Group as follows:

- ▶ The normalisation process should be carried out on non-zero grades only. Following normalisation, Soft Zero grades are reinstated throughout, unless identified as anomalous during the significance testing, in which case they would be replaced by fitted values.
- ▶ Staged calculation of results for a particular programme (sequence) was introduced. The results for a particular sequence will be calculated to produce a rank order of pilots based on percentage of the maximum possible score (%). When there are large fields of pilots (more than 30), pilots who scored less than 60% (known/free) or 50% (unknowns) are temporarily removed from the data. The results for the higher ranked pilots are recalculated using the full FPS system. The recalculated % scores are recombined with the original % scores for the pilots who scored less than 60%/50% to produce a final result for the programme. This ensures that the way judges marked the lowest placed pilots has no impact on the rank order of the top placed pilots.
- ▶ When a figure is awarded a majority of zero grades comprised of a mixture of Hard Zeroes and Soft Zeroes, the HZI penalty should not be awarded to any judge that give a zero of either type.

At the beginning of January, Alan and I exchanged some e-mails in order to clarify some points of the considered modifications.

At the end of January, the draft of the modifications was available.

In February, the corrections were introduced in the FPS software and by the end of February, I sent Alan the first results. These were obtained with the test-set used in 2006 for FPS development (WAC 2005 in Burgos) as well as a series of questions to clarify the details of Chapter 8 of the Sporting Code (Section 6).

I received those clarifications by the middle of March. Alan validated the modifications by the end of April.



WGAC

At the beginning of May, students from an engineering school in Vienna (Spengergasse) contacted me and ask me to widen the ACMS software. They were requested by the organizers of WGAC to replace the procedure of writing the scores on paper by a procedure of direct input of the scores on a laptop computer located at each judge's station.

Exchanges of e-mail followed in order to clarify their request. Very quickly, difficulties appeared because their proposal did not meet the rules requirements set by CIVA. The organizers proposed a "paperless" contest with marks being input into laptops at each judge's station with verification (CHZ's and so on) and application of penalties done at the Chief Judge's station. The scores would then be transmitted to the Scoring Office in the main building. This was not acceptable to the International Jury and though the Spengergasse system was used throughout WGAC successfully, with much promise for the future, the normal paper forms were marked by Assistant Judges and scanned into the ACMS as at past Championships.

During the championships in Granada, I sent them the technical specifications allowing them to interface their software with the ACMS. After some unsuccessful tests, their software at last correctly transmitted the scores to ACMS.

I could never determine their objectives and why the organizers wanted this system. The current version of the ACMS allows users to input the scores manually (without the optical reader). Moreover it was possible to slightly modify the software to obtain the immediate diffusion of a pilot's score to the public right after the reading of the score sheets by the optical reader.

The 2007 Version of ACMS

The 2007 version of ACMS incorporated improvements concerning:

- ▶ The choice of the printer when printing output
- ▶ The posting of the pages of results on the server of the Web site
- ▶ Diagnostic analysis of judging performance (JPI charts and indices) (there was not time to complete this part of the system for the version 2006)
- ▶ Minor details facilitating the maintenance of the software

The first version of 2007 was available at the beginning of June.

At the time of the first Championships to use ACMS in 2007 (WAC Q programme in Granada), Steve Green checked that the improvements made to the FPS gave the anticipated results.

For a particular case, concerning the processing of figure scores when multiple soft zeroes had been awarded, mixed with other marks, the system produced unexpected results, awarding a higher average mark for the figure than was expected. This phenomenon was the consequence of the changes made to the system to exclude soft zeros from the normalisation. The problem occurred very few times across all of the sequences flown. After the completion



of these championships, Alan Cassidy transmitted an amendment of the FPS to me to remove this phenomenon.

With Steve Green, we worked on this point and developed a method of test. Steve used BAeA software. A test data set was constructed and analysed using both ACMS and the BAeA systems. We compared our results.

Begun on July 10, we finally arrived at the same results on July 16. ACMS version 2007.1.4 was made available in time for the AEAC in Finland which began on July 20.

During the three competitions of 2007, it was not possible to produce the JPI statistics because the calculation of indices LSI, HSI and SAI were erroneous. The changes made to the system had not been updated correctly in the JPI calculations and this led to an error in the JPI charts and indices. This was corrected in September.

WAC 2007 in Granada

I arrived at Granada on June 21 at noon. The room for the scoring office was not set up and computer equipment was not available.

This was rectified on June 24. We received the equipment and were connected to Internet. There remained a point to be solved because we had only one USB cable for two printers.

After much searching, it was not possible to find the parcels containing the score sheets sent by Madelyne Delcroix. The competition thus started using the classical A forms.

The parcels were found on June 27. Unfortunately the sheets were not usable because the printing of the guiding black blocks were shifted to the border of the sheet making it impossible for proper scanning by the optical reader. We asked Mady to have new sheets printed. The second batch of the printed sheets was again defective.

The scores thus continued to be entered manually by Francoise Chomono.

During the first days of WAC, the score sheets arrived at the scoring office every half-day creating an increased workload for the entry of scores. After many requests to the organizers, we agreed that the sheets were to be transmitted every 7 to 8 pilots. Nevertheless, we were still obliged to look for the sheets each half-day at the end of the flights.

Many score sheets had problems:

- ▶ Absence of Positioning score
- ▶ Unreadable writing of the scores
- ▶ Hard Zeros not confirmed
- ▶ Incomplete or missing penalties

In spite of the checks carried out, a few data entry errors were identified the pilots. This emphasizes the importance of use of the CIVA optical reader as it eliminates one more human in the paperwork chain and therefore, reduces the chance for error.



The organizers did not provide computers with web access for the pilots. Results were published on the CIVA server and made available on the web as soon as possible, but pilots could only access the information either using their own laptops or computers back at the hotel lobby. The working conditions were worsened by the heat in the scoring office.

AEAC in Joensuu

At the time of his departure from Granada, LG Arvidsson could not take the optical reader with him because the dimensions exceeded those authorized for hand luggage.

July 17, LG sent me the address was to send the reader.

I shipped the reader on July 18.

The reader did arrive at the address indicated on July 20 but the recipient was not present and the parcel was not delivered. It was scheduled for re-delivery on July 24.

I contacted the shipper and insisted the reader be delivered immediately which finally occurred on Monday, July 23.

Swiss and German National Championships

At Jürgen Leukefeld's request, the results of these two championships were published online on the "CIVA" web server.

Next version

Future development of ACMS under consideration are:

- ▶ A Windows Vista version of ACMS in addition to the XP version now in use
- ▶ Enhancement of JPI (and anomalies) presentation in the "Analysis of Judging" section of ACMS to make it easier to review judging performance.
- ▶ Publication on the web site of the grades of the last flight as soon as possible after the flight is completed and the scores entered. An additional window will be added to show the last pilot's scores since the ranking on the website now does not match the order of flight. This window could also be connected to screens viewable by the public.
- ▶ Improvement in the generation and presentation of scores on the web site
- ▶ Easier access to the software from the web server
- ▶ Modifications required as a result of any changes to Section 8 of the Sporting Code as agreed by CIVA