

Report to IGC Plenary 2022

Alternative Scoring ("AS")

Joint Report from USA and NZ

Executive Summary

During the 2021 gliding season both the USA and New Zealand used AS:

- In the USA, four National Championship events covering Club, Standard, 15-Meter, 18-Meter, 20-Meter Multiseat, and Open Classes were held and scored with SeeYou using FAI Annex A task definitions and AS. The scoring script was developed in the USA. In parallel these contests were also scored with the USA scoring software Winscore according to the same task definition and scoring with equivalent results.
- In New Zealand, seven Regional and National contests were held and scored with SeeYou using both FAI Racing and Assigned Area Tasks. The scoring script was developed in New Zealand with Minimum Distances adapted for local New Zealand conditions. In all other respects the scoring algorithm is the same as the Alternative Scoring algorithm.

Results from USA:

- No adverse safety events related to AS were reported or observed
- Very positive pilot acceptance
- **Decision taken by the US Rules Committee to continue the scheme for the US FAI class National Championships in 2022 (SSA Directors formal approval pending).**

Results from New Zealand:

- No adverse safety events related to AS were reported or observed
- Neutral pilot acceptance. Positive acceptance by contest organizers and the national Sailplane Racing Committee.
- **Decision taken by the NZ annual Contest Pilots Meeting in June 2021 to continue using the Alternative Scoring algorithm for all future contests.**

Next Steps:

The original intent (i.e. before COVID) was to incorporate AS into the rules as an option to be used by organizers of Category 2 and national events through 2020. Additionally, there was an agreement to commit to the use of AS in at least one class at a CGC in 2021, and to re-evaluate the whole topic in 2022. Essentially two years have been lost due to COVID.

Given the positive and successful results thus far, the next suggested step is for the 2022 season to recommit to the test starting in 2022 by identifying the competitions in which AS will be used and evaluated. We recommend that the Organisers of future National competitions consider using Alternative Scoring, and we ask the Bureau to renew its promotion of AS in the next series of Continental Gliding Championships.

A wider trial is central to getting experience-based feedback from participants in order to make an informed decision in 2023.

Note:

The use of AS is not intended to be mutually exclusive with other efforts undertaken to increase either the safety of contests (e.g. discouraging large gaggles) or reward of individual effort (e.g. preventing leeching). This includes both PEV controlled starts and schemes to control energy at the start.

Background

At the 2019 IGC Plenary, the year 2 proposal from the USA for "Alternate Scoring" was adopted by a "clear majority" (https://www.fai.org/sites/default/files/documents/igc_2019_plenary_meeting_-_minutes_final.pdf 8.1.1). According to Mr. Cubley – "It should be first tested at national championships, then at Continental Championships and only if successful at the World Championships." Mr. Mozer commented (but not as a directive) "The Plenary will reevaluate the proposal in 2022 before the old (current) system in Annex A will be taken out."

The potential benefits of AS (from the adopted year 2 proposal (https://www.fai.org/sites/default/files/documents/8_1_1_y2_sc3a_8.2_8.3_8.4_usa_2019_calculation_of_speed_and_distance_pointsv2.pdf):

"The most important benefits are that it will encourage earlier starts, decrease the motivation to stay in the gaggle, and reward bold tactics. It also will remove occasional strange incentives to slow down before crossing the finish line. By eliminating the counting of outlandings in the scoring formula, the proposal also makes risk/reward calculations more transparent. By giving a bigger and fixed reward for finishing, it moves point spreads from the middle of the scoresheet to the winners, and further encourages earlier starts and independent tactical decisions. The Year 1 proposal discusses these points in detail."

At the same time, no negative impact on safety should be introduced.

With the onset of COVID the 2020 gliding season essentially did not exist, resulting in no reviewable feedback for use in 2021.

However, during the 2021 season, both the USA and New Zealand made use of AS with positive results.

USA Results

For the 2021 season, all "FAI Class" National Championships were conducted according to the task definitions in Annex A. Only the Racing and Assigned Area tasks were used. The PEV start was not used. Scoring was done in parallel with the USA Winscore program and SeeYou with a USA developed script based on the standard scripts.

This test covered National Championships in six classes (Club, Standard, 15 Meter, 18 Meter, 20 Meter Multiseat (handicapped) and Open). The Club Class was conducted at Benton Tennessee in relatively weak Eastern USA conditions. The other Classes were held in the Western USA (Minden Nevada, Nephi Utah and Montague California). Especially strong conditions prevailed at Nephi, and the provisions of 7.4.5 b (Pre Start Altitude) were also used.

The annual USA competition pilot poll included a section devoted to the experiment to be completed by pilots who participated. The results were reviewed and discussed at the annual USA Rules Committee meeting.

New Zealand Results

For the 2020/21 and 2021/22 season (currently in progress) , all "FAI Class" National Championships were conducted according to the task definitions in Annex A. Only the Racing and Assigned Area tasks were used. The PEV start was not used.

New Zealand Contest classes differ from the USA contest classes and standard FAI class definitions in two areas.

- New Zealand uses the BGA handicap list. All contests are handicapped according to this list.
- Due to low contest entry numbers in previous years, a decision was taken in 2015 to amalgamate the various FAI classes into just two contest classes.
 - "Open Class" applies to any glider with a BGA Handicap of 0.96 or greater
 - "Racing Class" applies to any glider with a BGA Handicap of 1.06 or less

Because of the overlap between handicap ranges, there is a large number of gliders that may choose to enter either of New Zealand's two contest classes. Contest classes typically contain a range of handicaps and there can be significant performance differences between the various gliders entered in a class. Contest Tasks are generally set to accommodate as many as possible of the aircraft entered in that class.

Whatever scoring algorithm is chosen, it must be able to produce an outcome that reflects pilot skill independently of the glider handicap. A skilled pilot flying a low performance aircraft should be able to win a day over a less skilled pilot in a higher performing aircraft.

The NZ sailplane racing committee (SRC) are of the opinion that the Alternative Scoring algorithm performs exceptionally well in these circumstances. As an example of this, in the 2021 Central Districts Regionals (Results available on SoaringSpot.com) the first 5 places in order were a Discus 2b, LS4, SZD-55, T51-Dart, and a Discus-b. All of the remaining placings show a relatively equal distribution of glider handicaps, with the actual results correlating well with pilot skill and experience.

Also beginning in the 2015/16 season the NZ SRC has made a concerted effort to increase the numbers of pilots choosing to take part in contest flying. It was strongly felt that one of the major impediments to new competitors entering the contest environment was a sense of "hyper focus" on performance, winning and tactics at the expense of any fun and enjoyment of a contest.

The SRC has instead focused on a message that contests are for "everyone" – not just the winners. While only a small part of this message, the Alternative Scoring system enforces the impression to pilots that contest scoring is being adjusted both in favour of safety **and** the interests of "fairness". Tactical mistakes are not unfairly punished by excessive penalties. Less experienced pilots do not receive contest ending day scores for being too slow. Equally, competitive pilots still receive scores that reflect their performance for the contest, and the best pilots are winning.

New Zealand has been fortunate to avoid the worst effects of Covid-19 over the last 2 seasons. The contest season has been relatively unaffected by cancellations, and the number of competitors in the last two years has substantially increased. Contest entry numbers in 2021 and 2022 are now approximately twice those of 5 years ago. The Alternative Scoring system is just one of the many small pieces that have come together to enable this success.