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Section 7G Annexe C – A Brief History of the CIVL Competition Class

Serial and Open

From 1999 and on, there were many Serial Class (EN certified) advocates (PWCA for a short while, then the UK, the Nordic countries and the European Hang gliding and Paragliding Union – EHPU). But proposals were always clearly defeated during CIVL plenaries, traditionally held in February. The only specification for a glider was that it should be flown 'within the limitations of its certificate of airworthiness or permit to fly and its manufacturer's published limitations.' It was an Open Class world.

The 2009 Valle de Bravo World Championships saw mid-air collisions, too many parachute deployments and the death of one of the best Swiss pilots. Many people questioned if we should start to regulate the sport more seriously. There was heavy pressure on CIVL from the Fédération Aéronautique Internationale (FAI) to do so.

2010 – Evaluation

The plenary implemented the Open Class Technical Working Group (OCTWG) to answer the current safety issue and 'look at establishing test standards for Open Class gliders and consider possible design limitations'. The OCTWG came up with 9 pages of proposals, underlining that 'a dozen factors play a significant role in the overall safety of a competition' and that 'the paraglider itself is not an inherent safety risk, but rather it is the combination of both the paraglider and the pilot that is of concern.'

Twenty-three companies from the Paraglider Manufacturers Association (PMA) also came up with proposals after an internal survey: one wanted to stay Open, ten wanted to go AFNOR or EN certified only, twelve wanted to address safety in general (pilot qualification, task setting, harness protection) and structural strength (lines and load tests).

2011 – OCTWG Class, Piedrahita and the Task Force

Paraglider design evolved radically: reinforcements and inserts, 2-liners. Drag was reduced and top speed increased dramatically. And the best gliders were available to all instead of to the special few.

The plenary was 'virtually unanimous' in favour of the OCTWG proposals: structural strength requirements, pilot-glider combination, checking, pilot experience declaration form…

A bare four and half months later, the Piedrahita World Championship was flown with mostly OCTWG gliders and turned out to be a disaster: two fatalities and a high number of incidents on task 2, all under the new gliders. CIVL suspended the use of these gliders and the championship was de facto stopped.

The Chairman of the OCTWG later wrote: 'In my opinion the self-homologation did not work and the manufacturers did go over the limit with the 2011 models. Probably the main problem has been that they felt very stable and easy to fly even at high speed but were almost impossible to recover after a collapse.'

CIVL implemented a Task Force that produced a very good 30-page report on incident investigation, data analysis, equipment, pilot skills and education, competition structure, task setting and scoring.

2012 – Serial

The Task Force report was read but had little impact. It was probably too far-reaching and CIVL didn't have the resources nor the political will to pursue all its proposals. But nonetheless, during the following years, CIVL would apply some of them.

The plenary was unanimous in supporting CIVL's decision to suspend the Competition Class. It was also unanimous that Category 1 Championships should remain restricted to EN-926 certified gliders in 2012 and that by 2013, the plenary would be presented with a new class for consideration in future Cat 1 events.

2013 – Corruption and Birth

Top-level competition restricted to EN gliders only quickly led to predicted and unwanted effects. Serial class glider designs were pushed to the limit, testing to the standards becomes extremely difficult. The Paragliding Committee stated that 'all parties agree that running Category 1 competitions with EN gliders only has not solved anything safety-wise or fairness-wise. More, it has created new problems, the corruption of the EN scheme being not the least. How should these problems be solved?'

The plenary declared in 216 words: implement a new CIVL-EN Competition Class (CECC) by 2015. Basic requirements were produced. CIVL was tasked to work on it with the EN certifying body: WG6.

When contacted, WG6 laughed at us. We could not insist on participating and a new norm would take 5 years to be ready. So we decided to do it by ourselves.

The Paragliding Committee worked extra hard. The PMA and PWCA were involved. The 216 words turned into a 22-page document. The CIVL Competition Class (CCC) was born.

2014 – Respect

CIVL went to the general assembly of EHPU, then representing 60% of the pilots in the world and the strongest Serial Class lobby, to convince them that in competition EN-only had to go, that CCC was the way. Obviously, EHPU didn't like the EN scheme crumbling down. CIVL didn't get a standing ovation but felt respect for the job it had done. Three weeks later, the plenary voted unanimously for CCC from January 1, 2015.

The European Championships in Kopaonik, Serbia was a testing ground for measuring gliders, with mixed results. The PG Committee worked some more on the CCC requirements, patching the bugs and loopholes, defining controls and penalties. The document grew to 58 pages. A video was published on how you should measure and control your glider.

2015 – The Bumpy Road of Implementation

The Roldanillo World Championships was the first major test for CCC. No fatalities… Happy faces everywhere, pilots and manufacturers alike… Phew! … We got applause from EHPU and at the plenary, but…

Only three manufacturers designed CCC gliders. Only two gliders were really competitive. Certification was expensive. You could not correct an obvious mistake without going through certification again. It was time to go back to the drawing board.

Most of the work went into gaining consensus amongst the distinct interest groups: pilots, manufacturers, test houses, competition organisers and those who check glider conformity at competitions. Discussion within the PG Committee went in circles. A restricted Working Group was created. At Coupe Icare, it met the main stakeholders, going back and forth between two manufacturers who did not speak to each other anymore. Bright ideas were written down and disregarded. An almost final draft was sent with the Plenary Agenda.

2016 – A New CCC

We kept discussing. At least the restricted Working Group met physically. More adjustments were made. The final proposal was voted unanimously by the plenary and was to be implemented October 1st. The document stated:

'The definition of Competition Class paragliders was created with the purpose of World and Continental Championships in mind: safe, fair and satisfying contest flying. This leads to the following goals for the class definition:

Safety – Wings complying with this definition are safe enough for adequately trained competition pilots in competition conditions. A wing's conformity with certification can be verified by simple measurements.

Fairness – Ensure that wings are available for a wide range of pilot weights. Prevent pilots from gaining an undue advantage over others through temporary or permanent modification of their glider.

Satisfaction – Wings complying with this definition should provide a satisfactory flying experience to the world's best competition pilots.'

2017 – Stability

Progress with CCC wings during the past year was reported to the plenary. Gliders certified under CCC 2016 has better performance and no safety issue. The PWCA permitted single CCC prototype wings to be flown in its competitions by manufacturer test pilots. It allowed manufacturers to test wings in real racing conditions prior to certification. The major issue remained the small number of manufacturers making CCC wings. It was hoped that the PWC prototype decision would resolve this.

The possibility of simplifying the CCC rules by removing the restrictions on wing planform was discussed. The current tight restrictions on wing design seemed to lock in the technological advantage of larger manufacturers.
There was broad support for maintaining the current CCC rules stable until the next plenary, but if an increase in the number of manufacturers producing CCC wings was not seen, then there would be a strong argument in favour of a substantial simplification of the CCC rule.

2018 – Simplification
The bureau reviewed the progress and effects of the CCC requirement and believed it was time to consider some changes. Until now, the approach was to have a working group develop very detailed list of criteria that would then be discussed and approved by the delegates at the plenary meeting each year. The Bureau believed it was time for more of an upper-level management approach where CIVL would develop a document that specifies high-level design performance criteria with boundary conditions rather than detailed dimensional requirements. This approach would allow a more stable innovation environment within which manufacturers could continue to improve competition gliders without the risk of requirements to change at the plenary after development has begun, while also maintaining control over the in-flight safety performance of our competition gliders.
The plenary trusted the CIVL Bureau to implement a dedicated Working Group to define the new requirements and date of implementation. The following principles were defined: all lines have a minimum of 23 G strength, maximum accelerator travel defined, measurements restricted to what is really appropriate, one model tested by an independent test organisation. And possibility for other models to be scaled and tested by the manufacturers.

2019 – And now?
Five years after the first implementation of the CCC scheme, twelve manufacturers have certified CCC gliders. The World championships saw the top ten pilots representing ten nations. It was analysed as a tremendous success for the CCC gliders, all ‘safe, fair and satisfying’.

- Safe: the gliders perform very well even in turbulent conditions.
- Fair: an affordable certification allows ‘small’ manufacturers to be present at the championships; all gliders flown are widely available to anyone in all sizes.
- Satisfying: CCC gliders are performant and predictable flying machines.

The CCC glider quality is seen as a key factor in raising the skill level of pilots worldwide. New nations are participating ; the top ten and podiums are now shared by many nations.

It will never be possible to satisfy absolutely everyone with a CCC definition. There will be bugs and loopholes. There will be ways found to twist the rule and its intent. There will be a lot more work to do. There will be a new CCC. It will be a never-ending world of toil and passion. But we will try, and we will always have in mind safety, fairness and satisfaction.