Gliding competitions and safety – my perspective from the cockpit

By Wolfgang Janowitsch

1.) How it got started

In spring 2022 in Prievidza it happened, that Karol Staryszak and I started an intensive discussion about safety in competitions. We instantly agreed that the risk of midair-collisions is the main concern for us, as this threat is not 100% under our individual control, and it ends statistically for 50% of those affected fatal. As an irony of fate two young pilots were killed in a midair at this 2022 FCC in Prievidza.

Straight after the WGC 2022 in Szeged, I gave feedback to Peter Eriksen about the development of our classical competition format, becoming more and more a 3D video-game. Waiting in a start-gaggle for other competitors to leave ahead, then follow, head down in the cockpit, gathering all valid information via Flarm, Internet and Team captains.

Thereupon Peter invited me to join a working group, investigating the risks and possible solutions regarding gliding competitions. Members of the group are experienced representatives of both the organizers side, and the “consumers” (=pilots) side. In several meetings we could confirm our initial gut feeling by a more scientific approach, that the risk of midair collisions is the main threat to focus on.

2.) Facts we must accept

Introduction of Flarm about 20 years ago, made us initially optimistic that we have finally overcome this problem. But - other than in low density traffic situations - reality showed very soon, that Flarm is not capable to deliver a clear picture for situational awareness in a typical competition environment. Gaggles or meeting gliders on crossing/opposite task legs create warnings, but often the number of possible conflicting traffic is overstraining pilots, leading to dangerous situations or even accidents.

Apart from this, Flarm made us the “present” that we can see other gliders and how they perform – with good antennas sometimes 30km+ ahead. Of course, it pays in a competition to make use of this information, leading – against the original idea of Flarm – to a congestion of traffic along certain points/lines.

Initially numerous pilots suggested, to require mandatory use of “stealth mode” in competitions. But as we must expect (mandatory?) devices in general aviation soon, using all kinds of signals exchanging position- and altitude-information, this idea was discarded quickly. We realized that we can’t stop technical progress…

3.) What can we do immediately?

The person who has by far the most influence on safety (apart from the pilots of course) is the task setter. He should be aware that some of his decisions will have immediate impact on the probability of a midair collision. Keeping the following key points in mind, could make a significant difference:

- **Use the meteorological potential of the day to a maximum.** This reduces tactical games in gaggles before starting on task to a minimum.
- **Separate task-areas of different classes**, even if this means that one or two classes are not flying in the best meteorological conditions.
- **Reduce number of turn points**, they are creating additional areas of traffic congestion.
- **Avoid turn points with angels close to 180° between in- and outbound legs.**
- **Use AAT-tasks with** sensible (small) areas and the **recently introduced cylinder type start** (thanks to Karol Staryszak to make it come true!).
- **Use PEV-start with a PEV Wait Time of at least 10min.** Do not use it if the weather situation around the start line is so marginal that crossing the line at all is very difficult.

All these rules are based on the idea, that in a classical competition the pilot's individual skill to interpret given weather briefings and solve the challenges in varying meteorological conditions should be tested. Starting as a peloton together on a short sprint task, using only the best areas for the day to minimize the risk of landing out, can be done in sailplane-Grand Prix.

4.) What can we do soon?

Hopefully the rule "MLoH" will make its way into the Sporting Code soon, also for the start over a line.

- A certain hight is defined on the task sheet as maximum difference between starting- and finishing-altitude.

5.) What should we avoid?

It was a wise decision of the IGC to limit the number of teams to one per nation in 20m-multiseater-class. Many pilots coming from "mass-classes" like 18m-class enjoyed the experience of a more individual stile of flying again. It was one of the key-attractions of 20m-class. But very soon representatives of organizers and large national teams came up with the idea of lobbying for a vote to **"exceptionally" accept two gliders per NA in 20m-class.**

- We should not trade a little bit of easy earned money for organizers, and another team-advantage for some nations, for increased objective risk in another class. This is a very clear mathematical ratio: **more gliders in a certain area = more risk for collision!**

6.) What is my expectation from the IGC?

To represent the interests of the pilots, with a clear focus on safety.
Stewards should insist on the implementation of the guidelines for task setters I listed in para 3.) respectively 4.) in future.
I would appreciate if well considered decisions are being executed accordingly, and not ignored as soon as a lobby is finding some national or financial advantages by doing so (see para 5.).

I think I am speaking for most of my colleges if I say: We are doing all that because it is a lot of fun – but we would like to survive it!