



FAI Hang Gliding & Paragliding Commission

*Fédération
Aéronautique
Internationale*

CIVL Competition Paraglider Survey 2013

Final Report

Revision 1.0

Published February 2013

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Editor's note: Hang-gliding and paragliding are sports sport in which both men and women participate. Throughout this document the words "he", "him" or "his" are intended to apply equally to either sex unless it is specifically stated otherwise.

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1 Introduction

For the 2013 CIVL Plenary, the Paraglider Manufacturers Association (PMA), at CIVL's request, created a proposal for a future paragliding competition class for cross-country competitions. This proposal, as well as the topic of equipment for such competitions in general, has been heavily discussed over the last several months, amongst pilots, officials, country associations and many others. These discussions will continue at the Plenary, and will most likely lead to a vote there.

The views of many players on this complex topic are well known, but to this date, no clear information existed on the point of view of those mainly affected by CIVL's decisions: The competition pilots themselves. Following a blog post by André Rainsford, a group from within the PMA approached CIVL and proposed a survey amongst competition paraglider pilots, to learn about their opinion on PMA's proposal, and on the equipment topic in general.

Between February 4th and 10th 2013, such a survey was conducted. This document contains its final outcome.

2 Goal

The goal of this survey was to provide the members of the CIVL Paragliding Subcommittee, as well as all the Plenary attendees, with an overview of the pilots' opinion on the proposed equipment changes for cross-country competitions. An additional requirement was to distinguish between different pilot groups, to acknowledge the fact that top-level pilots are more directly affected by changes CIVL introduces, and may have a different opinion from other, more occasional competitors.

It is important to understand that the survey has only a consultative character. In no way can it be understood as a vote that would directly influence CIVL's policy making. CIVL is governed by the Plenary meeting, which consists of delegates from FAI's member countries. This survey was created to make the competition pilots' voice heard by those delegates.

3 Method

The survey was conducted using the online service “Survey Monkey” (www.surveymonkey.com). Participation was only possible through an invitation Email sent out by Survey Monkey. Each Email included a personalized link, which allowed the recipient to fill the survey exactly once.

The survey was conducted amongst all pilots who were listed in the January 2013 WPRS for cross-country paragliding competitions. January 2013 was chosen because this was the most recent complete ranking (the February ranking was still incomplete, with the PWC Super Final results missing, at the time the survey was started).

When preparing the survey, it was discovered that only 40% of the pilot entries in the WPRS include an Email addresses. The survey invitation Email therefore asked pilots to inform their colleagues about the survey, and to ask them to contact us if they wanted to participate. Additionally, a post in the Paragliding Forum (www.paraglidingforum.org) was created to make pilots aware that they could request a survey invitation.

The pilots’ email addresses were grouped in four different “collectors” within Survey Monkey, depending on their ranking in the January 2013 WPRS: 1-100, 101-400, 401-1000, 1000-5837¹. This allowed us to easily apply the same grouping to the results, to be able to distinguish between different groups of pilots.

The survey ran from Monday, February 4th 2013, 11:30 CET until Sunday, February 10th 2013, 18:00 CET.

The collected answers of each group were exported to Excel, and aggregated to find the number of pilots who selected “Yes” or “No” for individual options, but also for relevant combinations. These numbers, expressed as percentages of the group size, are listed in the results section below. All percentages were rounded to the next whole number.

3.1 Questions

The survey consisted of one six-part question, and a comment field. The six-part question was:

For World and Continental championships in cross-country paragliding from 2014 onwards, would you like CIVL to:

1. Require EN-certified wings up to EN-D (Yes/No/No opinion)
2. Enforce a restriction in aspect ratio (Yes/No/No opinion)
3. Enforce a restriction in maximum speed (Yes/No/No opinion)
4. Change task scoring to discourage high-speed final glides (Yes/No/No opinion)
5. Require two reserves for each pilot (Yes/No/No opinion)
6. Require a reserve system that can be deployed by either hand (left or right) for each pilot (Yes/No/No opinion)

Answering each of these six questions with either “Yes”, “No” or “No opinion” was required to submit the survey.

The comment field could be filled in with a text of any length. Filling in the comment field was not required in order to submit the survey.

¹ 5837 was the maximum possible ranking in January 2013

4 Responses

The January 2013 WPRS for cross-country paragliding contains 6895 pilots. Of those, 2712 have entered an Email address in their pilot record. These 2712, grouped by ranking (1-100, 101-400, 401-1000, 1001-5837) were invited to participate in the survey. An additional 62 pilots whose Email address had not been available through the WPRS requested a survey invitation personally by Email, bringing the total of invited pilots to 2774. Of those, 69 Emails could not be delivered to a recipient, for various technical reasons ("bounced"). We therefore reached 2705, or 39% of the total population, with a survey invitation. 1152 of those pilots submitted a filled-in survey, which is 17% of the total population, and 42% of those who received an invitation. The responses of the original four groups, along with the total, are given in Table 1.

group	in group	invited	bounced	reached	%reached	answered	% of group	% of reached
1-100	100	92	0	92	92%	76	76%	83%
101-400	300	213	2	211	70%	144	48%	68%
401-1000	600	329	7	322	54%	193	32%	59%
1001-5837	5895	2140	60	2080	35%	739	13%	35%
Total	6895	2774	69	2705	39%	1152	17%	42%

Table 1: Responses by original groups

Combining the original groups allows us to find the "top" groups:

- Top 100 (1-100) – the best pilots
- Top 400 (1-100, 101-400) – candidates for World and European championships
- Top 1000 (1-100, 101-400, 401-1000) – candidates for non-European continental championships
- All (1-100, 101-400, 401-1000, 1001-5837)

Their response numbers are given in Table 2.

group	in group	invited	bounced	reached	%reached	answered	% of group	% of reached
Top 100	100	92	0	92	92%	76	76%	83%
Top 400	400	305	2	303	76%	220	55%	72%
Top 1000	1000	634	9	625	63%	413	41%	65%
All	6895	2774	69	2705	39%	1152	17%	42%

Table 2: Responses by "Top" groups

A third way to group the answers is by "higher than" groups:

- 1+ (1-100, 101-400, 401-1000, 1001-5837)
- 101+ (101-400, 401-1000, 1001-5837)
- 401+ (401-1000, 1001-5837)
- 1001+ (1001-5837)

These are given in Table 3.

group	in group	invited	bounced	reached	%reached	answered	% of group	% of reached
1+	6895	2774	69	2705	39%	1152	17%	42%
101+	6795	2682	69	2613	38%	1076	16%	40%
401+	6495	2469	67	2402	37%	932	14%	38%
1001+	5895	2140	60	2080	35%	739	13%	35%

Table 3: Responses by "+" groups

Of course, several of those are redundant: Top 100 = 1-100, 1-5837 = All, 1001+=1001-5837. For the remainder of this document, we will only use the nine unique groups:

- 1-100
- 101-400
- 401-1000
- 1001-5837
- Top 400
- Top 1000
- All
- 101+
- 401+

5 Results

For improved readability, the six questions are from now on labelled as follows:

question	label
Require EN-certified wings up to EN-D	EN
Enforce a restriction in aspect ratio	AR limited
Enforce a restriction in maximum speed	Max speed
Change task scoring to discourage high-speed final glides	Scoring
Require two reserves for each pilot	2 reserves
Require a reserve system that can be deployed by either hand (left or right) for each pilot	I&r reserve

Table 4: Question labels

5.1 Individual questions

First we look at the answers to the six original questions. One possible answer was always “no opinion” – we show the percentages of pilots who gave this answer for each question and for each group in Table 5.

No opinion	EN	AR limited	Max speed	Scoring	2 reserves	I&r reserve
1-100	3%	3%	3%	4%	8%	17%
101-400	10%	4%	5%	8%	8%	14%
401-1000	6%	5%	5%	4%	6%	9%
1001-5837	6%	11%	8%	10%	13%	15%
Top 400	8%	4%	4%	6%	8%	15%
Top 1000	7%	4%	4%	5%	7%	12%
All	7%	9%	7%	8%	11%	14%
101-5837	7%	9%	7%	8%	11%	14%
401-5837	6%	10%	8%	9%	11%	14%

Table 5: No opinion on original questions

For the remaining pilots, the ones choosing either “Yes” or “No” as their answer for the individual questions, Table 6 shows the percentages of positive answers.

Yes	EN	AR limited	Max speed	Scoring	2 reserves	I&r reserve
1-100	41%	38%	54%	53%	40%	51%
101-400	43%	49%	64%	64%	32%	47%
401-1000	52%	50%	55%	71%	30%	51%
1001-5837	57%	45%	44%	76%	26%	49%
Top 400	42%	45%	60%	60%	35%	48%
Top 1000	47%	47%	58%	65%	32%	50%
All	53%	46%	49%	72%	28%	49%
101-5837	54%	47%	49%	73%	27%	49%
401-5837	56%	46%	46%	75%	26%	50%

Table 6: Yes on original questions (in % of pilots with an opinion)

5.2 Wings

The first three questions (EN, AR limited, Max speed) allow for various combinations, which we studied further. The combinations are given in Table 7.

combination	wing type	label
EN=no, AR limited=no, Max speed=no	Open class	OC pure
EN=no, AR limited=yes, Max speed=no or no opinion	Open class with limited AR	OC AR
EN=no, AR limited=no or no opinion, Max speed=yes	Open class with limited max speed	OC speed
EN=no, AR limited=yes, Max speed=yes	Open class with limited AR and max speed (the PMA proposal)	PMA wing
EN=yes, AR limited=no, Max speed=no	EN with no further restrictions	EN pure
EN=yes, AR limited=yes, Max speed=no or no opinion	EN with limited AR	EN AR
EN=yes, AR limited=no or no opinion, Max speed=yes	EN with limited max speed	EN speed
EN=yes, AR limited=yes, Max speed=yes	EN with limited AR and max speed	EN AR speed

Table 7: Wing combinations

Again, in a first step, we look at pilots who had no opinion: Pilots who selected “no opinion” on all three wing-related questions (EN, AR limited, Max speed), see Table 8.

No opinion	wings
1-100	0%
101-400	0%
401-1000	0%
1001-5837	1%
Top 400	0%
Top 1000	0%
All	1%
101-5837	1%
401-5837	1%

Table 8: No opinion on all wing questions

For the remaining pilots, Table 9 shows the percentages of positive answers.

Yes	OC pure	OC AR	OC speed	PMA wing	EN pure	EN AR	EN speed	EN AR speed
1-100	22%	7%	14%	14%	13%	4%	11%	12%
101-400	13%	3%	11%	22%	12%	2%	7%	15%
401-1000	15%	7%	9%	12%	13%	6%	8%	19%
1001-5837	19%	2%	5%	12%	19%	9%	6%	15%
Top 400	16%	4%	12%	19%	12%	3%	8%	14%
Top 1000	15%	5%	11%	16%	13%	4%	8%	16%
All	18%	3%	7%	13%	17%	8%	7%	16%
101-5837	17%	3%	7%	13%	17%	8%	7%	16%
401-5837	18%	3%	6%	12%	18%	9%	7%	16%

Table 9: Yes on wing combinations (in % of pilots with an opinion on wings)

5.3 PMA proposals

Besides the wing definition, PMA’s proposal consists of changes to the scoring system, as well as a change in the reserve parachute setup. We look at the three combinations listed in Table 10. For easier comparison, the combination “PMA wing” from section 5.2 is duplicated here.

combination	label
EN=no, AR limited=yes, Max speed=yes	PMA wing
EN=no, AR limited=yes, Max speed=yes, Scoring=yes	PMA wing, scoring
EN=no, AR limited=yes, Max speed=yes, Scoring=yes, 2 reserves=yes	PMA wing, scoring, reserves

Table 10: PMA proposal combinations

There were a small number of pilots who opted for “no opinion” in all the questions of those combinations, as shown in Table 11.

No opinion	wings	wings, scoring	wings, scoring, 2 reserves
1-100	0%	0%	0%
101-400	0%	0%	0%
401-1000	0%	0%	0%
1001-5837	1%	1%	1%
Top 400	0%	0%	0%
Top 1000	0%	0%	0%
All	1%	0%	0%
101-5837	1%	0%	0%
401-5837	1%	1%	0%

Table 11: No opinion on PMA proposals

For the remaining pilots, Table 12 shows the percentages of positive answers.

Yes	PMA wing	PMA wing, scoring	PMA wing, scoring, 2 reserves
1-100	14%	11%	4%
101-400	22%	14%	6%
401-1000	12%	10%	3%
1001-5837	12%	9%	2%
Top 400	19%	13%	5%
Top 1000	16%	12%	4%
All	13%	10%	3%
101-5837	13%	10%	3%
401-5837	12%	10%	2%

Table 12: Yes on PMA proposal combinations (in % of pilots with an opinion on these topics)

5.4 All yes/no

Finally, in Table 13, we look at the number of pilots who chose the same answer for all six questions.

All	no opinion	yes	no
1-100	0%	1%	3%
101-400	0%	4%	6%
401-1000	0%	4%	4%
1001-5837	1%	3%	3%
Top 400	0%	3%	5%
Top 1000	0%	3%	4%
All	0%	3%	3%
101-5837	0%	3%	3%
401-5837	0%	3%	3%

Table 13: Same answer on all six questions (in % of pilots)

6 Comments

Survey participants were free to leave a comment before submitting their choices. This was done by a total of 250 pilots, as can be seen in Table 14.

group	comments	% of answered
1-100	20	24%
101-400	35	24%
401-1000	45	23%
1001-5837	150	20%
Total	250	22%

Table 14: Comments

Time did not permit to evaluate all these comments, so we simply list them the way and in the order they were received. They are enumerated for easier referencing during discussions.

6.1 Group 1-100

1. It should not allow releasing trimmers. It's too dangerous and stupid.
2. There should be less bureaucrat decisions regarding PG rules. There should be smarter decisions (more safety and fair play oriented) on competitions from meet directors! There should be some "air marshals" in the air (instead bureaucrat) at competitions, to monitor the situation in the air, etc...
3. Problems to open reserve single-handed should be addressed before requiring a second one. 23G mandatory for the lineset.
4. I don't think aspect ratio has an influence in safety IF combined with limited top-speed, so these features should be considered: limit top-speed >> YES, because of irrecuperable glider in case of incident/cascade at very high speed; limit aspect-ratio >> NO, because of development and research castration regarding performance and new technology improvement from manufacturers. In order to eliminate the tweeking of the extra km/h on final glides and therefore be in harmony with the stated above, i'm in favour of conical ESS or altitude points reward for arrival in goal. In the other hand this will kill the "show" in the already very little attractive sport for the media.. not to mention the motivational side on top pilots. we're going back to the xc days.
5. restriction in max speed is difficult to check in real life.(pilots can cheat by overpushing the pulleys) clearly seen at superfinale. Risers design MUST avoid this possibility. - conical arrival is not possible with gps errors of high.
6. I would prefer a flight test procedure defined for open class wings and proved by independent test pilots. i don't want to be the one testing the gliders. So far the en-d test was a big step forward to me even if the test where not suitable for these wings!
7. Reserves are not affecting performance. Its usage, mount and number should be left upon pilot's decision. We care about our safety, don't worry!
8. We need apart competition class (e g EN E, or Comp class), which will be slightly wider then current top en-d. To free real en-d class for normal pilots. not to fake them.
9. Use the same rules in pwc, fai1 and cross country would be good for pilots. TX for dooing this hard job!

10. I think methods of exiting high G lockouts is more important than a number of the other proposed measures
11. EN Certification bring some form of control to the sport, e.g. pilots shifting pulleys, making self modifications to crazy outcomes etc 2) Aspect ratio should not be directly link to safety. If designers can come up with an inovative way to build a aspect 10 wing with the same safetey then why not, you are limiting and underestimating the design advances with this implementation 3) same as above with max speed 4) Yes, agreed, final glide on high speed is most of the time an issue 5) I will fly with two reserves but would not like to enforce it on someone else, it should be your choice, although a stupid one to carry 5kg ballast instead of a 2kg reserve 6) I would like to see designers designing harnesses giving the option for 2 reserves, therefore select yes, but do not require two handles for the same reserve
12. I specially do not see PMA proposal of conical end of speed section as a good idea because we can not even properly control violations of airspace's with our GPS systems and it would made a lot of confusion and devaluation of competition. I think that by just eliminating goal line and replacing it with 400m or 1km radius as goal would help improve safety in final glides, as most GPS devices compute height above goal at the center of turnpoint. Anyway's high speed final glides are not the problem, because nowadays it is high-speed all the way. p.s. I see PMA proposal a little unprofessional and think they should give a lot more thought also to other idea's. And last, by no mean's I am conservative about competition paragliding, quite opposite I think we need change's and new rules, but making them just to fulfill some regulations is not smart in long term, so it should be given a lot more thought and a different approach than what we have now (meaning PMA and so) sincerely, Tilen Ceglar
13. First question: would like a lighter tested competition glider. Last two questions. Either one or the other, both are good measures
14. require en-certified wing up to EN-D but with reasonable security requirements. Define a maximum speed is impossible because depends on the set of significant factors. For example also by the weight of the pilot ...
15. The task setting is much more important to the glider.
16. Before asking for a second rescue, just make sure it can be extracted from the harness at any time. See Marina case at St André and Johanna case at Roldanillo at least...
17. Questions are really oriented; I'm not sure survey will be really significant.....What about reinforce the PILOT minimum requierement (CIVL ranking & mandatory specific abilities...)
18. Like i always said..Wings don't need too much certifications..Pilots yes...
19. Think curb growing our wings to cheat to fly faster. Think compréhenssible make public all our races paragliding. Do not demolish the whole point of the race paragliding. Selection hardest pilots for competitions FAI 1, for the better pilots. Best regards
20. Hi guys, great job! I would like to ad more safety and fairplay in comps, but leave space for design improvement (we still don't know where we can get) Cheers Ronny

6.2 Group 101-400

1. Aspect retio is not reliable and may lead to a deterioration of safety will lead to a flattening geometry wings. The most important is the safety restriction max speed.
2. Limit max. speed is the way to go. Most comps use a end of speed turnpoint before actual goal line to avoid high speeds at low altitude. Altitude bonus at arrival should be tried as well.

3. I think the damage is already done, EN-D certification is nowadays out of any help for non-competition pilots. Tecnology permits to have EN-Cs with performances more than enough, so EN-D could become the certification for comp class, maybe lowered in requirements and costs, and renamed En-Comp or anything that claims its use. Two mandatory reserves without new certification testing G-force loaded extraction is nonsense for me, and probably mandatory Anti-G chute would be more useful. Thanks Antonio
4. Max AR and max speed to be revised as in "K" in PMA proposal.
5. The ESS Change is verry bad! In Race it is verry difficult to look the rank. Pilots need new instruments to know where the ESS is. Pilots look one more time on devices to find best speed. Better it is to make the goal so far away from ESS that they have to find thermal after pass the ESS to fly over the line. Comparison: Formula1. Tank-level change the position of goalline. driver have to look at instruments what the best decission is. What is here a race? Nothing. Don't do that please.
6. I would ask something for task setting rules, and weather forecas/monitoring facilities available for potential orginiser.
7. The restriction of maximum speed is only an option if there is an easy to check this.
8. I think that the majority of injuries were due to unused reserve, no tangle glider and reserve. Better option is 1 reserve on the eyes behind pilot, than under the seat.
9. Bring open class back please.
10. Glider change rules should be affective after a year. So pilots and manufacturers can plan ahead!
11. Require a reserve system that uses the paraglider as a deployment chute, like the system used in skydiving.
12. We are flying all task long with max speed. And not only from last turnpoint to goal...!!!
13. i think, we need a new sistem automatic for reserves.
14. Yes to require certification, but separate class competition glider and END.
15. Good luck.
16. Paragliding is dangerous, we can not change that fact, and we must not try to fool ourselves into believing anything else. We have to stop changing the rules. I believe the wide open class was not good because we must allow all pilots access to the same gliders (ie the best pilots on the hottest protos makes the comp unfair). The proposal from the PMA is a step in the right direction. I vote that we make that the rule for 2 years. I also vote there is another meeting next year that will decide how the proposal can be modified and improved, after the initial 2 year period. But these meetings must happen as early as possible to give pilots and manufacturers the maximum amount of time to plan. We need to come to a clear decision, for a fixed amount of time and stop meddling with the rules
17. General comment: there seems to be a lot more cheating going on between pilots now, than before the competition glider ban. There is tuning of gliders to get them back to the original settings, cheating with the weight, cloudflying, aggressive thermalling etc. All to gain a little advantage om the others. Please also design a control system that is fair for all pilots where the penalties are justified and correct.
18. Good work! Good to see active canvassing

19. CAT1 competition should be flown by EN certified wings. Limitation by EN-C is possible, if EN-D is confused. This will allow a competition mainly by pilot's skill, not by paraglider brands. PWC will provide competition with new competition class wings. CAT2 competition also can provide competition for new competition class under local rule.
20. I still want the gliders tested with a public test report so you know what you buy.
21. Without open class wing , progress of development in new wing and new design will slowdown. I have found open class wing much more solid and much more stable.
22. in my opinion for discourage high-speed final glides close to ground, would be enough to increase the radius of the ESS.
23. we should have more careful selection of pilots safety course checks accidents history in pilots book safe and not super strong flying places especially nice take offs flying marshals during tasks from experienced pilots which can observe race from air and react immediately if conditions dangerous big improvement a lot good pilots ready to do that for small payment and reducing fair observers on ground who take lot money and do very little for safety of comps less bureaucrats more well know how people change tasks scorings to stops gaggles more lead points flying goals during tasks like bicycling
24. What about projected aspect ratio, measured from engineering plans instead of measuring a physical glider. The need to have a field-measurable criteria applies only to things a pilot could change.
25. At the Superfinal in Roldanillo we had to fly almost always full speed when not thermaling. Not only in the final glide! There were pilots who could fly 5 Km/h faster than the others with the same glider model. These gliders were measured and nothing was found. Obviously there must be a technic to enhance speed without changing the length of the lines or risers.
26. Thank you for this initiative. Very much appreciated. I have one comment: In case you will request pilots to use 2 reserves, I would really think about obliging pilots to use 2 same reserves to avoid pilot to have to choose (and maybe hesitate) between two different solutions in a critical moment (ex: shall a drop the passive reserve parachute or the manoeuvrable one). Deploying a reserve parachute must remain a very straight action. Robert
27. If comp wings will remain EN-D , no restriction in aspect ratio and no speed restriction. If (re)introduction of comp class, what about the EN-D with 7.0 + aspect ratio : serial class gliders, banning ,... ? A big radius (more than 3 km from goal) should discourage low and high speed final glides, no ?
28. some pilot has to change brain first !!! best example is superfinal comp colombia 2013 , some pilots flying inside of the cloud or thermaling over fire !! seat case :(((Murat Tuzer CIVL ID 2656 Thanks
29. I apologize for my English I use a translator In my opinion and you have just approved a sail, but without limitazioni. The speed limit and elongation would only limit the development. C paragliders years ago were much less elongated and very slow but very dangerous thanks Vittorio
30. Don't go back to open class (unserтифициated) wings
31. 1. EN test is important for safety but we all know this isn't correct because it tests situations in "laboratory environment" but real life situations differ. In normal competition day with slightly turbulent air two EN-D gliders have big differences in tendency to collapse or produce dangerous situations. For example you can't compare Gradient XC3 and Ozone Enzo in spite

of this two glider is EN-D! 2. Aspect ratio alone isn't good because manufacturers can play with the shape which is also a factor. 3. I think you can't measure maximum speed correctly, so maximize speed is pointless. Regards, Peter

32. Why not make comps in two classes e.g competition class and standard, like in gliding
33. Require a reserve system that can be OPENING by either hand (left or right) for each pilot !!!!! Peter Simonics Hungary
34. i would require a different EN certification. something like END, but only with pilot intervention. (no test without pilot intervention; and maybe less number of tests)
35. Reserve system is the best to have one on side and one in front container. I already used it two times and it save me. Thank you

6.3 Group 401-1000

1. Additional paid safety committee, flying along side but not as a participant of the comp. Promote pilots flying lower class gliders by giving additional percent in points value.
2. Thankyou for the opportunity to offer some input
3. The question is misleading. It states "For World and Continental championships" but the decisions taken by CIVL will be applied to almost all competitions, including Cat 2s, PWCs, etc.
4. I vote "No" for restriction of the aspect ratio, but I don't mind if there will be restriction that is high enough and doesn't lead to compromise with safety in exchange of performance.
5. If there is a speed limit of 65km/h and A/R is less than 7 units, the certification may not be mandatory.
6. I think a EN certification is a must but, It must be serious with well defined parameter and TEST not like the EN test now used for certification.
7. No bans of current gliders anymore please. This had a huge negative safety effect for many leisure pilots who changed to these gliders by financial motivation.
8. Gliders must have some kind of certification and have standart recovery reaction after collapses, it is not good to mess up the current certification system thow
9. Perfect questions - thank you!
10. Focus development on global pilot qualification that is tangible and continuing education to maintain pilot skill set. Use peer review to enforce or risk being suspended from participation until action is taken correcting a deficiency. I strongly believe the pilot is most correctable item in safety. Pilot training is absent after initial basic training. I.e. two reserves probably is your best suggestion, however I see too many pilots never use the one they have. A second would only pull them to gravity that much quicker. Manufactures have a natural ability to ensure their wing is proper or risk capital failure. We should not risk handcuffing them to protect us. The conformity testing does this enough. Handcuff pilots to continued training and demonstrated proper decisions keeping us safe on the entire course line, not only the goal regardless it's shape.
11. I would like to make the safety through restriction not EN certification, the idea of max aspect ratio 7 and max speed 65 km/h restriction sound perfect to me.
12. Very good questions! Safety first!
13. Require a New EN-certified Wings, (Max Speed).

14. I liked the kind of competition in 2011 where everybody flew with normal EN-D gliders, so the competition was between pilots and not between material.
15. The rule proposal lacks a) a description of the set of skills a competition pilot must have/get certified in (i.e. recover 10 out of 10 asymmetric collapses in a row during a SIV), b) a proposal on how to test these good and logical ideas in practice, so far it's only theory and in aviation any innovation must be thoroughly tested before "going live" and c) a process of reviewing and updating the rules when these become obsolete (and they will no matter how good they are), otherwise it's only a short term patching.
16. Excellent survey
17. I have been on the US accident review committee for many years. I, and my predecessors, have never researched an injury or fatality where a second reserve would have been useful. You are trying to solve a one-in-a-million problem by burdening every pilot with extra weight and cost. The extra weight will worsen many of the other injuries. The inverse-conical ESS is a ninteresting idea, but doesn't adjust for wind and will be tricky if the cone intersects terrain.
18. I personally do not see the improvement in safety with introduction of EN-D class wing as opposed to the open class wings. I have NEVER used as much bar (full speed) on an open class wing, and looking at other competitors on EN-D, full speed is the only setting while not termaling. This is clear when you look at the number of reserve deployments/incidents during Europeans at ST. Andre for example.
19. For heavier pilots, flying with 2 reserves could put them over the weight range in accordance with glider sizes. Not to mention the additional cost. Enablement of deployment with either or both hands is an excellent idea!
20. Thanks for think in our security.
21. "Enforce a restriction in maximum speed" - a very good idea ... sorry not clear how this will affect the ideology of race in paragliding
22. You left out a key one: enforce that gliders must be commercially available 60 days before a comp. No protos!!!! (= licensed cheating). If you can't do that then I change my vote to keep EN-D.
23. Require SPOT or other satelite tracking device. Especially in places where complete cell phone coverage is not possible.
24. I disagree with no Homologation glide in any competition, I disagree with prototipe and similar's in any competition.
25. If the additional reserve requirements go forward Joerg, they should only apply to pilots flying the competition class gliders...
26. If you want pilots to start adopting & supporting Sport class, it needs to be spilt from Serial / Comp class. No need to run seperate comps, this is as simple as allowing sport class race a different course @ the same meet (i.e. Course turnpoint radi are larger for sport class, or same start with serial and comp, but different course altogether). When sport pilots are not forced to compare themselves with the better / faster serial / comp class, they will begin to look inward and compare themselves to each other. Having a thriving sport class is another way to breed a safer serial / comp class, as pilots won't feel as much pressure to jump up to comp wings (that perhaps they can't handle). What better place to demonstrate this than Cat.1? Thanks for asking the pilots you represent what they think CIVL!!

27. I do not agree with the Conical ESS, in Australia we had been using a remote ESS (3-5km) which allowed a race to that point, then the pilot still had to have enough height to glide to goal. Reserve. (if 2 is better then 1 then why now 4 or 8 or 16) My 1st harness had a dual handle (left & right) in the last competition I saw a lower deployment, the Reserve came up straight, out of the container, but did not open after 5 sec he went into the trees, a second reserve would have been of little use. A second reserve is a stop gap measure, what is needed is better pilot Behaviour (deferent to skills), better deployment systems and reserves. I fly a old style EN-D and these last years have seen some of the closest racing for years, my skills have improved.
28. Make new EN-E with little limited
29. Fulfill with all the conditions for competitions as max weight permitted, no modification in the gliders as accelerator pulley without limitations to can accelerate more than the other, control in the line lenghts to avoid glider with "hide trimmers"
30. Here you talk a lot about gliders, but never said anything about certifying the pilots. Other idea is that in Cat 1 we can just fli gliders that have at least 6 months on the market.
31. Aspect ratio restriction should be about 7.5, not 7.0. Reserves work extremely well right now. There is no need to force all pilots to carry two or to have two deployment handles.
32. A lot of sports have a requirement to qualify. This would be beneficial for paragliding as well. Pilots should have to acquire a certain amount of 'points' in fun, sport and serial class or EN B, C and D during competitions before they can advance to the next level. In the current system, novice pilots can buy advanced wings and compete. In military and commercial aviation, pilots are grounded when they participate in an incident or accident. The situation is thoroughly investigated before pilots are released for flight again. This should apply to competitions also. In practice this should mean that if a paraglider pilot ends up in trees, with or without reserve, he is grounded for the rest of the competition. This would urge manufacturers to design safer wings, and pilots to fly more carefully. All incidents should be published. Dangerous flying (soaring close to terrain) could be discouraged. Scoring software should detect this and penalize this similar to airspace violations.
33. Thank you for asking us. No one should be forced to become a test pilot (flying a glider with no demonstrated recovery characteristics) in order to enjoy and learn from competitions. Some sort of EN-E might accomplish this, but you didn't ask that.
34. In the long run we should aim to have a new class of glider for competitions. The class proposed by the PMA may be a good compromise but I do not believe that they will be accepted by National Associations in other competitions. Any specification for gliders at Cat1 must be also accepted by the vast majority of national associations at their own Cat 2 championships.
35. Today tasks are all about speed, so if you want to avoid 110% speed forcing on transitions, you must define every task turn point like inverted cone. Not just a goal one. Less speed means more altitude for same task/leg/tangent time. Problem is that I don't know any instrument capable supporting cone shaped TP .. GND speed or AIR speed are relative because change of wind over task area, so with 40kmh tail wind (in narrow valleys) speeds like 80-90kmh are normal. Some today race gliders fly safer/better on 30-50% speed bar. Speed should be restricted through class/construction of glider. Stability is provided by depth of a wing profile or amount/type of plastic/carbon reinforcements, so should be restricted/defined like aspect ratio too.

36. I would prefer a restriction on speed system riser travel, as I doubt measured speed limits are possible.
37. Please consider certification category for comp class paragliders. (gliders should be somehow certified to give pilots idea about how they behave) Separate class en-E category to do not mess with the other class.
38. It should be found a solution to stop comp-wings be certified in EN-D class with the result that EN-D-Class-Wings are only flyabel for more or less PWC-Level Pilots, whatever that means. This also shouldn't effect that a nice flying comp-wing is modified only to fit resp. to pass the current EN-D requirements but as a result losses the originally nice and perhaps even saver flying properties. If there ist established a comp-class in future for FAI 1 comps , it should be also obligatory to be forbidden for FAI 2 comps in order not to force other none PWC-pilots to also fly such comp-wings as it will be than more or less necessary, if such a none PWC Pilot should have a chance to get a good comp-ranking which is necessary to get relevant points in CIVL ranking. PWC Pilots than need to use two different wings in FAI 1 or FAI 2 comps. This is the price they have to pay if they want to compete with the best, as in all other high level sport. Over all, "better" material (concerning speed) shouldn't make the big difference in performance, at least in FAI 2 Comps, maybe also not at FAI 1 Comps....This should ideally only be caused by pilot's flying skills and/ or better handling/better climbing performance.
39. I think that the number of rescue parachutes, safety does not solve the problem of high-performance gliders.
40. Need a free competition for the development of the glider.
41. Hello, If speed win... pilots will use speed. If thinking win... pilots will use thinking. In Black-Jack, you may reach 21 but without exceed it. After the 2 crashes in the english open in south alps, I imagine something like B-J to not use the fastest way to win. It is in french, but I suppose google can does something.
<http://ronron.perso.neuf.fr/ThemesCompetition/courseFAI/courseFAI.html> Safe strategy must coming alone if you want it stay for long time. Regards. Ronron
42. no urge, the actually system is good, the seasons of paraglide are expensive, keep cool. but ok for reserve system deployed by either hand
43. Enforcing EN-D has been tested and is not contributing to an increase in safety. A restriction in max speed could be very usefull, but can only work if it can be tested & enforced properly (objectie glider test, avoid cheating etc.). Almost none of the accidents in the past would have been avoided with 2 reserves, so why enforce more weight, more stuff. Also, with the 33kg additional weight rule, 2 reserves means changing to lightweight harnesses that are not necessarily an improvement in safety (e.g. carbon seat plates braking in high G-forces). Forcing people to yet again change both glider and harness at the same time is 1. too expensive 2. dangerous (too many changing variables; see Piedrahita 2011). Remember Europe is in a economic crisis. Continuing increasing the cost of competition flying will just reduce interest.
44. to demand responsibility of organizers of competitions for not the correct tasks, decisions and actions! ! ! ! YOU can oblige to have ten reserve parachutes and to cut off speed system, but yet there will be no responsibility of organizers a safety problem you solve! ! !
45. I think EN-certified is the best way for our security!

6.4 Group 1001-5837

1. Read "No" as "Fucking Hell No". Fuck John Altridge, fuck the assholes behind the June 2011 decision, Fuck the disrespect against the OCTWG recommendation, Fuck the disrespect against the Task Force recommendation, and fuck pretending you actually give a damn about competition pilots' opinion Fuck group think Fuck lawyers
2. Introducing a comp-class is a good thing. Pressing comp-gliders into serial was a bad move. Having the Chance to do proper separate ranking for serial and comp also might be motivation on regular Cat. 2 events to get more pilots on wings they really can control instead of feeling forced to fly EN-D top end wings. Additional safety is good, but if we feel the need for having a second reserve during a regular comp then there's something wrong in the first place.
3. Problem is as much pilots flying wings that require an ability higher than that of the pilots. How many pilots involved in serious incidents of high end comp wings are up to date with collapse and recovery behaviour of their gear? This is a bigger issue than simply banning or restricting wings allowed to fly. How is the progression in technology and performance of wings meant to advance if everything becomes restricted?
4. I am an EN-C pilot, I don't presume to impose my opinions on higher level pilots, beyond the observation that pilots with less hours and experience than myself want to race hot wings, and therefore the issue is human nature, and maybe too many pilots of inadequate skill trying to compete at the very top level. I don't know how you get around this. The very best pilots are reasonably safe on the uncertified gliders, but many in the field as we have seen are not. Good luck, may you have the wisdom of Soloman.
5. Use the AU system of a wider 'End of speed cylinder' and a tighter goal cylinder to limit risks of racing close to ground. Conical cylinder - NO, it sets wrong incentives. Simple penalty for arriving below height x in goal would be another alternative. The proposed competition class makes no sense in my view as - with sufficient dev from manufacturers - gliders within EN-D cert could actually go beyond the comp category definition. (E.g there could be an EN-D glider in the future that manages to get certified despite top speed higher than x and aspect ratio higher than 7. Such gliders would then fall outside competition class but still in EN-D which would essentially make system and comp category pointless.) Nothing against a comp class but limiting speed and/or aspect ratio are the wrong approach in my view. Thanks for your work CIVL team! It's a tough job.
6. i would prefer a new competition class with some testing, but in absence of that, en-d class. PILOT TRAINING IS THE MOST IMPORTANT.
7. if AR is set too low, practically it may become the same situation like requiring EN D
8. Aspect ratio is probably the most important of all these variables...
9. How will this affect the intermediate/sport level pilot who will have to possibly upgrade his/her gear. Not viable to buy new gear just to fly in a comp
10. Bring back open class!
11. unique design "FAI CLASS" for competencies category 1.
12. Asses the level of the pilot, not only the glider
13. Accidents have not been because of openclass wings. I would support going back to open class.
14. keep it simple!

15. Hello friend's, i'm flying since 1993. My first 2 linner glider 4 years ago. I Never have a big colapse without control. NEVER ! Year after year the big trouble are the bad pilot, not is bad equipment (my opinion). On this current year, me and my friend's from Brazil flying in Quixadá - Bazil, many-many Kilometers at the turbulence extreme and strong wind whith the 2 linner glider, without problem. The task's need change. Is a fact ! Thanks for your preoccupation, Cheers Carlos Boni - Brazil CIVL 3024 ...
16. MaxSpeed = 60km/h MaxSpeed without trimm or Speedbar = 42km/h EN-D requirements with fix harnes-type(s)
17. Safety for competition
18. The EN-system is messed up: Both Ozone Enzo and Advance Omega8 are EN-D, but their characteristics in critical situations are very unlike!
19. you may add requirement that the wing has to be out of the testing proces at least 3-6 months. so that whoever is willing to fly with it have time to fly it on his own a bit at least. Otherwise let the designers design at will, and they will do miracles with the sport.
20. The reserve system work just fine, having two reserves increases travel costs and reduces convenience and reduces the number of pilots prepared to travel and enter competitions while adding very little if any additional safety.
21. Make a competition class. With normal certification the level in D, C and B Class changed too much. (For Example: If an Enzo is D, we give Passion and Trango a C...)
22. -Pilots have to do SVI trainings with the wing used in comp- to feel how it works while stressful situations. it will be good when this will be mandatory in the school already. take a example from skydiving- also for the reserve system, they also have one but before you jump first time you know exactly how to use it...
23. Ruslan Bushchak
24. I think that gear is covering only a small part of safety aspect. Some other topics (like pilot level vs wing level or a task definition requesting more endurance and analysis than just pushing the accelerator) could be more efficient. But it is easier to say than apply... Personally, I decided to give up competition and to focus only on XC because of several reasons: I din't really accepted the decision to forbid open wings (I think the last generation was safer than whatever has existed before), I can't (and don't want to) buy a wing only dedicated for competition and I used to be frustrated because of too short tasks. May be I would have a different opinion if I had practiced at higher level of competition (FAI1) than only FAI2 or national level.
25. I don't think 2 reserves is the solution, maybe just one usable by both hands, but nothing more!
26. two reserves is a stupid solution! I would prefer a single reserve with a pyrotechnique extraction specially designed for paragliders!.
27. Please consider one-design competitions.
28. Interdiction des systèmes d'accélérateur bloqué: Tel que les trims, aficheurs, étarqueurs...
29. enforcing a restriction in max speed? if reasonable, like 70 km/h than yes. if less, no.
30. New Comp class required. Traditional EN D gliders should remain as the jump from EN C to EN D comp gliders is to big.

31. Mas competencia de pilotos y menos competencias de parapentes. By google translator (More competition and lower skilled pilots of gliders.)
32. In my opinion It is very important to include the recovery tests of flight incidentes
33. Keep the open class gliders out of EN D. The Enzo managed to destroy a lot of trust in the certification process.
34. Keep it simple and safe !
35. There is a clear lack of real datas about safety issue. For reserve, I would prefer to ban drawer making it difficult to extract reserve with G. Maybe a mandatory drag-chute could avoid high G situation. There is no need to hurry, in Annecy "Grands Espaces" have a high G machine to allow pilots to open their reserves under high G situation, we probably will learn a lot about issues with harnesses!
36. Aproximate the most posible to free fly
37. Serial gliders should be exempt from the double reserve requirement.
38. Important questions about glider and task but need Require see informations about the PILOT(require SIV and to comprove expirience of each pilot for exemplo) Clayton Alvarenga Resende CIVL 12464
39. Two reserves should be a requirement for non certified gliders.
40. The End Speed Section should be conical and lower arrives has less points
41. Championships with restrictions in line of a serial class (but with more predictability) will ensure more innovations with the use for everyday/ sports pilots. A good example will be requirements for safer harnesses and reserve systems (two.-sided).
42. I hope every pilot know his "level" and will be fly on glider with understand all risks.I do not mind about competition class but I do not will be fly on the wing this category. Good luck all pilots!
43. also light or heavy pilots must compete fairly. a rule that i think helps is that the pilots must be in the weight range of the paraglider
44. A reserve system that can deploy fast, the pilot can deploy without throwing by hand.
45. Regarding the EN-certifications, I agree that they depend a lot on the test pilot, but I see the EN-certification as a non-perfect-but-what-else-can-we-use added security measure in a very delicate moment for our sport, after the last world championship incidents. In my opinion, we cannot just rely on manufacture rules, because we cannot risk to test if they are enough with non-professional pilots (most pilots of FAI cat 1 competitions). First, they have to prove that aspect ration and max speed limitations, together with task changes, significantly improve the security in competitions, and in 2014 or 2016, it can be reviewed if the EN-certification is removed. Finally, points G) SIV, I) Manuals and J) Availability in advance, of the document provided, IMHO, are useless... it also have been proven that recommendations are not enough when people are competing at top level.
46. Change task scoring to discourage high-speed final glides, In any case, I think that this kind of changes must be tested long before the FAI1.
47. Perdon pero escribo en castellano, creo que el principal cambio deberia estar en el tipo de competencia, hacer mangas en las que la pericia y las buenas decisiones puntuen mas y no tanto el quien tiene mas cojones para ir full speed hasta el final. Saludos

48. I think every glide has to be EN-certified, and the pilots have the choice of how much risk he wants to take.
49. Further to the PMA proposal, competition gliders should be subject to some security checks as well. As can be achieved by requiring them to comply with EN-D or a special, higher competition norm. In addition to the question of competition gliders and to competitions at all and considering one sentence of the introduction of the PMA proposal: "Almost any glider can pass whatever test with a good test pilot at the controls (...)" ; considering this confession, I urgently request the CIVL to use its influence in international discussions to help making EN-certified gliders (classes A to D) safer by revising the EN-certification rules! The measurements and the definitions of EN-certifications must be made more robust to test pilots input. I know that the German DHV already did test flights with sophisticated recording equipment to record a lot of physical parameters of the wing reaction to test manoeuvres; that might be a starting point. It should also not be allowed anymore to add special equipment to tested gliders for initiation of test manoeuvres.
50. While I do not suggest that a reserve that can be deployed by either hand should be mandatory at present, it could be suggested as a future PMA best practice, along with a preference for systems (e.g. clover type) that are easier to deploy under high G. This way, the new systems will gradually replace the old ones and pilots will have time to adapt at their own pace, as opposed to being forced to change abruptly in order to keep up with new regulations.
51. Additional: * Prevent flying above fire * Prevent/stop task if there is back wind on start.
52. A second rescue should be recommended. Restriction of wingspan, so that lighter pilots have better chances. World Championships not in Jan/Feb or July, but instead in April or September. Go for "saver areas" weaker thermals and better rescue.
53. Questions : - why not focusing to reduce speed of stall, i.e. 26km/h ? I wonder if that would limit ratio. - Concerning your idea to reduce speed at the goal, I imagine your proposal gives too much place to instruments and electronics. Perhaps you could just enlarge the goal distance line a bit. - for the rescue, please propose a system that could be manufactured for all pilots. Should I buy a very expensive special harness exclusively for competition ? + 2 reserves ?
Thanks you very much, Pascal
54. We need innovation to continue. Innovations that feed into the mainstream. However - I have little faith in the objectivity of certification...
55. I think either 2 reserves required, or reserve accessible by either hand required
56. None
57. creo que no hay que pensar en dos paracas como primordial, sino en que las velas tengan una homologación como corresponde, sino que no homologuen. creo que EN no está haciendo las cosas bien.
58. Thank you for your concern, I hope to be useful.
59. Simply use wings that can be safely reset. A wing that can go out from a stall "safely", the stall will be used as a reset in bad situations whatever the wing is.
60. I think more important is to implement a system reserve automatically release the glider, have been cases where the pilot fails to release the G forces reserve because they have not allowed.
61. Thank you

62. Everything was so good before you started to change the rules...
63. I think the factories can't develop the wings using the Championship to test it. Some people said restrictions in competition cuts the evolution. I don't think so. Because nobody says some factory can't develop dangerous wings, with some restriction speed or aspect ratio. I said to the factory: Do your super wings, make great XC flights, make a distance record, stay in the air for hours and beat the speed record. And the day your wing is enough safe (just EN-D) enter to the Comp. Just like F1 race cars.
64. Progress is good.
65. I think the 3 first questions are mutually exclusive. If I reply 'no' at "1", i have to reply yes at "2" and "3" ... and I am not glider designer.
66. Regarding reserve systems, paragliding rigs should develop to a system similar to the one used in skydiving: a 3 ring-release system, connected to a static line reserve lanyard (stevens cutaway type), deployed by a single procedure (cutaway pillow near the chest strap) in case of need and a wing type reserve (seven cell, low forward speed, accuracy type). With a good system, paraglider pilots will need just one reserve, but one jettisoned by a reliable system. The all system would be one similar to this - <http://www.xcmag.com/2012/04/cross-country-magazine-test-supairs-new-base-paraglider-reserve-system/>. This should be enforced for all paragliding rigs.
67. I believe that competition is the natural environment to test the future gliders. Restrict the minimum safety requirements, don't restrict anything else. Even if now, we see some aspects has something against security, with more development we can achieve future security. Don't kill pilots, but also, don't kill innovation and new ideas!
68. If decision will give an option to use wings what does not be certified according to EN-D demands. That would be good for pilots whom are confused how to choose certified wing. Because one can be classified to EN-D and still it needs PWC level ability and an other is clearly belong to EN-D and gives a bit more option for leisure pilots (whom not often are participating to competition but fly actively xc). A hands what are locked by twisted risers not able to throw any parachutes even pilots are carrying many of them. Or if G-forces are pushing awareness out from. Then there might be better to have sensor what follow a tension of pilot body and computer what be able to release reverse based to sensor information.
69. Task scoring to reduce speed into goal should just be an end of speed cylinder not a cone
70. Yes No No opinion Require EN-certified wings up to EN-D Enforce a restriction in aspect ratio Enforce a restriction in maximum speed Change task scoring to discourage high-speed final glides Require two reserves for each pilot Require a reserve system that can be deployed by either hand (left or right) for each pilot
71. task scoring already has remote end of speed, you only need the task committee to use it,
72. Create a new certification category (like EN-E), in order to have certified competition gliders without distorting EN-D class.
73. A conical goal cylinder is a bad bad idea. One important thing that makes a race interesting for spectators and - yes - also for pilots is that theres a clear goal line so you can see who's first crossing it. If the task scoring is to be changed an altitude bonus definitely would be the better choice. It's simply more obvious and better to understand.
74. Paraglider are no sailplanes. High speed has nothing to do with that sport. If even some boys think they need to have. Although every one likes flying a quick wing whilst soaring. Let

speed races with the sailplanes, that appears rather cool instead of crashing instabile PG's in full speed.

75. The actual situation with pressing competition gliders into the EN/ LTF certification is an mistake, from my point of view. The gliders are not the problem, the pilots are. Within the competition they do stupid things/ decisions they would never do in normal life. (My own personal experience...) For cat. 1 competitions there should be an entry test, like a SIV, or something else be created. Most of the acrobatic events have a flight test, before people can compete there in the official competition. So why not in the cat. 1? The delivery time between the delivery of the glider and the event with 4 weeks is to short! Nobody can ensure to have enough time to have a training on the new material. My proposal is 2 - 3 months between the delivery to the pilot and the event. The weather can be worse, the job, family,... Anything can happen. An intelligent task setting would also save lives. The conical cylinder may help, but is not practicable, because of the worse GPS system. The interpreter and the event management will have much more discussions about the scoring... I think a short speed section only and the higher points for reaching the target line would make more sense. The speed section then can be set over an "safety area" visual for the event management and with much more high safety over ground. A second reserve will raise only the weight of the equipment. The energy while a crash is raising then, too. Also the mass in a twist situation will be higher. An clear design of the harnesses with a deployment with both hands would make more sense... Will cost more money, but will have a very good influence in the design for future harnesses for the normal people, out of the competitions. At the moment my Genie race is for me a compromise only. I can handle the reserve only with the right hand. No chance to reach the handle with the left hand... A mistake in the engineering! Why this has to be so? Sincerely Marc Tobias
76. It will be impossible to enforce a restriction in top speed unless some form of measurement is available for meet directors to easily use at competitions, and I think if the EN certification is tightened up and used more effectively, this will negate the need for restrictions in aspect ratio and top speed anyway. I have not seen any evidence to convince me that two reserve systems will make competition flying significantly safer. However, requirements for pilotage training certainly will, we have the evidence for this already. So I am disappointed that this isn't one of the proposals, along with the competency assessment and accreditation of SIV training professionals.
77. The max. speed of the comp. glider should be 60km/h, so it is fair, the risk is not so high, we have nothing to change and every pilot has much more fun!!!
78. I don't believe the conical end of speed is necessary. In Australian competition, we have the end of speed section almost a thermal distance away from the goal, thus eliminating the urge of the pilot to use full speed bar when approaching the end of speed, as they risk landing short of goal if they get too low.
79. About reserve system ideas, I guess its more important to avoid situations were you have to throw the rescue.
80. Thanks for taking up this topic at the meeting.
81. I can't judge if the proposed ar and speed limitations are the right ones. Will this limit the possibilities for innovation? Safety have highest priority but the possibility for innovation shall not be limited by to stringent roles.
82. The game rules can avoid more risk situations than the glider configurations but, ok, lets work both sides.

83. Don't have accidents because the pilot only use 1 reserve, I have 19 years of experience.
84. I think en-d class is good choice for competition. Because human life is most important on the other hand new en-d gliders is like a immature fruit they are not refined and need develop.
85. The current "end of speed" cylinder works quite well to avoid excess speed close to terrain.
86. I think a pilot should be required to demonstrate a certain level of experience / competence, in order to fly uncertified gliders in competition. If pilots want speed of tactics - fly a hangglider or sailplane.
87. I'm not very knowing of the ins and outs of fatal accidents. But my guess is that the g forces implied make it very hard to deploy consciously and adequately a reserve system. Having 2 systems probably won't help. So I guess that making gliders that are safer, by restricting speeds and aspect ratio maybe will help make them more manageable for recovery and less prone to high g's under bizarre configurations. I liked the idea of having certified gliders imposition because in my mind that would make it more about the pilots than the gliders. But it seems that it creates a certification safety problem. If it's unsafe for certification tests, why would it be safe for comps? That's a question to be set side to side with the idea that enforced certified gliders for comps in the first place. F1 made many changes after Ayrton Senna accident. Banned electronic controls, limited engines, limited aerodynamics. Why? So that it wasn't all about a race of technologies, it's all about a race between pilots. Who's the better man with the best choices and with the best physical and mental conditions. Bringing that to paragliding, the world and continental champions will still be champions if they're all flying EN-C at the Comps, or EN-B's. So why not? It's harder, it means the pilots will have to climb always very well to get a decent glide, it's more safe, and the idea behind ESS of a conical shape would be implied all the way through the race by making them have to climb more during all the race instead only at the final glide. This is just a thought.
88. The issues is not just the gliders. Its also the tasks. The task committee and specifically the safety committee must ensure safe tasks are set and dangerous tasks quickly stopped. Members of the safety committee should not be members in the comp with a vested interest in that days personal scoring. If you were to make the safety committee independent from the competitors safety would be greatly increased. Also - the safety committee must sit in on the task committee and must have veto rights. I lost first price in the Porterverville 2012 pre pwc because I was not willing to continue flying on day 7. I came second because I have a kit and family and responsibilities and not willing to crash for glory. Cheers
lukas. robo.barnard@gmail.com
89. Safety First! The Payment isn't good enough for more Risk, than than fun needs.
90. I think most fatalities have been early in the task so high speed final glides have no bearing on safety. I may be wrong?
91. I'm not a experienced XC pilot, but I'm observing the accidents. And with a certified wings there is more safety. In the end - life is what matters most.
92. Need For Speed and pushing for the same is what is causing these accidents in my opinion. A flexi airfoil cannot replace a rigid wing, so lets keep the flexi airfoil within its safety and speed limits.
93. No comment. Thanks for keeping us informend of the results of your survey :-) Fly safe.
Regards. OliveM, Paris ----- <http://volatile.parigot.free.fr>
<http://photos.parawing.net/gallery/olive> <http://montelol.fototime.com/ACCUEIL>

<http://volatile.parigot.free.fr> <http://photos.parawing.net/gallery/olive>
<http://montelol.fototime.com/ACCUEIL>

94. I think two reserves will greatly add to the number of accidental deployments and create a greater problem that it tries to solve
95. i would like to see comps only for one category like Open or Serial END or Sport because in a comp with all the categories racing the same task demotivate pilots with lower performance wings. The task always seem to be designed for Open class and for best performance wings. The different categories should race each other on task designed for their wings...
96. It was rather nice in 2011 when rules changed and everybody had nearly the same type of glider a normal EN D. We could compare the pilots and not their material. It was more fun even if I lost much money with the quick changements
97. Thanks for make a possibility to express my opinion...!!!
98. Be safe, but be fast ;-)
99. The objective is Safety and Evolution, not Restrictions. New class "EN-E" like DHV 3. Limiting speed on manufactors would limit evolution. Enforce Speed limit when flying LOW - track checking..
100. Hello, I think rules are necessary to prevent pilot from bad Ways of flying. Equipment is only one thing, easy to check... Spirit of free fly is a melting pot. I like this. Standardisation, équipement, rules kill innovation, research, difference.
101. I'm not flying on cat.1 competitions yet)))
102. Thanks for this survey!
103. If idea of having 2 reserves come from the accident at Piedrahita WC, I think it's enough to have a reserve which can be deployed by either hand. Other wise pilot must have 2 rserve.
104. I agree "Enforce a restriction in aspect ratio", but I want to continue to use my Enzo.
105. EN-D wings only if a special category for competition wings cannot be created.
106. I hope that al is good for our sport, the flight.
107. In my opinion the restriction of aspect ratio, maximun speed and other restrictions should be a requirement to certified the wings as a EN-D. I do not agree with a new Competition Class.
108. too much politics!
109. IMHO wings for competition should be certified, but not within an EN-certification, in order to : 1) separate distinctly competition wings (which are suitrable for 2% of all pilots) from "D" EN-certified wings (which is not anymore the case today,) 2) allow the certification rules to easily (yearly) evolve according to the evolution of equipment (and as such serve also as a testbench for the future evolution of the EN-norms). ie an open-class, with includes behaviour tests (stall, deep spiral, etc) would be fine.
110. LIMITAR "UM POUCO" PODE SER O CAMINHO, NAO MUDAR NO MODO COMO E NOS PARAMETROS DA TAREFA
111. EN certifications should be revisioned and upgraded on yearly basis. It is mandatory thing for the sport. If you don't INSIST and FIND THE WAYS how to do it, everything else is useless. Paragliding should continue the evolution process, but safety benchmarks must be set. It is possible to do it! 2) PMA proposal doesn't look simple, so I don't like it. 3) Start supporting

- and promoting alternative task settings and scoring in FAI2 events with rules that will lead to more safety and possible acceptance for FAI1 comps in future. Radoslav Ostermann
112. Every Decision will come down even to local competitions. Decisions can stop or handicap further glider development even in safety.
 113. AR and top speed limits for short terms might be beneficial as they've have been in motorsports. But it shouldn't stifle creativity and these limits should only be for defined periods of time, say 2 years. Also, for the future, instead of two reserves I think the cut-away system once perfected should be required. And finally, the certification system should include a comp class which has been load tested and simply stall tested to make sure it full stalls nicely without surprises.
 114. HI, I think there in the long run should be a full speed collapse test designed/defined, so that we do not end up in a "R11/Boom 8" situation again. E.g En-D at trimm-speed testing + additional new test with some pilot action allowed at max speed. An FAI-competitor should not have to fly an unrecoverable glider to be able to win a competition.
 115. Rework EN-D certificate. It's ridiculous at the moment..
 116. What if you decide to use cutaway system beside 2 reserves?
 117. Instead of two reserves I'd enforce the use of quick-out carabiners and/or rogallo shaped reserves
 118. Task scoring change as proposed (points for altitude) is not technically reliable. At least for now some other method should be found.
 119. Although it would difficult or impossible to enforce, I would prefer to see some sort of system in place to test a pilot's proficiency before they are able to race the their preferred model of paraglider. Some sort of test to achieve "comp level" otherwise you have to compete on an EN-D? Restricting glider design will not necessarily produce safer gliders or safer pilots
 120. I think it is more important to enforce limits on the wing beavoir trough flight tests than enforce particular limitation on design, such as maximum speed and aspect ratio. - Change task scoring to discourage high-speed final glides looks a good idea, but i think that it will complicate the things with no safty improve in pratice, because all the competition pilots know that if one wants to keep in the gaggle, he must fly all way at maximum speed. Besides, it looks to me that most of the last years acidents didn't happened on the final glide, and there are easier ways to acomplish that, like for instance, setting a larger cylinder (before the goal cylinder) as the end of speed secction.
 121. I think the problem is not the glider, the problem is the task in dangerous areas. if you have a responsible task comity and the organizer = less pilot in border live or accident. best regards Ricardo Zepeda civil 8683
 122. Helo there, The PMA proposal may work in theory but not in the practical situation such as Speed limit and final speed section. Since 2 years,as a designer, we have learned a lot to be able to get EN D with enough safety not only just pass the EN D but also easier to fly with good handling. What we have seen with boomerang 9 after certification EN D work it keeps performance and increase the safety in fact, thanks to the EN D. If there is no test we would not work hard to achieve the both performance and safety. So it is clear if CIVL keep the current rule then the designer will do the job. It was too new situation for every brand last 2 years and we had to pay something to learn. We should keep the EN D certification to be make rule clear and fare for all brand. PMA proposal is good inside of building but not in the air. One more thing to consider is that as you see PWC Super final in Colombia 2012 was

- perfect area to go,10 task without big accident. FAI CAT1 competition should consider the area more seriously. Gin Seok Song Delegator of Korea and designer of GinGliders.
123. Both EN certified and uncertified gliders should be allowed flown in Cat 1 comps to give pilots a genuine choice. Having an open class or comp class will discourage manufacturers to squeeze comp gliders into the recreational class. Remember the description of pilots who the certified gliders are suitable for! Can we have DHV 3 class back? That could separate recreational and comp gliders. Having fixed rules for 2 years minimum will again have designers create gliders to certain parameters without necessarily ensuring safety.
 124. Authorize EN-D EN-certified wings Allow aspect ratio restricted gliders Allow speed restricted gliders Allow task committees to set scoring formulas to discourage high-speed final glides, although such a formula without perverted consequences may not exist Authorize two or more reserves for each pilot Authorize a reserve system that can be deployed by either hand (left or right) for each pilot
 125. Continue with the actual competition system, about the EN certified wings.
 126. I have just changed my wing, we cannot change it every year. Please understand us before making a lot of changes.
 127. PMA recommendations are excellent.
 128. and ensure wings available for FAI 1 are available and tested in all sizes, including smaller pilots, with manufacturers making special efforts for these wings to be as safe and performant as the larger ones.
 129. We saw in the last PWC superfinal.. not only the final glide was high speed but every transition was full bar. Therefore i would prefer instead of leading point have altitude point. I explain. having a calculation (i don't have a formula) where people will be rewarded to fly high (safe) or having maybe more turnpoint where entrance and exit should be above a certain value (i know somehow it was discussed and we said the GPS altimeter is not precise enough.. simple answer take enough margin) Speed limitation: I said no, competitor will always find the trick to get additional 2 or 3 km/H or more. Aspect ratio i know about pro and cons of Aspect ratio... but aspect ratio without talking of profile center of gravity shark nose etc... When talking about security, it is more than just speed and A/R it is profile center of gravity center of lift force (sorry don't know the word in english) also pilot qualification... thank you
 130. Thank you!
 131. If the pilot is not any more afraid of the wings reaction, then it is dangerous. There happen accident with top EN-B Wing, because pilots thinking this wings are safe. Limited topspeed means for many pilot: this wing is safe at fullspeed. Limited aspect ratio means for many pilot: this wing is safe in turbulence, with colaps, crawats etc. Keep it free as possible and teach the pilots not to follow blind certifications. Even with the best winter tire it is dangerous to drive on a ice-street .
 132. I want the competition class back, but used only by experienced pilots.
 133. I think that EN-C and EN-B gliders that also fly in competitions should not be required to have two reserves. EN-D glides or uncertified gliders would be safer with two reserves as they are much less stable.
 134. I recommend : Proposal for a Competition Class + EN D requirements should be valid together. So FAI 1 gliders should fulfil the PMA proposal and EN D test together ! (to check the opening behavior of the glider)

135. The differences between EN D and open class is negligible. The gliders are only a contributing cause of accidents at CAT 1 events. Far more significant are aspects of the comp task format that need to be addressed.
136. need to hav don siv kours whit the glider the pilot is flying
137. Requiring certification up to EN-D has damaged EN-D and has not had an appreciable improvement on safety. CIVL needs to establish a proper Comp Class (not the Ozone-PMA proposal) outside of EN-D. Until then, comp class gliders within EN-D (EnZo, Icepeak, Core-3 & Boomerang 9) need a competition, or Race designation.
138. unlimited requirement could cause unlimited risk. Competition is not extreme flying test. There could be another kind of flying, such as record flying etc. Competition must be fair for every pilots.
139. In my opinion, 2 reserves will not improve safety as either we ate too low to deploy the 2nd reserve or if we cannot deploy the 1st one, most likely we will not be able to deploy the 2nd one. This being said, the technology of our reserve is quite old and a investment to develop a new technology (similar to what Rodriguez is developing) might help a lot.
140. It's not comment. I'm new pilot. I haven't attended any CAT 1 Cross- country competition (I attended only 2 CAT2 Xc Competitions). I don't have enough knowledge to give my own opinion about question number 2,3,4. Thank you for sending the survey!
141. keep free flight: free
142. Prioritize strategic decision making tasks (many routes, height bonus points, etc) instead of full speed bravery ones.
143. Pilots should be free to define their own personal safety limits. Example: I choose not to drive my car at the top speed in city traffic because of the potential for accidents
144. Rename "EN D" to "EN Competition"
145. Each pilot can choose in which category he want's to fly. The disadvantage of the rule only certified gliders can take part in competitions hits the former EN-D pilots. They want to fly a wing with more potential than an EN-C glider and they can't compete with wings like Enzo or Icepeak. So this rule made a lot of pilots fly wings, they don't control anymore like former EN-D wings. And I don't think that the aim of less accidents is fulfilled. That's why we need an open class!!
146. Also, we can do like glider competition: if you have a good glider, then there is a ratio, ex : 0.9 on your score. The better is your glider, the smaller is the ratio, so, it discourage peple to fly high performance gliders. Thanks
147. I would eliminate the requirement to test END gliders "with out pilot's intervention". but of course, that would be a change in homologation, maybe EN E
148. Aspect ratio, maximum speed are design parameters. Therefore, manufacturers should be free to optimize them, since the glider remains safe, ie it passes the safety tests of EN. We should not limit creativity in any area of human knowledge. If the test of EN is not suitable, or it is difficult and expensive, then we should change it.
149. highspeedFinalGlides Yes, but with enough highness (safetyTurnpoint before goal)
150. I want to thank you for the concern you have shown regarding the competition gliding safety.

7 Discussion

Table 1 shows that the higher ranked pilots are more likely to have their Email addresses set in the WPRS, and were more active in filling in the survey. This of course since the higher ranked a pilot, the more likely will he or she be affected by the changes discussed here. The higher level of involvement by highly-ranked pilots is also demonstrated by the number of comments left by each group (Table 14), which shows that 24% of the top 400 pilots left a comment, but only 20% of the pilots in the 1001+ group.

Opinions on the individual questions also shift depending on where in the WPRS pilots stand. Because of the different group sizes, it is very important to look at the results within each group, rather than the overall results – otherwise the biggest group (1000+) will always skew the results in its favour.

7.1 *Original questions*

As Table 6 shows, only the proposed changes to scoring receive a majority of “Yes” votes from all the groups we looked at, with a little more than 50% of the top 100 pilots, and over 75% of the 1001+ pilots being in favour of it.

The proposed speed limitations receive a relatively clear “Yes” from the pilots ranked 1000 or better, with 58% of the Top 1000 pilots selecting “Yes”. A small majority of 56% of the 1000+ pilots is against it, though. Due to the different group sizes, this results in an overall agreement of 49% - a very tight result where it is extremely important to look at the individual groups to come to a final conclusion.

The same is true for the question regarding a reserve system that can be deployed with either hand: The difference between the “Yes” and the “No” votes is very small, across all groups. The highest number of “Yes” can be found in the 1-100 and 401-1000 groups, with 51%. On the other hand, only 47% of the 101-400 group voted for it.

EN certification is slightly favoured by pilots in the 401+ group, but 58% of the Top 400 pilots refuse it. Even within the Top 1000, there is no majority for EN.

Opinions seem a little clearer regarding aspect ratio limitations: Except for the 401-1000 group, where exactly 50% were in favour, no other group submitted a majority of “Yes” for this.

The verdict on the two reserves proposal is quite clear, no group favours it. The number of “Yes” votes goes from 40% in the Top 100 group down to 26% in the 1000+ group. This can probably be explained with concerns amongst less active pilots that this rule will trickle down to FAI Category 2 events eventually, forcing them to buy a new harness for the few competitions they participate in every year.

7.2 *Wings*

When looking at the wing options, none of the combinations emerges as a clear favourite. Pure open class is the favourite for Top 100 pilots. The PMA wing is the preference for the 101-400 group. The 401-1000 group prefers the same limitations, but on an EN-certified wing. Lastly, the 1001+ group prefers either a pure open class or a pure EN certified glider. Seen across all groups, pure open class and pure EN are very close to each other, with a slight advantage for pure open class, which is the most pronounced amongst Top 100 pilots. Surprisingly, even in the 1001+ group, the same number of pilots is in favour for pure open class as for pure EN. Of the individual limitations (either speed, or AR) on either open class or EN wings, speed limitations are slightly favoured, especially by the top 400 pilots. But in general these options are less popular than the four others.

7.3 PMA proposals

While the PMA wing fares relatively well in comparison to other options, its appeal seems to diminish by adding further changes to it. Less than 80% of the pilots who opted for the PMA wing also said “Yes” to the proposed scoring changes. And only about 25% of the PMA wing proponents are in favour of both the scoring changes and the mandatory second reserve.

7.4 All yes/no

This was mainly done out of curiosity, also to see to what degree the survey participants may only have blindly clicked on the same answer for all the questions. Even if this had been the case, the results even out across the board, as the same number of pilots clicked all “Yes” as did all “No”.

8 Conclusion

The level of participation in this survey is very high, especially considering the short notice at which it was conducted. Notably, the participation rate of the top-ranked pilots is exceptional, and speaks to their interest, their high level of involvement and their need to be heard by those defining the future of their sport.

In the previous sections, I presented the outcome of our survey in a hopefully neutral way that does not take into account my own preferences. Being an active competition pilot myself, I do not believe that I am in a position to draw specific conclusions from the above which would then influence the readers of this document.

Instead, in a more general vein, I would like to propose that, given the results presented in this document, one thing should be obvious: The paragliding competition world is a very heterogeneous one. For any decision or proposal, a sizable fraction can be found that is in favour, and a similar one that is against it.

From this it follows to me that prior to taking major decisions regarding flying equipment or scoring, CIVL should become very clear about which pilot group it wants to cater for with its Category 1 competitions. Who are the target participants for the World and Continental championships of the next few years? The top 100, top 400, top 1000 or any other group? Once this question is answered, further decisions should be relatively easy to make given all the information available, including the results of the survey presented here.

Zürich, February 11th

For CIVL, Jörg Ewald