AGENDA ITEM 6.2

REPORT OF THE CONTEST DIRECTOR

World Advanced Glider Aerobatic Championships & European Glider Aerobatic Championships

Jämijärvi, Finland
17-24 July 2010

Kari Kemppi

Dedication

The Championships were dedicated to the memory of Matti Peura. He was the key figure in Finnish glider aerobatics, and due to much of his personal effort, the sport has grown rapidly in Finland in the past years. Matti was particularly involved in initiative to bring the World Advanced Glider Aerobatic Championships to Finland. He was to participate in the competition but become ill couple months before the event, and died only two days after the closing, on the 26th of July.

Event

The two championships were held together in order to make it easier to finance the event. The two classes could share aircrafts, and thus competitors could also save some of the costs.

1st World Advanced Glider Aerobatic Championships
- 31 pilots
- 7 countries
- 2 independent competitors

10th European Glider Aerobatic Championships
- 28 pilots
- 8 countries
- 2 independent competitors

Organising Group

The event was jointly organised by Aerobatic Club of Finland and Jämi Aviators, the local club at the contest site. A big, two-day fly-in and airshow was arranged just prior to the competition at the airfield, and some of the infrastructure costs could be split between the two

events.

Contest Administration

The contest was run efficiently by volunteers even though it was the first ever international aerobatic competition for most of the crew members. There were three key teams to ensure the smooth operation:

- Scoring team
- Ground crew
- Office team

Each team had an experienced leader who was responsible for running the team, and assigning tasks to each team member.

International Jury

President: Mike Heuer
Members: Madelyne Delcroix and Manfred Echter

The International Jury worked closely with the contest director both before the event and during the Championships to ensure that plans for the contest were progressing well, and that the infrastructure and staffing being implemented were appropriate for a World Contest. Their advice and support throughout the event was very much appreciated.

Technical Commission

Chairman: Olli Walden (FIN)
Members: Radoslaw Gorzenski (POL) and Harro Renth (GER)

During the registration one aircraft was found to have its 3rd party liability insurance coverage too small. Luckily we were able to get a new insurance, although it meant an extra 340€ cost for the team. According to the Finnish (and supposedly all EU member states') aviation law an aircraft must have a 3rd party liability insurance with at least 750 000 SDR amount. It would also be very risky from organiser's point of view to knowingly let somebody participate without adequate insurance coverage.

No major incidents happened during the competition.

Judging Line

Philippe Küchler acted as a chief judge.

Because of the large number of competitors in the two classes, total of 59, days were long and breaks were short and few. Because of strong winds we had to fly late in the evening, and even start twice at 06:00 in the morning.

Judging line did an excellent job. Nobody complained about long days and short nights sleep,

the organisers are very grateful to everybody in the judging line.

Judge	Assistant	Scribe
Küchler, Philippe	Dörder, Georg	
Arvidsson, L-G	Allerhed, Lars-Ake	Hägg, Inga-Lill
Bajzik, Stanislav	Kaftanova, Alena	Stepankova, Dana
Barthold, Timo	Bartholdi, Tuula	
Buckenham, Nick	Bois, Caroline	
Gaillard, John	Nilsson, Bo	
Hau, Stephan	Renth, Harro	
Lambert, Peter	Salzinger, Otto	
Louvel, Remy	Dugas, Alain	

Video: Pekka Kakko
Runner: Santeri Kemppi

Scoring Team

Scoring team was lead by Kimmo Virtanen and it had two members: Lasse Lautanala and Mikko Jägerholm. Kimmo is a seasoned judge, and knows from his own experience what really matters in the judging line. Lasse has served in scoring team in national events, and Mikko is active aerobatic pilot and a judge himself. The team understood well what was required and expected from it, even though it did not have any previous scoring experience from international championships.

ACRO system was used to produce flying orders and contest results in a format that could be uploaded to the CIVA Results website efficiently. Madelyne Delcroix checked all of the Free Programmes before publication and found errors on a small number of the submissions which were corrected prior to publication.

Results were fed during the flights, and preliminary results were published in less than 2 hours after the last flight of the class. No errors were found in any of the scores, and the process was very smooth and efficient.

Flight Director and Ground Crew

Ismo Aaltonen acted as a flight director.

The main goals were flight safety, ground safety and to produce maximum number of flights per hour. All goals were achieved by good co-operation between ground crew, tow pilots and competition teams.

Jämi airfield is not an easiest place to plan a competition: Especially take-off and landing areas are fairly narrow and there will be ground traffic across the field. This required personnel to control and observe the area.

Airspace around Jämi airfield was designated as a temporary danger (D)-area in aviation bulletins. The aim of D-area was to avoid any other air traffic except competing gliders to fly in the box or in the vicinity. This worked well and flight director received several phone calls from pilots requesting to visit Jämi. Jämi radio frequency was also monitored.

Towing of gliders was done by three tow planes which had fairly same performance. One towing took approximately 12 minutes to height of 1200 meters. The judges were able to have a glider in the box in seven minute intervals i.e. 8,5 gliders per hour on average. Stop watch was used to sequence the take-offs. The flight director instructed the tow pilots the climbing and descending procedures.

All the tow planes were equipped with GPS-devices and the box was created by waypoints. Active route went through the center of the box. Tow pilots were able to follow the active route to the box. Also distance to the box and deviation from the route (in meters) was displayed to tow pilots. The flight director checked GPS's each day before the flights and also after flights to check flown tracks. This GPS-system helped tow pilots to fly precisely into the box. The system provided equal starting position to each competing pilot. The procedure will be described more in detail in Learnings section.

Weather Information

Weather information was obtained from websites available for SAR service in Finland. It includes almost a real time radar picture, and an accurate forecast. Also access to non-aviation weather stations was possible, the nearest weather station being 15 km west of Jämi airfield. At the airfield there is a ground wind measurement system that is connected to a PC.

Official wind measurements were made by flying a tow plane in 4 directions, and measuring the ground speed using GPS at two altitudes (700m and 1200m AGL). The method gives results quite quickly; most of the time is consumed by tow plane flying in each of the directions.

No separate weather man was involved in the organisation. Weather information and forecasts were given as well as wind measurement calculations were made by either contest director or flight director.

The biggest challenge with the weather was the wind. Flying was not possible for several days because of strong winds. On Wednesday the ground wind peaked at almost 25 m/s, and caused some damage to tents. All the competition aircraft were safely in hangars, because the wind was forecasted, and the day had been cancelled.

Information and Communications Systems

The web site was made and updated by Katja Soikkeli, and scoring director Kimmo Virtanen built the IT system at Jämi.
Public Information Website: http://www.jami2010.com/
CIVA Results: http://www.civa-results.com

Jury President Blog: http://www.fai.org/aerobatics/PresidentPage

Information was sent to participants, team members, jury, judges and organization by SMS. It was very efficient and handy, e.g. when briefing time had to be changed. When competition results were ready, they were also published via SMS. Messages could also be sent only to one or several groups.

Contest Progress

Practice Week – Monday 12th - Friday 16th July

A full week was reserved for practising. First teams arrived already on Sunday evening, and last teams as late as Thursday.

The first practice days were easy, as there were only a few competitors, and no delays in getting a tow. The weather was very hot during the practice week. The week was well spent in rehearsing ground crew and tow pilots.

Weather on Friday was not flyable, and competitors who had arrived on Thursday had not had chance to fly a single practice flight. Weather on Saturday was forecasted to be good, so the organiser decided that the remaining 12 pilots, who had not yet flown, could have their single practice flight on Saturday morning while the others were in the briefing.

Competition flights

Saturday 17th: Programme 1, Known Compulsory

Opening ceremony was moved to Sunday, and Saturday was reserved for flying because of the weather forecast. The first competition flight started around 10:30, after the last practice flight had landed. Flying order was decided so that Advanced class would fly first and then Unlimited class. Flight order had been drawn using Acro, under supervision of Jury President Mike Heuer.

Both classes finished the program on Saturday. Last flight was around 8 pm. A long day for organization and especially for judges.

Sunday 18th, no flying

Weather was not flyable, as forecasted. A short opening ceremony was held on Sunday morning.

Monday 19th, Programme 2, 1st Unknown

Advanced class was able to fly programme 2. Winds were getting stronger, and after lunch hour, when it would have been time for Unlimited class to start, the wind was too strong at the altitude.

Tuesday 20th – Thursday 23rd

Winds were getting too strong. Tuesday morning Unlimited class & judging line was ready at

06:00 in a desperate attempt to get a few hours flight time before the rain would come. Did not succeed. Wednesday and Thursday were even worse. There was a jet stream sitting only a bit to north of the airfield, and that combined with thunder activity made it impossible to even start flying.

Contest director made a decision that Advanced class would start flying first even though it had flown the last flight. The reason was that Advanced class was only one flight short of official competition status, while Unlimited still needed two flights. The decision caused some controversy but was strongly backed by most of the team leaders after a team leader's meeting.

Friday 24th, Programme 3 Free Programme (A), Programme 2 1st Unknown (U), Programme 3 Free Programme (U)

Winds came down, as forecasted, and tows started around noon. Advanced class finished it's third program, and hence the first world champion in advanced class could be announced.

Unlimited class continued without interruption after the last flight of advanced class, and the program was finished around 20:00. Since the days are long up in the north, and unlimited was only one flight short of competition, flying was continued without interruption. The last competitor landed somewhat after 22:00. Jämi airfield's noise & environmental rules forbid flying between 22:00 – 06:00. The sun was also getting quite low, and there was daylight only for maybe 45 minutes, so it was good time to stop flying.

About half of the unlimited class had flown all the three flights, but we still needed dozen tows on Saturday to have an official competition. Judges and ground crew had worked around the clock without even a lunch break: warm food was served at the judging line, and judges ate between the flights. Tow pilots and ground crew was able to keep a constant flow of competitors. Every 7 minutes there was a new competitor starting in the box.

Big thanks to judging line, ground crew and tow pilots. Excellent job done.

Saturday 25th, rest of Programme 3, Free Program (Unlimited)

Tows started at 06:00. Short briefing was held in the grid, wind was measured, and tows started.
Judging line had been able to leave their post around 22:30 on Friday night, and now they were ready judging at 06:00. Everybody were anxious to get the Unlimited class to finish the competition, too. Extreme dedication from everybody. Again time for really big thanks to everybody.

The remaining unlimited pilots were finished by 8:30, and also European Glider Aerobatic Championship could be announced.

Results

1st World Advanced Glider Aerobatic Championships

Programme 1, Known Compulsory

1. Johan Gustafsson, SWE
2. Mazen Makari, GBR
3. Petr Biskup, CZE

Programme 2: 1st Unknown

1. Petr Biskup, CZE
2. Jan Rolinek, CZE
3. Jochen Reuter, GER

Programme 3: Free

1. Michael Spitzer, GER
2. Aurèlien Durigneux, FRA
3. Johan Gustafsson, SWE

Combined Results and World Champion

1. Johan Gustafsson, SWE	3934,49
2. Michael Spitzer, GER	3905,79
3. Jochen Reuter, GER	3905,12

Team results

1. Germany (Michael Spitzer, Jochen Reuter, Sebastian Dirlam, manager: Michael Spitzer)
2. Sweden (Johan Gustafsson, Daniel Ahlin, Pekka Havbrandt, manager: Christer Gustafsson)
3. Czech Republic (Petr Biskup, Milos Ramert, Jan Rolinek, manager: Premysl Vavra)

10th European Glider Aerobatic Championships

Programme 1, Known Compulsory

1. Erik Piriou, FRA
2. Ferenc Tóth, HUN
3. Daniel Serres, FRA

Programme 2: 1st Unknown

1. János Szilágyi, HUN
2. Erik Piriou, FRA
3. Dietmar Poll, AUT

Programme 3: Free

1. Miroslav Cervenka, CZE
2. Georgy Kaminskiy, RUS
3. Maciej Pospieszynski, POL

Combined Results and European Champion

1. Erik Piriou, FRA	5192,87

2. Ferenc Tóth, HUN 5108,77
3. Dietmar Poll, AUT 5063,01

Team results

Hungary (Ferenc Tóth, János Szilágyi, Szabolcs Kühtreiber, manager: Tamás Kecskeméti)
France (Erik Piriou, Daniel Serres, Pierre Albertini, manager :)
Poland (Maciej Pospieszynski, Jerzy Makula, Stanislaw Makula, manager: Radoslaw Gorzenski)

Learnings

1. Usage of Text Messages (SMS)

Sending SMS to everybody, who had provided his or her mobile phone number was easy, fast and cost efficient way to spread information. It freed team members from keeping a watch post at briefing office for e.g. change of briefing times. Also judges and organization members were easily reached during the competition.

Following method was used:
- GSM subscription with a low SMS rate
- Nokia phone with Nokia PC Suite (almost any Nokia phone will do)
- A regular laptop running Nokia PC Suite

Numbers were categorized (advanced, unlimited, judge, jury, organization), and fed using a csv–file to Nokia PC Suite. This required some reverse engineering, and it took several hours before it started to work flawlessly.

The total cost of sending all SMS messages during the competition was only 127 €.

2. Use of GPS

Every tow plane had a GPS receiver that tracked all the flights. In case there had been a protest, or just a complaint about towing, the tow could have been tracked from the data, and verified if any mistakes had been done.

The two biggest operational advantages were:

1. Tow pilot could easily fly a route that would bring the tow into the box at required altitude without any extra manoeuvres.
2. Use of GPS fixes to fly the direct line before entering the box at exactly correct location and altitude.

Flying the correct route during towing

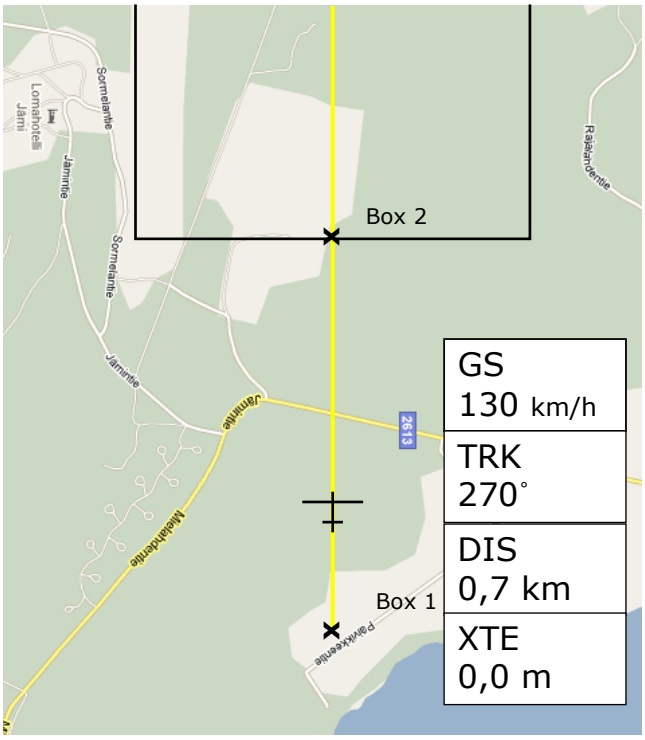
Tow pilot simply follows the previous tracks that are visible on the GPS receiver. Following the tracks will inevitably lead him to 1200 meters altitude in correct entering position to the box. See picture 1.

Picture 1. Highway to heaven

Entering the box at exactly correct line

At altitude it is very difficult to precisely determine one's position in reference to box markings. In practice pilot in a low-wing aircraft cannot even see the markings without dipping a wing.

GPS had 3 fixes: 1 km before the box (Box 1), at the box entering position (Box 2), and at the other side of box (Box 3). See picture 2. Tow pilot flies the first fix (Box 1) in at 1200 meters, and then keeps the altitude and speed constant while flying the 1 km line inbound the box. It was easy to keep the aircraft within 50 meters, or less, from the line. The method is very similar to 2 NDB approach in IFR flying, except it is done using simple GPS, and at level flight.



Picture 2. Diagram of GPS display

Box 1 is a fix 1 km before entering the box. Box 2 is at the box boundary.

Box 3, not visible in the picture, is at the other end of box, at the boundary. If glider is still hanging in the rope at that mark, a new entry will be made, according to the rules.

Thank You

The event was made possible by a fairly small group of volunteers, who worked long days without any payment. I want to address my very special thanks to the organization. You did a great job!

A big thanks belongs also to everybody working in judging line. There were no complaints from anybody, even though we had to really push late in the evenings and have early morning wake-ups.

I want to thank also the jury. Great support and smooth co-operation with every member of

the jury.

Last but not least I also want to thank the pilots. Great flying and a lot of fun during the contest.

Kari Kemppi
Contest Director