

Agenda

of the Annual Meeting of the
FAI Gliding Commission

Version 1.1

To be held in Lausanne, Switzerland
Friday 4th and Saturday 5th March 2011

Day 1, Friday 4th March 2011

Session 1: Opening and Reports (Friday 09.15 – 10.45)

1. Opening (Bob Henderson)

- 1.1 Roll Call (Stéphane Desprez/Peter Eriksen)
- 1.2 Administrative matters (Peter Eriksen)
- 1.3 Declaration of Conflicts of Interest

2. Minutes of previous meeting, Lausanne, 5th-6th March 2010 (Peter Eriksen)

3. IGC President's report (Bob Henderson)

4. FAI Matters

- 4.1 The FAI Secretary General Stéphane Desprez or his Deputy Jean-Marc Badan will report to the Plenary

5. Finance (Dick Bradley)

- 5.1 Treasurers Report and 2010 Financial Statement
- 5.2 2011 Budget and 5 year planning

6. Reports not requiring voting

- 6.1 OSTIV report (Loek Boermans)

Please note that reports under Agenda items 6.2, 6.3 and 6.4 are made available on the IGC web-site, and will not necessarily be presented. The Committees and Specialists will be available for questions.

6.2 Standing Committees

- 6.2.1 Communications and PR Report (Bob Henderson)
- 6.2.2 Championship Management Committee Report (Eric Mozer)
- 6.2.3 Sporting Code Section 3 Report and 2011 version (Ross Macintyre)
- 6.2.4 Sporting Code Section 3, Annex A and Handicaps Report, 2010 version of SC3 Annex A and List of Changes (Göran Ax)
- 6.2.5 Sporting Code Section 3, Annex D (Brian Spreckley)
- 6.2.6 GNSS Flight Recorder Approval Committee (GFAC) Report (Ian Strachan)
Update Sporting Code Section 3, Annex B
Statement from USA (enhanced Flight Recorders)
- 6.2.7 FAI Commission on Airspace and Navigation Systems (CANS) Report (Ian Strachan)
- 6.2.8 Air Traffic, Navigation, Display Systems (ANDS) Report (B. Smith)

6.3 Working Groups

- 6.3.1 Country Development (Alexander Georgas)
- 6.3.2 Grand Prix Action Plan (Bob Henderson)
- 6.3.3 History Committee (Tor Johannessen)
- 6.3.4 Scoring Software Testing (Visa-Matti Leinikki)
- 6.3.5 13.5M Class (Roland Stuck/verbal report)
- 6.3.6 Championship Structure (Eric Mozer)
- 6.3.7 Continental Records (Hans Obermeyer)

Session 2: Championships (Friday 11.15 – 12.45)

6.4 IGC Representatives and Specialists

- 6.4.1 CASI Report (Air Sports Commissions) (Tor Johannessen)
- 6.4.2 EGU/EASA (Patrick Pauwels)
- 6.4.3 Environmental Commission Report (Bernald Smith)
- 6.4.4 Membership (John Roake)
- 6.4.5 On-Line Contest Report (Axel Reich)
- 6.4.6 Simulated Gliding Report (Roland Stuck/verbal report)
- 6.4.7 Trophy Management (Marina Vigorita)
- 6.4.8 Web Management (Peter Ryder)

7. Championships (Eric Mozer)

7.1 Past & Future Championships

For past championships, the Jury President's or Chief Steward's reports are available on the IGC web-site. The reports will not be presented. For future championships, general information is available through the Bulletins, only items requiring action or special attention from the Plenum will be presented.

- 7.1.1 31st FAI World Gliding Championships 2010, Slovak Republic
 - Jury president's report
 - Chief Steward's report
- 7.1.2 31st FAI World Gliding Championships 2010, Hungary
 - Jury president's report
 - Chief Steward's report
- 7.1.3 6th FAI Women's WGC 2011, Sweden
- 7.1.4 7th FAI Juniors WGC 2011, Germany
- 7.1.5 16th FAI European Gliding Championships 2011, Slovak Republic
- 7.1.6 16th FAI European Gliding Championships 2011, Lithuania
- 7.1.7 32nd FAI World Gliding Championships 2012, Argentina
- 7.1.8 32nd FAI World Gliding Championships 2012, USA
- 7.1.9 7th FAI Womens's WGC, 2013, France
- 7.1.10 8th FAI Juniors WGC 2013, Poland

7.2 Approval of Competition Officials (Eric Mozer)

- 7.2.1 Approval of Officials for 2011 Competitions
 - a.** 6th FAI Women's WGC 2011, Sweden
 - b.** 7th FAI Juniors WGC 2011, Germany
 - c.** 16th FAI EGC 2011, Slovak Republic
 - d.** 16th FAI EGC 2011, Lithuania

7.2.2 Approval of Chief Stewards for 2013 Competitions

- a. 7th FAI Womens's WGC, 2013, France
- b. 8th FAI Juniors WGC 2013, Poland

7.3 Sailplane Grand Prix (Roland Stuck)

- 7.3.1 2010-2011 Qualifying Sailplane Grand Prix
- 7.3.2 2011 World Sailplane Grand Prix Final

- 7.4 World Air Games (Brian Spreckley)
 - 7.4.1 Update on World Air Games 2013

Session 3: Safety (Friday 14.00 – 15.30)

Guest speaker: Helmut Fendt, Chairman of OSTIV SDP: “Safety Pays”

Presentation outline available for download

Session 4: Championship bids (Friday 16.00 – 17.45)

- 7.6 Presentation of bids for future championships (max. 10 minutes each)
 - 7.6.1 33rd FAI World Gliding Championships 2014
 - Räyskälä, Finland (15m/18m/Open Class)
 - Vinon, France (15m/18m/Open Class)
 - Leszno, Poland (15m/18m/Open Class)
 - 7.6.2 17th FAI European Gliding Championships 2013
 - Ostrow, Poland
 - 7.6.3 Questions on Bid Presentation

8. Date and place for the 2012 IGC Plenary Meeting (Bob Henderson)

This vote requires an absolute majority (50% of votes present)

- 8.1 Proposal from South Africa,

9. Nominations for President

--- End of day one ---

Day 2, Saturday 5th March 2011

Session 5: Proposals requiring voting (Saturday 09.15 – 10.45)

1.1 Roll Call (Stéphane Desprez/Peter Eriksen)

Discussion item: Design parameters and the implications of “certificated” versus “permit-to-fly”. Should we put a limit on the period that a glider should be able to operate under a “permit-to-fly” at the WGC level?

10. Reports and proposals requiring voting (Bob Henderson)

10.1 Proposals from the Bureau

10.1.1 Future World Gliding Championships structure (Year 1)

10.1.2 13.5m Class – Class definition

10.1.3 20m two-seater class – Class definition (Year 1)

10.2 Proposal from the Sporting Code Section 3, Annex A and Handicaps (Göran Ax)

10.2.1 Removal of Reference Weight from Handicap List. (Year 1)

10.3 Proposal from ANDS (Bernald Smith)

10.3.1 Proposal for mandatory use of Flight Recorders for altitude records above 50.000 feet (Year 1)

10.4 Proposal from USA

10.4.1 Remove the requirement that the identity of the pilot and glider be included in the Flight Log from the Sporting Code (Year 1)

10.5 Proposal from Poland

10.5.1 To establish medals in Team Cup at World and Continental Gliding Championships (Year 1)

10.6 Proposal from Canada

10.6.1 Allow for use of GPS height for Silver or Gold badge claims (Year 1)

10.7 Late proposal from Holland

10.7.1 Acceptance of the late proposal (2/3rds majority required)

10.7.2 Mandatory use of FLARM during competitions (Year 1)

Session 6: IGC Strategy and votes on bids (Saturday 11.15 – 12.45)

Guest speaker: Dr. John Grubbström, FAI President

11. IGC Strategy (Bob Henderson)

11.1 Update on the IGCs strategic Plan

12. Votes on Bids (Eric Mozer)

12.1 2014 World Gliding Championships

12.2 2013 European Gliding Championships

12.3 Site for the 2012 IGC Plenary

10. Reports and proposals requiring voting (continued)

Session 7: Proposals requiring voting (Saturday 14.00 – 15.30)

10. Reports and proposals requiring voting (continued)

13. Strategy for the future management of FAI sanctioned competitions (Eric Mozer/Brian Spreckley/Dick Bradley)

Session 8: Awards and 2012 IGC Plenary Meeting (Saturday 16.00 – 17.30)

14. IGC awards (Bob Henderson)

14.1 Lilienthal Medal

(Please note that according to the FAI By-laws, one Medal only may be awarded per year)

- Nomination by Australia
- Nomination by Germany
- Nomination by Poland

14.2 Pirat Gehriger Diploma

(Normally, only one Diploma may be awarded annually. However, exceptionally, the International Gliding Commission may recommend the award of one or two additional diplomas)

- Nomination by Canada

14.3 Pelagia Majewska Medal

(One Medal only may be awarded per year)

- No nominations received

15. Elections of Officers (Bob Henderson/Eric Mozer)

Officers will be elected for two years

15.1 Election of President

15.2 Election of 1st Vice President

15.3 Election of 5 other Vice Presidents

15.4 Election of Secretary

15.5 Confirmation of Committees and Committee Chairmen

16. Announcement of date and place for the 2012 IGC Plenary Meeting (Bob Henderson)

16.1 Useful dates and other practical information (Peter Eriksen)

17. Closure (Bob Henderson)



*Fédération
Aéronautique
Internationale*

Minutes

of the Annual Meeting of the
FAI Gliding Commission

**held in Lausanne, Switzerland
on 5th and 6th March 2010**

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**Minutes of the FAI/IGC Plenary meeting
Lausanne 5th and 6th March 2010**

Note: The agenda together with all reports, documents and proposals, as well as nominations for people having received awards, can be found on the FAI web http://www.fai.org/gliding/system/files/IGC_Plenum_2010_Decisions.pdf

1. Opening

IGC President Bob Henderson called the meeting to order and requested the observation of a moment of silence in honour of friends and colleagues lost in the previous year.

The President then welcomed the delegates to the 2010 IGC Plenary meeting. A special welcome was given to the new FAI Secretary General, Stéphane Desprez.

1.1 Roll Calls

IGC Secretary Peter Eriksen performed the roll of the meeting. It was determined that 33 votes were present including 4 proxies (from Argentina to Spain, from Chile to the Slovak Republic, From Ireland to the United Kingdom and from Latvia to Lithuania), thus 17 votes would be required for an absolute majority on any ballot, and 22 for a 2/3rds majority. Slovakia arrived during the morning, making the total number of votes 34, 18 votes now required for an absolute majority, 23 votes for 2/3rds majority.

The IGC Secretary again called the roll at the beginning of the second day, Saturday 6th March. Delegates and proxies present totalled 34, an absolute majority required 18 votes, and 2/3rds majority required 23 votes. Austria, Norway and Hungary left the meeting during the afternoon, reducing the number of votes to 31, 16 votes were now required for a simple majority, and 21 votes required for a 2/3rds majority.

Apologies were received from Mr E. Toselli, Argentina, Mr A. Janssen, Mr R. Vidal and Mr M. Reyes from Chile, Mr L. Brigliadori, Italy, as well as from Ireland, Israel and Latvia.

1.2 Administrative Matters

60 persons participated in the IGC dinner held at Restaurant Piazza San Marco in Lausanne Friday evening. Former FAI Secretary General, Max Bishop, and his wife were present as guests of the IGC.

IGC President Bob Henderson handed Mr Bishop a gift certificate. The certificate provides financial support to reactivate Mr Bishop's gliding license.

1.3 Conflict of Interest

The President asked the meeting participants to declare any conflicts of interest, which was done.

2. Minutes of previous meeting, Lausanne 6th and 7th March 2009

The IGC Secretary presented the minutes of the previous meeting held in Lausanne 6th and 7th March 2009.

The minutes were unanimously approved.

3. IGC President's report

The IGC President referred to the report circulated before the meeting and added that it is important to profile our gliding sport. Disappointment was expressed that some of the World Champions did not have their pictures displayed on the IGC Ranking List. The President also confirmed the voting protocols for the meeting.

The President's report was approved unanimously.

4. FAI Matters

4.1 Update from the FAI General Secretary

The FAI Secretary General, Stéphane Desprez, thanked the delegates for the warm and friendly welcome he received when he arrived at FAI. He explained that, since he had only been with FAI for a few weeks, it was too early for him to give us a lot of insight to his ideas and visions about FAI.

He mentioned that 20 Asian countries had participated at the FAI General Conference 2009 held in Incheon, Korea. Seven new members had joined the FAI at or just after the conference. FAI now has 95 member countries, making it one of the world's biggest international sports federations in terms of member nations.

FAI has decided to move from the present offices in Avenue Mon-Repos to Maison du Sport in Lausanne during early 2011, where FAI will be located close to more than 20 other international sports federations, improving possibilities for synergy and cooperation.

Mr Desprez reported that the FAI finances were in good shape. What was somewhat concerning was that about 50% of the funds belonged to the Sporting Commissions, something that he would like to come back to at a later point in time.

The 2010 General Conference will be in Dublin, Ireland and 2011 in Belgrade, Serbia.

5. Finance report

5.1 2009 Financial report

The IGC Treasurer Dick Bradley presented the 2009 Finance Report and the 2010 budget.

In 2009 the income was close to the budget (44.648EUR) and the cost well below the budget (19.935EUR), resulting in a net result of 24.713EUR.

There are however presently more than 19.000EUR of outstanding payment, of which some date back to 2008. *(Note: Since the Plenary meeting we have reduced the amount outstanding at year end by €14475, leaving an amount of just over €4k to resolve or collect, all of which is related to the Ranking List System)*

The Treasurer explained that it was unacceptable to continue with outstanding payments. The Bureau had mandated a number of actions to avoid this situation in the future.

First of all, the Sanction Fees for future IGC sanctioned Championships will be due for payment before the start of the competition. The Jury President will have the authority to stop the competition until the Sanction fee has been paid.

Secondly, the Bureau will be considering blocking participation in FAI sanctioned competitions for pilots representing countries with outstanding debts.

Thirdly, pilots will not receive ranking points towards the IGC Ranking List for competitions where the Sanction Fee was not paid.

5.2 IGC Financial Policy

There are no changes to the IGC Financial Policy.

5.3 2009 Budget and 5 year planning

The new Sanction fee system for the IGC Ranking List will probably lead to a temporarily smaller income, as the Fees have been reduced to attract more competitions. The 2010 budget is still based on the old Sanction fee model. It is expected that the new Fees will attract more competitions, and therefore lead to at least the current level of income in the future.

The Financial Report was unanimously approved by the Plenary.

6. Reports not requiring voting

6.1 OSTIV report

Prof. Loek Boermans reported among other things from OSTIV.

The Sailplane Development Panel and the Training and Safety Panel had discussed safety during gliding competitions and in clubs. A first draft report had been circulated, and will be published later. The report suggests amongst other things to reward pilots for positive “safety behaviour”.

The Meteorological Panel had completed a new book, Weather Forecasting for Soaring Flight. The book is published by the World Meteorological Organisation and costs 17EUR. Prof. Boermans warmly recommended the book.

The meeting had no questions to the OSTIV report.

6.2 Standing Committees

6.2.1 Communications and PR Report

Mr Henderson referred to the published report, and mentioned that IGC had initiated several new communication initiatives such as TWITTER.

He drew attention to the fact that these new social networks can be damaging and require monitoring. Information, including mis-information, spreads quickly, and needs to be monitored responded to as appropriate, which creates a workload implication for IGC/FAI.

Mr Jeff Zaltman and Ms Zoe Adjonyoh of Flying Aces Ltd, a company cooperating with FAI on developing television programs about our sport, gave a presentation where they explained how they promote air sports through television.

They invited competition organisers who had film they wanted to publish, or wanted support to film events, to contact them.

The presentation is available on the IGC web site.

6.2.2 Championship Management Committee Report

Mr Eric Mozer, Chairman of the Championship Management Committee, thanked Brian Spreckley, Roland Stuck and Dick Bradley for having organised the Chief Steward's meeting the night before the Plenary. He felt that these meetings were a very important element of our continuous quality improvement of sporting events.

Mr Mozer had nothing else to add to the written report.

6.2.3 Sporting Code Committee Report

Mr Ross Macintyre reported that the Sporting Code Committee had had a quiet year after the completion of the new version of the Sporting Code for the 2009 meeting.

6.2.4 Air Traffic, Navigation, Display Systems (ANDS) Report

Mr Bernald Smith, Chairman of the ANDS Committee reported that the expiration dates of the 3-year terms of office for the current Glider Flight Recorder Approval Committee (GFAC) members are:

IGC meeting of 2010 Mr Marc Ramsey (USA),

IGC Meeting of 2011 Mr Ian Strachan (UK) Mr Angel Casado (Spain),

IGC meeting of 2012 Mr Hans Trautenberg (Germany), Mr Tim Shirley (Australia),

Mr Ramsey was re-elected for 3 years (till 2013).

In the USA, FAA support has continued for VFR ADS-B. Mr Steve Northcraft (Chairman), Mr Hal Becker (retired from FAA and SSA Advisor) and Bernald Smith were appointed by SSA to form an ad hoc group to work with FAA to develop an FAA/SSA Memorandum of Agreement, which was signed in November 2009 by FAA and SSA.

6.2.5 GNSS Flight Recorder Approval Committee (GFAC) Report

Mr Ian Strachan, Chairman of the GFAC Committee, reported that nine position recorders have now been approved by National Aero Clubs: two in Australia and seven in France. More information is available on the GFAC web site.

6.2.6 FAI Commission on Airspace and Navigation Systems (CANS) Report

Mr Ian Strachan, Secretary of the FAI CANS Commission, reported on work of this group that was created based on an IGC initiative.

During the past 12 months there had been two meetings where 15 nations and three Sporting Commissions participated. The next meeting will be in Dublin just before the FAI General Conference in order to attract more participants from outside Europe.

The Delegate from USA, Mr Rick Sheppe, thanked Mr Strachan for the report and suggested that the Plenum accepted paragraph 6 of the report as a recommendation, not a proposal.

Mr Henderson confirmed that it was not the intent of the Bureau to take paragraph 6 of the report further.

6.3 Working Groups

6.3.1 Country Development

Mr Alexander Georgas, Chairman of the Country Development Working Group mentioned that the report on the on-line survey had been published. An update which would include the Cross Country Soaring Report was just about to be published

Mr Georgas gave a more detailed presentation about the work of the WG later during the meeting.

6.3.2 Grand Prix Action Plan

Mr Henderson reported on the Grand Prix Action Plan. He started by outlining IGC's vision for the Sailplane Grand Prix (SGP), mentioning that IGC is flexible and can adapt the Grand Prix concept to fit within different contexts in order to achieve the goals.

He then showed a map of internet connections during the recent SGP Final in Santiago, Chile, showing a worldwide interest for the on-line competition, which confirmed that the use of on-line tracking was important for the SGP concept. IGC was considering funding the cost of tracking in all Qualifying and World SGPs.

Mr Nick Farrell from the company Rock Seven Mobile Services Ltd. made a presentation on the tracking device Yellow Brick. He explained the technology used for the trackers that have been developed specially for gliding, and the challenges the company were facing when producing the on-line tracking and transmitting it via internet.

Mr Peter Newport from Air Sports Ltd. and Mr Mario Hytten from CAPTIMAX introduced the movies that had been produced during the Sailplane Grand Prix final in Santiago Chile. A seven minute promotional movie, planned to be used to raise sponsors together with a 24 minute movie planned for TV channels, aiming at reaching 80 million viewers, are the two products generated from this partnership..

Mr Hytten gave a presentation explaining his vision of how to promote gliding as the environmental friendly sport, and how to promote this image to potential sponsors.

6.3.3 History Committee

Mr Tor Johannessen reported on the History Committee.

The History Committee is still missing the minutes of the CIVV meetings in 1956 in St. Yann and 1958 Leszno. Mr Johannessen asked the delegates to go back and search the archives of the National Aero Clubs and Gliding Federations to try to find the missing minutes.

The search for documentation from the period before the 2nd World War was still undergoing. Next stops would be Freiburg in Germany to look in the Bundesarchiv for the papers confiscated in 1945 as well as in Washington DC in the National Archives. These were the last chances to find the missing papers.

6.3.4 Scoring Software Testing Working Group

Mr Visa-Matti Leinikki, Chairman of the WG, had nothing to add to the written report.

6.4 IGC Specialists

6.4.1 CASI Report (Air Sports Commissions)

Mr Tor Johannessen thanked Mr Henk Mertens, Mr Rick Sheppe and Mr Bernald Smith, who had been involved in the CASI work together with Mr Johannessen, for their support.

6.4.2 EGU/EASA

The EGU president Mr Patrick Pauwels thanked Mr Henderson for the opportunity to speak to the Plenary about the latest regulatory developments in Europe.

The main activities in the licensing area was the agreement with EASA that there would be two types of future licenses, the Sailplane Pilot's License (SPL) and the Light Aircraft Pilot's License-Sailplanes (LAPL).

Theoretical and practical training would be equal, the privileges nearly equal, but only pilots with a SPL would be allowed to receive remuneration.

The medical would be different. An ICAO Class 2 would be required for the SPL. The LAPL would have an alternative solution which is still under discussion between the involved parties. The Aero medical organisations were fighting strongly against an increase of period between medical visits. EASA is now writing a new proposal based on the FAA Class 3 Medical.

All future training shall take place within Approved Training Organisations (ATO). The initial requirements were too strongly oriented towards commercial organisations and did not leave room for voluntary organisations like gliding federations. An alternative proposal for a Non-Profit-ATO is under development. For gliding, the national federations/NACs will become ATOs.

For all maintenance and airworthiness EASA Part M is providing the necessary guidance.

The implementation has shown quite some differences in interpretation/application between the different national administrations and a clear increase in administration and cost. Large gliding federations can cope with the situation, but many smaller organisations are in trouble.

Small airfields (Runway shorter than 800m, no instrument procedures etc.) will remain outside the scope of the new EU-Regulation under national rules.

Requirements for 8.33 radios may still come, but not before 2018.

Finally, a new European project for Standardised European Rules of the Air (SERA) has been launched and inputs are needed very soon.

Mr Robin van Maarschalkerweerd, the Dutch Delegate: "Is self-declaration still on the table for the medical license?"

Mr Pauwels: "We don't know, we are waiting for the revised alternative proposal from EASA."

Mr Henderson mentioned that EGU was acting on behalf of the 80.000 glider pilots in Europe. He felt it a pity that not all European gliding organisations were members. He noted that the USA and NZ are members of the EGU. If all European pilots paid 1 euro per year to EGU this would allow the EGU to have a professional person to fight for them. Mr Henderson was afraid that EASA philosophies would migrate around the world, so it was important to get it right in Europe to protect our sport.

6.4.3 Environmental Commission Report

Mr Bernald Smith reported that a couple of projects were under consideration by the Commission.

The German Aero Club has information material available in German that would be useful for other countries. Translation of this material into English should be considered.

Mr Smith finally encouraged the delegates to put more emphasis on the fact that gliding is fundamentally a green sport, and encouraged the delegates to use that argument to further develop the sport.

6.4.4 Membership

Mr Henderson reported on behalf of Mr John Roake and asked the delegates to make it easier for Mr Roake to get the numbers for the annual report. Several countries had not responded, or responded very late, to the request from Mr Roake this year.

The report shows a continuing subtle decline, despite the fact that we have an increasing demand for entries at championships. We need to find ways to stop the negative trend.

6.4.5 On-Line Contest Report

Mr Axel Reich was unable to be present at the meeting.

In 2009 more than 107.000 flights with a total distance of more than 28 million kilometres were reported to OLC.

The top three clubs in 2009 were:

1. Albuquerque Soaring, USA, 599 Points
2. Warner Springs Gliders, USA, 452 Points
3. Tucson Soaring Club, USA, 448 Points

6.4.6 Simulated Gliding Report

Mr Roland Stuck had nothing to add to the written report.

6.4.7 IGC Trophy Management

The President thanked Mrs Marina Vigorito for the work she had been doing. We now have a good overview of the IGC Trophies and their history.

6.4.7 Web Management Report

Mr Peter Ryder thanked Mr Thierry Montigneaux from the FAI office for the work he had done during the last years supporting the maintenance of the IGC web site. Mr Montigneaux has found another job and is leaving FAI.

7. Championships

7.1 Past & Future Championships

7.1.1 6th FAI Junior's World Gliding Championships 2009 – Finland

There was nothing to report after the competition.

7.1.2 5th FAI Women's World Gliding Championships 2009 – Hungary

The Hungarian Delegate, Mr Zoltan Meszaros, reported that they had nine competition days with excellent weather and no accidents. The organisers considered the competition a great event.

7.1.3 15th EGC - Slovak Republic (flapped classes), 2009

The Slovak Delegate Mr Vladimir Foltin reported that there had been nine competition days out of 12 possible. The tasks had been flown over four different countries.

A pilot survey conducted during the competition indicated that a significant majority of pilots preferred to use the Finish Ring for finishing.

7.1.4 15th EGC - Lithuania (non-flapped classes and 2-seater), 2009

The Lithuanian Delegate Mr Vytautas Sabeckis reported that 13 tasks had been flown.

7.1.5 31st FAI World Gliding Championships 2010 – Slovak Republic

Mr Foltin referred to the written report distributed to the delegates. He confirmed that the preliminary entry list had been published, and the date for final entries to be 31st of March.

7.1.6 31st FAI World Gliding Championships 2010 - Hungary

The Hungarian Delegate Zoltan Meszaros reported that there were 157 pre-entries. The maximum was 150 pilots, but he estimated that the final number of entries would be around the acceptable figure.

There were still negotiations with neighbouring countries about access to airspace.

The OSTIV chairman informed the meeting that he planned to visit the site to discuss the practicalities around the OSTIV conference. He reported some communication problems concerning the organisation.

Mr Spreckley explained that the Local Procedures were almost ready and were only waiting for the decision on Pilot Selection Process.

A new Championship Director had been appointed. The previous director had to resign due to change in his job situation. The new Director, Mr Andras Zeno Gyongyosi, was the meteorologist during the WWGC in 2009, and fully capable of running the competition.

7.1.7 6th Women's WGC - Sweden 2011

The Swedish 2010 National Championships will be held in Arboga. The competition is open for foreign participation.

7.1.8 7th Juniors WGC - Germany 2011

There was nothing to report from the preparation of the competition.

7.1.9 32nd FAI World Gliding Championships 2012 – Argentina

There was nothing to report for the time being. The Chief Steward will be Mr Roland Stuck, who will initiate contact with the organisers.

7.1.10 32nd FAI World Gliding Championships 2012 – USA

Mr Sheppe reported that the weather forecast for August 2012 looked fine and added that the city of Uvalde was giving great support to the preparations.

Guest speaker: Mr Stéphane Desprez, FAI Secretary General

Mr Desprez thanked the audience for giving him the chance to speak to them. He explained how he intended to optimise the processes within the FAI office to provide a better service to the air sports. He saw great opportunities for synergy between the air sports, and mentioned examples of how this could lead to mutual benefits.

In FAI there are eight air sport commissions running international championships with up to 10 different competition disciplines per commission.

Media opportunities and presentations are evolving, the technologies are evolving, and sponsors today make clearer decisions on their involvement. We need to be able to provide a far better return for investment to attract sponsors.

Mr Desprez assured the Delegates that he would work together with the Commissions to understand their needs, and develop the future services in close cooperation with the air sports commissions.

The aim was to bring us his experience from business and sports industry to sustain the goal of developing our sports.

Flying is everybody's dream. We have a great product to sell.

As the main lines of change, Mr Desprez identified:

- Strengthen the organisation
- Unite all members
- Serve the members
- Promote the air sports
- Increase the air sports community

7.2 Approval of Competition Officials

All officers listed below were unanimously approved by the Plenary

7.2.1 Approval of Officials for 2010 Competitions

31st FAI World Gliding Championships 2010 – Slovak Republic

Chief Steward: Roland Stuck

Steward: Jaroslav Vach

Jury President: Visa-Matti Leinikki;

Jury Members: Tadeus Wala, Janusz Szczupack

31st FAI World Gliding Championships 2010 - Hungary

Chief Steward: Brian Spreckley

Steward: Frouwke Kuijpers, Ken Sorensen

Jury President: Peter Ryder

Jury Members: Jaroslav Vach, Peter Eriksen

7.2.2 Approval of Officials for 2011 Competitions

6th Women's WGC - Sweden 2011

Chief Steward: Arild Solbakken

Steward: Marina Vigorita

Jury President: Visa-Matti Leinikki

Jury Members: T.b.d.

7th Juniors WGC - Germany 2011

Chief Steward: Brian Spreckley

Steward: Marina Vigorita

Jury President: Eric Mozer

Jury Members: Holger Back, Roland Stuck

7.2.3 Approval of Chief Steward for 2012 Competitions

32nd FAI World Gliding Championships 2012 – Argentina

Chief Steward: Brian Spreckley

32nd FAI World Gliding Championships 2012 – USA

Chief Steward: Dick Bradley

7.3 Sailplane Grand Prix

7.3.1 Report from the 2009 Qualifying Sailplane Grand Prix

Mr Stuck reported that eight Qualifying Sailplane Gliding Grand Prix (QSGPs) had been held, six in Europe, one in Australia and one in Chile.

7.3.2 Report from the 2010 World Sailplane Grand Prix, Chile

The World Sailplane Grand Prix Final (WSGP) was originally planned for 2009, but due to difficulties in finding an organiser early enough, it was moved into the first week of 2010.

Santiago proved to be the ideal place for the WSGP, having good soaring conditions and a wonderful scenery for shooting the films. There was an excellent and efficient organization as well as good forecasting of fine soaring weather, a great opening ceremony, precise task setting and fast scoring. All in all it was a perfect gliding event.

The tracking system was provided by ROCK IT, using Yellow Brick trackers including a new interactive software and live commentary. On the last competition day there were 13.000 viewers on-line watching the race.

7.3.3 2010-2011 Qualifying Sailplane Grand Prix

Before the start of the next round of SGPs, some modifications to the SGP Rules have been adopted by the IGC Bureau, and will be valid from the 1st April 2010:

- Maximum 20 entries per class
- Flight recorder interval not above 5s
- Circling (turning) right prohibited 5min before the start
- Penalty for crossing the finish line below the minimum altitude
- Definition of unofficial results
- Penalty for subsequent offences

The following QSGPs have been approved so far: Zar Poland, St. Moritz Switzerland, Nitra Slovakia, Boonah Australia, Santiago Chile, Nummela Finland.

There may be more competitions added to the list. The 1st and 2nd placed pilots from each competition will qualify for the WSGP Final in 2011.

7.3.4 2011 World Sailplane Grand Prix Final

A bid has been received from Wasserkuppe in Germany, where the 100 years anniversary of the first glider flight on Wasserkuppe will be celebrated in 2011.

Bids can be submitted until 31st March 2010.

7.4 World Air Games

7.4.1 Report from the World Air Games 2009 in Turin

Mr Brian Spreckley reported that the event was conducted with a lot of support from FAI and from the local organising committee. He thanked in particular Mr Jean-Marc Badan from the FAI office.

A thorough analysis of the event in 2009 will now help us organise future events.

Mr Badan agreed with the report from Mr Spreckley, and thanked him for his support.

A 15 min DVD from the event was made available to the delegates.

7.4.2 Plans for 2011 World Air Games

With regard to the next World Air Games, the original plan was to have the organiser ready now, but the city that initially was the event withdrew its offer following a change in the local government after elections.

It is still the hope to be able to organise World Air Games in 2011, which may need to be a little bit smaller than the previous event. This decision will be made in the near future.

The bidding procedure for the 2013 WAG will start during 2010. It is planned to give an increased exposure to gliding.

7.5 Presentation of bids for future championships (max. 10 minutes each)

7.5.1 16th European Gliding Championships 2011

The following bids were presented:

- Nitra, Slovak Republic (World/Club/Standard/20m Two Seat Class)
- Pociunai, Lithuania (15m/18m/Open Class)

7.5.2 8th FAI Junior's World Gliding Championships 2013

The following bids were presented:

- Narromine, Australia
- Leszno, Poland
- Prievidza, Slovak Republic
- Pociunai, Lithuania
- Moravská Třebová, Czech Republic
- Ocseny, Hungary

7.5.3 7th FAI Women's World Gliding Championships 2013

The following bid was presented:

- Issoudun, France

7.6. Questions on all Bid Presentations

Mr Henderson asked if all organisers had approval from their NAC and local city, which all organisers confirmed. He also asked if any of the organisers had major infrastructure work to do to enable them to host the competition, which none of the organisers had.

Mr Sheppe asked for a more detailed briefing on the airspace situation from the bidders not providing that in the presentation, which was done.

Mr Sheppe also asked if any of the organisers had special equipment required like FLARM.

None of the organisers required special equipment, several recommend FLARM, but not as a compulsory installation. Oxygen is compulsory in Australia above 3000m, which can be reached on a good thermal day.

Nitra added to their presentation that the 200€ camping fee was per team (pilot and crew).

8. Reports and proposals requiring voting

8.1 Proposals from the Bureau

8.1.1 Pilot Selection Process (Year 2)

Mr Henderson presented the Bureau proposal, and informed the meeting that following discussion with the German and Dutch Delegates, the proposed amendments from the two countries was merged into one amendment, the Dutch.

Mr Henderson explained that the main difference between the Bureau proposal and the amendment was whether the country ranking or the individual pilot ranking should be used.

The Dutch Delegate added that Holland supported the need for a selection rule, but that it should be the NAC that decides who is number one and number two on the countries team. Mr van Maarschalkerweerd also gave the example of low ranked young pilots, doing well in nationals, could not be selected for the WGC if the pilot ranking is used.

In addition to that, he felt that it would be too easy to misuse the pilot ranking system by selecting the lowest ranked pilot as number one in the team, but asked how do we explain to the gliding community that a young pilot is selected as number one and e.g. the vice world champion is selected as number two.

The German Delegate, Mr Obermeyer, felt that the Year 1 proposal was changed too radically, and was disappointed that the Bureau had proposed that the individual pilot ranking should be used.

Mr Obermeyer also mentioned that the sporting code should not change on the 1st of April, but the 1st of October, in order to give time to prepare for the new rules and procedures.

Mr Henderson explained that the idea of the two years was to have discussions based on the debate in the plenum, and reformulate proposals where required. He also mentioned that Annex A only will change the 1st of April in 2010, in order to have the pilot selection process in force before the WGC 2010. Thereafter it will again be the 1st of October every year.

Mr Spreckley, the United Kingdom Delegate: "Even though we are country number two on the country ranking list, we agree with the Bureau proposal. The WGC is an individual pilot event. A pilot can impact his own position on the ranking list, he cannot impact the country's ranking."

The Greek Delegate, Mr Alexander Georgas: "When is the cut off date?"

Mr Spreckley: "The cut off date is the day of final entry closure."

Mr Göran Ax: "The Annex A Group supports the use of the country scoring."

Mr Sheppe, the USA Delegate: "I am happy to see the amendment, but I think that cut off six months before the competition is too early, as it is in the middle of the gliding season. I propose the 1st October."

Mr Vytautas Sabeckis, the Lithuanian Delegate: "Using the IGC Ranking List is not objective. Our nationals are not on the ranking list, so we will get lower rankings. Why don't we just organise WGC at more sites, and make room for everyone?"

The Finnish Delegate, Mr Visa Matti Leinikki: "If the proposed amendment is adopted, we will end in the same situation as before. The small countries will always be limited. The highest ranked pilot that would be eliminated in 2010 is around number 1500."

Mr Roland Stuck, the French Delegate: "I see a problem using the individual ranking, as one country can lose many pilots."

Mr Henderson: "Should the use of the Country Ranking be adopted, the Bureau will table an amendment to solve the problem raised by France."

The German Delegate rounded the debate off by stating that Annex A mentions that pilots are selected by the NACs and that a fair lead in time was required to prepare for new rules and procedures.

The German/Dutch amendment was then voted on.

23 votes were received for the amendment, 8 votes against, there were 2 abstentions.

Mr Henderson then tabled the proposed amendment from the Bureau.

"A country will only lose one pilot across all classes until all countries have lost one pilot."

Mr Terry Cubley the Australian Delegate: "Is this one pilot per year or per competition?"

Mr Leinikki: "We should only consider oversubscribed class."

Mr Vladimir Foltin, the Delegate from Slovakia: "I support the Bureau's amendment."

Mr Louis Boudier, Alternate Delegate from France: "We also support the amendment."

The Bureau's amendment was then voted on, and received 29 votes in support, 1 vote against. There was 1 abstention.

USA proposed the date used for the country ranking should be the 1st October of the previous year.

France: "This may cause a problem in the southern hemisphere."

UK: "For many reasons, having a fixed date is a bad idea. We should keep it on the date of the preliminary entry."

Greece: "In that case we need to be able to archive and save the data."

The Austrian Delegate, Mr Peter Platzer: "I am not sure it makes sense. The country ranking is very stable."

Mr Cubley, Australia: "The 1st October is difficult for e.g. the WGC 2012 in Argentina, at that time we need to have the travelling organised. I prefer some months before."

The South African Delegate Mr Dick Bradley: "I agree with Australia."

Holland: "Six months seems to be the best solution."

Mr Ross Macintyre, the New Zealand Delegate: “We cannot discuss oversubscription until we have the preliminary entry.”

USA: “I understand Mr Macintyre’s point. I withdraw the amendment.”

UK: “We would like to propose to use the date of close of preliminary entry.”

The UK proposed amendment was then voted on. 31 voted for, 2 voted against.

The final text was then put to the vote and received 30 votes for, 2 votes against, 1 abstention.

The pilot selection process was adopted with 3 amendments.

8.1.2 Immediate application of Pilot Selection Process (1st April 2010)

The proposal was adopted with 31 votes for, 2 abstentions.

8.1.3 FAI Decentralised Gliding Competition

The IGC Secretary Mr Peter Eriksen explained that the Bureau would like to involve FAI and IGC in decentralised competitions by organising an on-line competition focussing on FAI triangles.

Greece: “We can’t fly these triangles in Greece. We would prefer to have a 3 turn point distance competition.”

The Polish Delegate, Mr Artur Rutkowski: “We support the idea, is it to replace the Barron Hilton cup?”

Mr Henderson: “No, it is not seen as a replacement of the Barron Hilton Cup.”

The Dutch Delegate: “This can only be a success if we only consider pre-declared triangles.”

The German Delegate: “We could maybe use the same rules as were used for the Barron Hilton Cup.”

USA: “I like this proposal, because it an open proposal, giving room for development and more specific definition.”

Mr Ian Strahan: “You should not mention 28%; it’s not always required.”

New Zealand: “The task should be pre-declared.”

South Africa: “We support the proposal, yes it should be pre-declared.”

There were 32 votes for the proposal, 1 abstention.

8.1.4 IGC Safety Strategy and Plan

Mr Eriksen presented the proposal, which requested the meeting to endorse the Bureau’s continued work towards an IGC Safety Policy.

The proposal was unanimously adopted.

8.1.5 Special budget for History Committee

Mr Henderson presented the proposal from the Bureau, allowing the Bureau to reimburse limited costs of the History Committee.

The proposal was unanimously adopted.

8.2 Report and proposal from the Continental Records WG

8.2.1 Continental Records WG Report

The report was sent out to the delegates before the meeting.

8.2.2 Proposal for establishment of Continental Records (Year 2)

Mr Henderson explained that a proposal from the Continental Records WG was sent out with the material for the meeting. Following that, the Sporting Code Committee together with the Continental Records had developed a revised proposal without any change in substance, which had been submitted shortly before the meeting.

Mr Obermeyer, Chairman of the Continental Records WG, presented the background for the proposal, supporting the future development of gliding.

The Spanish Delegate, Mr Angel Casado Alonso: "The minimum performance should be the best current national record for the region."

Greece: "Why do we not require the biggest part of the flight to be flown in the continent where it is valid?"

The proposal was adopted with 31 votes for, 1 vote against and 1 abstention.

The President asked the Plenary to empower the Bureau to complete the proposal with minimum performance required per continent, which was unanimously approved.

8.3 Report and proposal from the Light-end Sailplanes WG

8.3.1 Light-end Sailplanes WG Report

The report was sent to the delegates before the meeting.

8.3.2 Proposals for 13.5 meter Class (Year 2)

8.3.2 a Establishment of the 13.5 meter Class

Mr Henderson presented the proposal, and mentioned that the Bureau sees a strong relationship between this proposal and the proposal to include the 20M Class in the WGC calendar.

The Bureau is concerned that there is a need to review the championship classes completely. Mr Henderson referred to the discussion that took place on the IGC discussion mailing list, and noted that the people flying in the light end had few competition opportunities. He also reminded the meeting that the proposal was only to replace the World Class as a Competition Class, not as Record Class.

The chairman of the Light End Sailplanes WG, Mr François Pin, was not able to be at the meeting, so the Mr Henderson asked the other members of the WG to respond to questions from the Plenary.

The proposal to establish the 13.5m Class was then voted on. The proposal received 20 votes for, 7 votes against, there were 6 abstentions.

8.3.2.b Handicap in the 13.5 meter Class

The discussion then continued on the proposal to include handicaps in the 13.5m Class.

Mr Foltin: "I suggest amending the proposal to read: The class may use handicap".

Mr Spreckley: "Handicap will limit the development; we prefer not to have handicaps."

Mr Stuck: "I agree with Mr Spreckley."

The amendment to the handicap proposal was then voted on. 15 voted for, 13 against, there were 5 abstentions.

The amendment failed as 17 votes were required to adopt the amendment.

Mr Sheppe: “I accept the argument for not using handicap, but in this class we are also trying to absorb existing gliders. If we want to do that, we need to use handicaps.”

Mr Georgas: “How do we include a new type if we don’t have a handicap factor?”

Mr Spreckley: “We know that some of the existing types still do not have correct handicaps, how could we manage this for so many new gliders?”

The proposal was then voted on and received 23 votes against, 9 abstentions.

The proposal was not supported.

8.3.2.c Use of ballast in 13.5m Class

Mr Cubley, Australia: “Why it is proposed not to have ballast in this class?”

Mr Sheppe: “We have recommended this for simplicity and to keep the cost down. The manufactures can build the gliders with water tanks, but ballast may not be allowed in competitions.

8 delegates voted for, 15 voted against, 10 abstentions. The proposal was not supported.

8.3.2.d Sub-classes in 13.5m Class

5 delegates voted for this proposal, 23 voted against, 5 abstentions.

The proposal was not supported.

8.4 Report and proposals from the Sporting Code Section 3, Annex A (Göran Ax)

8.4.1 Sporting Code Section 3 Annex A WG Report

Mr Ax, Chairman of the Annex A Committee, explained that the Annex A change to the 1st of April 2010 was only to assure the inclusion of the pilot selection process before the 2010 WGCs. He thanked Rick Sheppe for his support.

8.4.2 Revised Annex A of the Sporting Code Section 3 (Year 2)

The new version of FAI Sporting Code Section 3 Annex A was unanimously adopted by the meeting.

8.4.3 Report from the Handicap Sub-committee

The report was sent out before the meeting. The Sub-committee Chairman, Mr Axel Reich, could not be present.

8.5 Report and proposals from the Sporting Code Section 3, Annex D

8.5.1 Sporting Code Section 3 Annex D WG Report

The Chairman of the Annex D Working Group, Mr Brian Spreckley, informed the meeting that the WG was working on establishing a Ranking List for Virtual Gliding. The aim was to have the first competition for the virtual ranking list during the WGC in Prievidza.

As a new initiative, the Junior’s page will be established, and the ranking list is now made available to national federations to use it to establish a national ranking.

Mr Spreckley also mentioned that the IGC Ranking list is now ten years old, and that it was maybe time to renew the list in terms of presentation as well as functionality.

Mr Georgas noted that the Condor community has a well organised competition. We could invite them to participate in the virtual list.

Mr Spreckley responded that contacts had been established, and that a structure needed to be agreed on.

8.5.2 Revision to Annex D (Competition quality factor)

There were no questions to the proposal.

The proposal was adopted with 28 votes for, 2 votes against and 3 abstentions.

8.6 Proposal from Norway

8.6.1 Introduction of 20m Two-seater class at WGC

Before asking Norway to present the proposal, Mr Henderson ruled the part of the proposal concerning 2012 implementation out of order. The 2012 WGCs have already been allocated.

The Norwegian Delegate, Mr Arild Solbakken, explained that the 20m Two-seater class was becoming more and more popular, there were more and more competitive gliders and good pilots flying them.

Mr Mozer: “We can conceptually all agree to this, but we now have a 13.5 m class. We need to look at our championship structure to find out how we deal with this. Just continuing to add new classes will not work.”

Mr Stuck: “As long as we only allow 1 glider per country per class we probably can deal with this.”

Mr Spreckley: “The aim was to create a class for the club-owned 20m gliders, but the gliders flying in this class will not be the club gliders. These new gliders can fly the Open Class.”

Mr Georgas: “Is this a year 1 proposal, or is it a final proposal?”

Mr Henderson: “It is a final decision. This is not a Sporting Code matter, but a discussion on the Competition Calendar.”

Mr Sheppe: “Even if I am in favour, I don’t like the proposal, it does not consider the problems we have. I am in favour of rediscussing the structure for all classes.”

Mr Solbakken accepted to withdraw the Norwegian proposal should it be agreed to rediscuss all classes.

Mr Macintyre: “The light end is not at all well defined, now this comes up, it looks quite messy to me.”

A late proposal from USA was then presented:

“It is proposed that the IGC Championship Working Group, in conjunction with the Bureau, conduct a complete review of the World Championships calendar, with respect to classes supported. The group will consider all classes defined in Annex A. A report, with recommendations, will be presented at the 2011 meeting of the IGC Plenary.”

The late proposal received 21 votes for, 8 votes against, there were 4 abstentions. The proposal was lost as a 2/3rds majority was required.

The Norwegian proposal was then voted on and received 18 votes for, 12 votes against, 3 abstentions. The proposal for the 20m Two-seater class was adopted.

8.7 Proposal from France

8.7.1 Use of GPS Position recorders for silver and gold badge flights

Mr Henderson asked the French Delegate to present the proposal.

Mr Stuck: “The proposal is fairly obvious. We have agreed to use COTS for silver and gold badges, giving the responsibility for the selection to the NAC.

We feel the process in place is an approval by GFAC. We want the NAC to be responsible, but following the rules of GFAC, as was intended.”

Mr Henderson then informed the meeting that the text in the proposal had been slightly modified to provide more clarity.

Mr Angel Casado: “I am against this proposal. GFAC should be the body approving these devices.”

Mr Ian Strachan: “We are trying not to be bureaucratic, we simply verify that the proposed devices live up to the requirement. We are just defending the text in the Sporting Code.”

Mr Bernald Smith: “The ANDS committee supports this as long as it requires international oversight. With this proposal, as it is now, we lose this oversight.”

Mr Visa-Matti Leinikki: “We have already lost the international oversight. We have no control of badges today. The French proposal is a minor change.”

Mr Ross Macintyre: “I would like to make it clear that we don’t need manuals sent to GFAC for analysis, only the type of the proposed device.”

Mr Bob Henderson: “The Bureau thinks this puts the responsibility where it should be, with the NAC. The GFAC should provide the oversight, by supporting and reviewing the work of the NACs.”

The proposal was then voted on and received 27 votes for, 3 votes against and 2 abstentions.

It was then agreed to implement this change with immediate effect with 29 votes for, 2 votes against and 1 abstention.

8.8 Proposal from Australia (late proposal)

8.8.1 Acceptance of discussing the notion from Australia (2/3rds majority required)

In favour of discussing the proposal were 26, 5 were against, there was 1 abstention.

8.8.2. Allocation of WWGC and JWGC outside Europe

Mr Terry Cubley then presented the Australian proposal, which is in line with the decision on WGC locations agreed for the WGC calendar two years ago.

Mr Visa Matti Leinikki: “A junior pilot often gets only one chance to fly a WGC. For most of them it would be too expensive to go outside Europe, where by far most of the junior pilots are.”

Mr Roland Stuck: “We will also have a problem with vacation for students if we go to the Southern hemisphere.”

Mr Ross Macintyre: “We can use the same arguments as Europe, it works both ways.”

The Polish Delegate Mr Artur Rutkowski: “We support the proposal, once in 10 years is fair. We must also look at juniors from other continents.”

Mr Alexander Georgas: “It is a tough decision, but we cannot have a Europe-centric view on this.”

Mr Vytautas Sabeckis: “We could also support the non-European pilots when they come to Europe.”

Mr Angel Casado: “This is also a question of coherence. We do it for the “senior” WGC, we should also do it for the Juniors.”

Mr Cubley: “Yes there is the cost, but it is also a question of recognition. We are trying to build up the junior gliding movement in Asia. This will show them that IGC takes this seriously.”

The proposal was then voted on and received 18 votes for, 9 votes against and 4 abstentions.

Alexander Georgas: The work of the Country Development Committee.

Mr Georgas explained what the group had achieved so far, and what the plans were for the future. One remarkable figure was that 3.400 pilots from 55 countries or 3.2% of all the worlds registered glider pilots had participated in the surveys conducted.

The material will very soon be made available on the IGC website, but the plan is to also make the material available country by country, to allow national bodies to use the very information such as age distribution, participation in cross country, what are the most important issues we should deal with in the future, etc.

9. IGC Strategy

9.1 Update on the IGCs strategic Plan

The President gave an update of the IGC Strategic Action Plan.

He mentioned that he was disappointed about the number of gliding federation president’s that had turned up when they were invited to the IGC meeting a couple of years ago.

The number of delegates participating to the IGC meeting is stable. He asked the meeting to consider how we could increase the number.

Mr Georgas suggested inviting new countries by direct contact.

Mr Henderson mentioned that the Stewards and Juror training now has been formalised.

The number of pilots on the IGC ranking list is getting close to 5000, and we have more than 100.000 hits on the Ranking List web site yearly. We may need to expand the ranking list to have a category for simulated gliding.

The President also found it promising that we now had external commercial interest in our Gliding Grand Prix.

Finally he noted that the membership numbers were reducing.

There were no further comments from the meeting to the report.

10. Votes on Bids

10.1 2013 World Gliding Championships,

10.1.1 8th FAI Junior’s World Gliding Championships 2013

The first round of voting gave the following result:

Australia 11 votes,

Poland 8 votes,

Slovakia 5 votes,

Czech Republic 4 votes,

Hungary 3 votes

Lithuania 3 votes.

For the second round, the two bids that obtained the most votes were retained.

The second round gave the following result:

Poland 22 votes

Australia 12 votes.

The 8th Junior's WGC 2013 was awarded to Leszno, Poland.

10.1.2 7th FAI Women's World Gliding Championships 2013

The 7th Women's WGC was unanimously awarded to Issoudun, France

10.2 16th European Gliding Championships 2011

The 16th European Gliding Championships in World, Club, Standard and 20m Two Seat Class was awarded to Nitra, Slovakia, with no votes against.

The 16th European Gliding Championships in 15-meter, 18-meter and Open Class was awarded to Pociunai, Lithuania, with no votes against.

Mr Ian Oldaker: Implementing a Safety Management Programme for Gliding Organisations

Mr Oldaker presented the work done by OSTIV on how to implement Safety Management programmes in gliding organisations.

11. IGC awards

11.1 Lilienthal Medal

Four persons were nominated for the Lilienthal Medal.

The Medal was awarded to Mr Ross Macintyre, New Zealand

11.2 Pirat Gehriger Diploma

Two persons were nominated for the Pirat Gehriger Diploma

The Diploma was awarded to Mr Egidio Galli, Italy

11.3 Pelagia Majewska Medal

Two persons were nominated for the Pelagia Majewska Medal.

The Medal was awarded to Mrs Beryl Hartley, Australia.

12. Date and place for the 2011 IGC Plenary Meeting

12.1 Proposal from USA, Dayton, Ohio

Mrs Linda Murray presented the bid from the USA to hold the 2011 IGC Plenary in Dayton Ohio.

The proposal received 20 votes, 10 votes against and one abstention. The proposal was lost as a 2/3rds majority is required to move the meeting away from Lausanne.

12.2 Useful dates and other practical information

The IGC Secretary Mr Peter Eriksen informed the meeting about the deadlines for submission of material for the 2011 IGC Plenary meeting.

Notification of proposals shall be provided to the Bureau and bids for the 2014 WGC to the Bid Specialist Thursday 30th September 2010 at the latest.

Final proposals, nominations and reports requiring voting shall be provided not later than Friday 31st December 2010.

Reports not requiring voting shall be provided on Thursday 13th January 2011.

All material will be made available for delegates and NACs on Thursday 20th January 2011.

13. Closure

The IGC President Bob Henderson then closed the meeting and wished all the participants a safe journey back home.

Peter Eriksen, IGC Secretary

Appendix A: Committee Chairmen and Officers

Committee Chairs:

ANDS:	B. Smith
Communications & PR:	B. Henderson
Championship Management:	E. Mozer
GFAC:	I. Strachan
Sporting Code Section 3D	
Main Section & Annex C:	R. Macintyre
Annex A:	G. Ax
Annex B:	B. Smith/ I. Strachan
Annex D:	B. Spreckley

Working Group Chairs:

Continental Records:	H. Obermeyer
Country Development:	A. Georgas
GP Action Plan:	B. Spreckley
History:	T. Johannessen
Light End Glider:	F. Pin
Scoring Software Testing:	V-M. Leinikki

IGC Representatives

CASI:	T. Johannessen
EGU:	P. Pauwels
Environnemental Comm.:	B. Smith
Medical Comm.:	Vacant
OLC:	A. Reich

Specialist Officers

IGC Treasurer	D Bradley
Membership:	J. Roake
Sailplane Grand Prix:	R. Stuck
Simulated Gliding:	R. Stuck
Trophy Management:	M. Vigorito
Website:	P. Ryder



International Gliding Commission 2011

President's Report

As we go into the new decade there are new faces responsible for the governance of the FAI. Stephane Desprez, the Secretary General, has gathered an expanded team around him at the headquarters in Lausanne and we can look forward to enhanced assistance from them to help us look after gliding internationally.

John Grubbström, from Sweden, is the new FAI President and Otto Lagarhus (Norway) and Beat Neuenschwander (Switzerland) are new Executive Board members. President Grubbström will be speaking to us at the Plenary meeting and also be our guest at the IGC dinner.

Last year I spent some time talking about volunteers. This year the focus for our plenary meeting is on safety – for a very simple reason.

In 2009 we had serious accidents at our sanctioned competitions and I regret that this trend continued in 2010. We have had two pilot fatalities, one at the SGP Final in Chile and one at the WGC in Slovakia. Both accidents appeared to involve loss of control resulting in the gliders spinning into the ground with tragic consequences. The resulting situations were managed extremely well by the organisers with the involvement of local authorities, IGC people at the event and the guidance provided by the “*FAI Casualty Guidelines*”.

In addition to the fatalities, we had two serious accidents. One was at the WGC in Slovakia with a mid-air between two gliders during the competition. Both pilots were able to land their gliders safely and were uninjured. One pilot was subsequently disqualified for 3 days from the championship.

The second accident occurred at the WGC in Hungary where a glider on approach to landing collided with a truck passing along the road adjacent to the end of the runway. The glider pilot was uninjured despite the glider being destroyed in the subsequent uncontrollable landing, but regrettably the truck driver suffered severe facial injuries when the wing tip struck him. I understand that surgeons have been able to restore sight in one of his eyes. This accident is being investigated by the Hungarian Police.

Add to this the fact that multiple protests were made in Slovakia about “*dangerous flying*”, all of which were dismissed by the Jury, and you can understand why the Bureau is not happy with the behaviours being apparently displayed by some of our pilots. Safety messages were delivered loud and clear at both these World Championships but they seem to have fallen on deaf ears for a few pilots. A long, hard look will now be taken at the way we manage our World Championships and the latitude that we allow pilots for flying misdemeanours.

This matter will be the subject of debate at the Steward training session and proposals from that discussion will be brought forward to the plenum for consideration. We have increased the time allocated to the Steward training session this year to give these learned people time to work through various ideas that have been raised.

The time also seems right to now put in place safety requirements, mandated by the IGC, to mitigate injuries in the event of an accident. This will be a subject of discussion at this meeting and I anticipate us being able to implement proposals that have, up to now, only been talked about.

The other threats that the sport faces – airspace, airworthiness, medicals, transponders, ADS-B, increasing costs etc, form part of the interesting and frustrating battle that is on-going primarily at the national level. In Europe the gliding community is extremely well served by the members of the European Gliding Union who battle endlessly, or so it seems, to convince the Regulators at EASA to provide reasonable and appropriate regulations.

Pilot Rankings

The top three pilots on the IGC Ranking List (at time of writing of this report) are:



1st

Michael Sommer (GER)



2nd

Sebastian Kawa (POL)



3rd

Zbigniew Nieradka (POL)

IGC Sanctioned Championships

It gives me great pleasure to congratulate the winners of the 2010 Championships and the IGC-OLC World League. Again, despite the challenges presented by the world financial situation, we achieved our championship calendar for the year due to the combined efforts of dedicated organisers and volunteer IGC officials.

31st FAI World Gliding Championships – Standard, Club and World Classes

The 31st FAI WGC for the Standard, Club and World Classes was held in July in Prievidza, Slovakia. 106 competitors representing 27 NACs participated. 12 competition days were achieved for each class.

The World Champions are:



Standard Class

Sebastian Kawa (POL)



Club Class

Arndt Hovestadt (GER)



World Class

Laurent Couture (FRA)

31st FAI World Gliding Championships – Open, 18M and 15M Classes

The 31st FAI WGC for the Open, 18M and 15M classes was held in August in Szeged, Hungary. 142 competitors representing 32 NACs participated. The weather was inclement

and only seven competition days were achieved for the 18M and 15M classes and eight days for the Open Class.

The World Champions are:



Open Class
Michael Sommer (GER)



18M Class
Zbigniew Nieradka (POL)



15M Class
Stefano Ghiorzo (ITA)

The OLC 2010

After five years the activity level for the OLC seems to have stabilised at around a total 2160 km per participant with the average flight being 280 km. Total activity for the OLC for 2010 saw 12,881 participants flying 100,296 flights and achieving a total distance of over just over 28 million kilometers (the same as 2009).

The 2010 season of the IGC-OLC World League saw activity levels sustained with entries from 1068 Clubs and gliding organisations (2009 - 1067; 2008 - 1050). The top three placed clubs for 2010 were:

- 1st Albuquerque Soaring (retaining their 1st place from 2009)
- 2nd SFZ Konigsdorf
- 3rd Tucson Soaring Club (retaining their 3rd place from 2009)

The application and enthusiasm shown by the pilots at Albuquerque Soaring and the Tucson Soaring Club is to be complimented.

World Records

IGC made a submission to CASI (the FAI Air Sport General Commission) in 2010 regarding the treatment of world records claimed in multi-seat gliders. The result of the CASI decision means that world records for multi-seat gliders no longer have to first be accepted as a national record. This decision comes into effect from the 1st of October 2011.

Activity levels on the record front seem to have reduced in the past year. One record claim was ratified:

Sub-class	Type of Record	Performance	Date	Claimant
World Class - Feminine	Distance using up to 3 turn points	450.2 km	19 Jul	Facon (FRA)

And six claims for 2010 have been received by the FAI Headquarters:

Sub-class	Type of Record	Performance	Date	Claimant
Open	Distance over a triangular course	1600.2 km	8 Dec	Ohlmann (GER)

Open	Free triangle distance	1608.2 km	8 Dec	Ohlmann (GER)
Open	Speed over a triangular course of 1500 km	122.75 km	8 Dec	Ohlmann (GER)
15 Meter - Feminine	Free distance using 3 turn points	1051.4 km	25 Dec	Schödel (GER)
Open	Distance over a triangular course	1621 km	25 Dec	Ohlmann (GER)
Open	Free triangle distance	1650 km	25 Dec	Ohlmann (GER)

Public Presentation of Gliding

In 2009 I talked about the live streaming of the GP racing at Turin and Santiago. Our new FAI President has publically stated that he wants to see live streaming, easy-to-understand and immediate scoring being priorities for the FAI to enable us to present our sports to the public. This move forward will, I am sure, be of great benefit to our GP project.

SGP+

At the 2009 Plenary you heard about the plan to create an “SGP+ circuit” combining the excitement of GP glider racing with a strong environmental message. A considerable amount of work has gone into progressing this opportunity. I especially want to thank Stephane Desprez for working so hard on our behalf to negotiate a contract to enable this concept to develop. I also want to thank Brian Spreckley for his dedication to the job of being the IGC negotiator on this project. I will speak more about this at the plenary meeting.

FAI General Conference 2010

The FAI General Conference 2010 was held in Dublin, Ireland, in October. A full agenda included an Air Sports Commission President’s meeting. The two days of conference were generally very dry and involved working through details rather than allowing the delegates to debate philosophies about the future of the FAI. One presentation broke this pattern – being a discussion on the future of AVGAS as a fuel for GA aircraft. Interestingly, more GA aircraft operate in the USA and more AVGAS is used in the USA than in all the countries of Europe combined.

An updated FAI strategy was presented by the Secretary General and was well received by the conference delegates. This updated strategy is now the focus of work for the new FAI Executive Board for the next five years. Stephane was adamant that we need to focus on consistent and visible branding for all our sports to ensure that the FAI is visible and properly recognised. We all have a responsibility in this area to ensure that our IGC sanctioned events are properly branded – and this includes means websites, documents, letters, emails to outside organisations, banners, flags and so on. The FAI logo should be openly and clearly visible anytime we have an FAI_IGC sanctioned event at any level.

Following the recommendations arising from a report commissioned by the FAI Executive Board in 2009 the accounts of FAI have been consolidated so that the income and expenditures from the Commissions are integrated into the main body of the accounts. You may have seen or heard of concerns being raised that the ASC funds would be used to offset FAI expenses. The “change” in the accounting procedures is actually required to align the FAI with the requirements of the FAI Statutes. The future use and distribution of monies

(both excess income and budget debt financing) will be considered in 2011 by a Working Group set up by the General Conference. This WG is comprised of two representatives from the NACs, two from the ASCs and two from the Executive Board. The WG is charged with determining how the FAI accounts, income and expenditures are managed in the future.

The World Air Games for 2011 have been cancelled and the FAI Headquarters is now focusing on bids for the World Air Games for 2013.

Eric Mozer attended the Conference as the acting IGC President and continues to serve the FAI on the Statutes Working Group.

Bureau Meetings

A mid-year Bureau meeting was held in Dublin in October, 2010, in conjunction with the FAI General Conference. This meeting saw a significant amount of time spent on discussions about management of our WGC events and safety at WGC competitions.

Looking Ahead to 2011

2011 promises to be an interesting year. The new management team on the FAI are keen to progress a number of ideas that have not been able to gain traction in the past few years and I look forward to us being able to work closely with the Secretary General and the headquarters staff to develop the sport of gliding further.

In addition to my responsibilities as IGC President and an FAI board member, I now have responsibility for a number of FAI portfolios including: Strategic Planning; Branding; Positioning; Relationship with ASCs; Sports Development; New Technologies; On-line Contests and Safety.

This means that I will need to rely on Bureau members to look after day-to-day IGC activities perhaps more so than they have done in the past. I know that they will rise to this challenge.

Peter Platzer is standing down from the Bureau this year and I would like to thank Peter for his valuable contributions to the Bureau over the past three years.

Finally, my specific thanks to Eric Mozer and to Peter Eriksen for their support to me during the past year.

A handwritten signature in blue ink that reads "Bob Heald". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

President, IGC

IGC Financial Statement to 31st December 2010

	Actual 2008	Actual 2009	Budget 2010	Actual 2010
Opening Balance of Funds	€ 60 743,98	€ 67 807,75	€ 92 520,75	€ 92 520,75
Income:				
1. Total income	€ 28 711,38	€ 44 648,77	€ 36 350,00	€ 52 010,00
1,1 Championship Income - Sanction Fees	€ 24 584,11	€ 43 629,93	€ 34 850,00	€ 50 502,00
Continental Championships	€ 0,00	€ 23 400,00	€ 1 500,00	€ 1 500,00
World Championships	€ 11 050,00	€ 5 175,00	€ 18 750,00	€ 35 550,00
QGP and GP Final	€ 190,00	€ 969,34	€ 1 000,00	€ 0,00
SGP+				€ 0,00
WAG	€ 0,00	€ 500,00	€ 0,00	€ 0,00
BHC	€ 1 246,45	€ 0,00	€ 0,00	€ 0,00
Ranking System	€ 12 097,66	€ 12 925,31	€ 13 000,00	€ 13 252,00
OLC	€ 0,00	€ 660,28	€ 600,00	€ 0,00
Protest Fees	€ 0,00	€ 0,00		€ 200,00
1,2 Sales	€ 4 100,00	€ 990,00	€ 1 500,00	€ 1 500,00
FR Certification	€ 4 100,00	€ 990,00	€ 1 500,00	€ 1 500,00
1,3 Miscellaneous Income	€ 27,27	€ 28,84		€ 8,00

Expenditure:

2. Total Expenses	€ 21 647,61	€ 19 935,77	€ 30 870,00	€ 32 731,69
2,1 Travel and Administration	€ 0,00			
2,2 Meetings	€ 5 442,48	€ 6 481,65	€ 6 000,00	€ 9 008,11
President's attendance at meetings	€ 4 844,25	€ 2 561,72	€ 5 000,00	€ 2 645,47
Other Officials Attendance at Meetings	€ 598,23	€ 3 919,93	€ 1 000,00	€ 6 362,64
2,3 Stock Purchases	€ 0,00	€ 0,00	€ 0,00	€ 0,00
IGC Stickers	€ 0,00	€ 0,00		
2,4 Championship Expenses	€ 14 867,67	€ 12 360,77	€ 22 870,00	€ 21 221,90
Medals	€ 797,25	€ 1 464,05	€ 880,00	€ 1 005,00
WADA Doping			€ 2 500,00	
Officials Expenses WGC and CGC	€ 5 833,59	€ 7 005,78	€ 9 000,00	€ 8 685,10
Officials Expenses GPs	€ 1 594,33	€ 2 050,46	€ 5 000,00	€ 3 295,24
SGP+				€ 4 616,56
Officials Uniforms			€ 2 240,00	€ 389,00
Ranking List	€ 6 642,50	€ 400,00	€ 3 250,00	€ 3 231,00
World Air Games		€ 1 440,48		
2,5 Miscellaneous Expenses	€ 1 337,46	€ 1 093,35	€ 2 000,00	€ 2 501,68
GFAC	€ 1 337,46	€ 1 093,35	€ 1 000,00	€ 1 076,21
IGC History Project				€ 1 425,47
Sundry	€ 0,00		€ 1 000,00	
Special Travel				
2,6 Capital Expenditure			€ 15 000,00	€ 0,00
Tracking System			€ 10 000,00	
Safety Videos for Championships			€ 5 000,00	

Total Income	€ 28 711,38	€ 44 648,77	€ 36 350,00	€ 52 010,00
Total Expenses	€ 21 647,61	€ 19 935,77	€ 30 870,00	€ 32 731,69
Retained Income	€ 7 063,77	€ 24 713,00	€ 5 480,00	€ 19 278,31
Closing Balance of Funds	€ 67 807,75	€ 92 520,75	€ 98 000,75	€ 111 799,06

IGC - Detailed Ledger 1st January to 31st December 2007

IGC - Detailed Ledger 1st January to 31st December 2008

Date	Description	Type	FAI Event Number	Invoiced	Debit Amount	Credit Amount	Balance
01-janv-08	Balance Brought Forward					€ 60 743,98	€ 60 743,98
18-janv-08	DSX High Tech Salg FR Approval	GFAC		€ 1 000,00		€ 1 000,00	€ 61 743,98
18-janv-08	Reimburse T Johannesson - General Council meeting Rhodes	MP			€ 245,00		€ 61 498,98
02-févr-08	SF Austria - ACC	RS	5191	€ 300,00		€ 300,00	€ 61 798,98
02-févr-08	SF Norway - Elverum	RS	5190	€ 200,00		€ 200,00	€ 61 998,98
02-févr-08	SF Norway - Nat Championships	RS	5196	€ 300,00		€ 300,00	€ 62 298,98
02-févr-08	SF UK British Nationals	RS	5288	€ 450,00		€ 450,00	€ 62 748,98
05-févr-08	SF Germany - Womens Championship	RS	5197	€ 345,66		€ 345,66	€ 63 094,64
05-févr-08	SF Slovak Rep - Pribina Cup	RS	5194	€ 300,00		€ 300,00	€ 63 394,64
08-févr-08	SF Slovak Rep - FCC	RS	5193	€ 200,00		€ 200,00	€ 63 594,64
19-févr-08	SF Slovak Rep Fatraglide	RS	5277	€ 250,00		€ 250,00	€ 63 844,64
21-févr-08	SF Australia - Nat 2008 Temora	RS		€ 300,00		€ 300,00	€ 64 144,64
21-févr-08	SF Spain - Nat 2007	RS	4830	€ 350,00		€ 350,00	€ 64 494,64
26-févr-08	SF Hungary - Flatland 2008	RS	5354	€ 350,00		€ 350,00	€ 64 844,64
28-févr-08	SF Sweden - Natationals 2008	RS		€ 350,00		€ 200,00	€ 65 044,64
29-févr-08	Reimburse T Cubley Expenses New Zealand GP Final	GP			€ 1 594,33		€ 63 450,31
29-févr-08	SF Czech Republic Nat Championships	RS	5253	€ 250,00		€ 250,00	€ 63 700,31
29-févr-08	SF France - Vinon	RS	5192	€ 350,00		€ 350,00	€ 64 050,31
04-mars-08	SF UK British Nationals	RS	5288	€ 500,00		€ 500,00	€ 64 550,31
05-mars-08	SF Germany - Hahnweide	RS	5198	€ 350,00		€ 350,00	€ 64 900,31
07-mars-08	SF Netherlands - Dutch Nat	RS	5278	€ 350,00		€ 350,00	€ 65 250,31
10-mars-08	SF Germany - Klix	RS	5251	€ 200,00		€ 200,00	€ 65 450,31
11-mars-08	SF France - Bailleau	RS		€ 250,00		€ 250,00	€ 65 700,31
18-mars-08	Reimburse P Eriksen - Expenses Rome Plenary Meeting	MO			€ 598,23		€ 65 102,08
20-mars-08	Reimburse B Spreckley - Visit to Rieti WGC	WGC			€ 426,00		€ 64 676,08
14-avr-08	Reimburse Pres Henderson Expenses attending Meetings	MP			€ 1 188,51		€ 63 487,57
14-avr-08	SF Sloval Rep - Slovak Gliding Championships	RS	5276	€ 200,00		€ 200,00	€ 63 687,57
21-avr-08	Medals for WGC 2008	MWGC			€ 797,25		€ 62 890,32
28-avr-08	LX Navigation 3000 Celje FR approval	GFAC		€ 1 000,00		€ 1 000,00	€ 63 890,32
29-avr-08	SF Spain - OCA	RS	5250	€ 300,00		€ 300,00	€ 64 190,32
01-mai-08	SF Czech Rep - Jeseniky Spring Cup	RS	5252	€ 200,00		€ 200,00	€ 64 390,32
01-mai-08	SF Slovak Rep Saris Cup	RS		€ 350,00			€ 64 390,32
02-mai-08	SF Norway - Arnborg	RS	5431	€ 400,00		€ 400,00	€ 64 790,32
05-mai-08	SF Hungary	RS	5412	€ 350,00		€ 350,00	€ 65 140,32
07-mai-08	SF Belgium	RS	5413	€ 300,00		€ 300,00	€ 65 440,32
10-mai-08	SF Germany Hockenheim	RS		€ 350,00			€ 65 440,32
16-mai-08	SF Sweden - Eskiltuna	RS	5452	€ 450,00		€ 450,00	€ 65 890,32
22-mai-08	Payment - K Nicholson - Ranking system	RS			€ 3 330,00		€ 62 560,32
22-mai-08	Payment Hotel Aulac Lausanne ASC Meeting Pres H	MP			€ 254,98		€ 62 305,34
22-mai-08	Refund Netherlands SF reduction	RS	5278		€ 100,00		€ 62 205,34
22-mai-08	Reimburse Pres Henderson Expenses attending ASC Meeting	MP			€ 1 723,93		€ 60 481,41
27-mai-08	SF Spain - Copa Pirineos	RS	5195	€ 282,00		€ 282,00	€ 60 763,41
28-mai-08	Sale 2 IGC patches	MISC			€ 5,93	€ 5,93	€ 60 769,34
31-mai-08	SF Italy National Championships	RS		€ 450,00			€ 60 769,34
02-juin-08	SF Germany WGC Lusse	WGC		€ 11 050,00		€ 11 050,00	€ 71 819,34

05-juin-08	Ediattec GmbH - FR revised approval	GFAC		€ 500,00		€ 500,00	€ 72 319,34
05-juin-08	Jindrich Svorc Praha CZ FR approval	GFAC		€ 1 000,00		€ 1 000,00	€ 73 319,34
07-juin-08	SF Finland National Championships	RS		€ 350,00		€ 350,00	€ 73 669,34
11-juin-08	SF Czech Rep Zbraslavice	RS		€ 250,00		€ 250,00	€ 73 919,34
17-juin-08	FAI Shirts for Stewards and Jury Rieti	WGC			€ 148,75		€ 73 770,59
19-juin-08	SF Germany - Bayreuth	RS		€ 300,00		€ 300,00	€ 74 070,59
27-juin-08	Reimburse GFAC Chairman expenses	GFAC			€ 1 337,46		€ 72 733,13
07-juil-08	SF France - National Championships	RS		€ 450,00		€ 450,00	€ 73 183,13
09-juil-08	SF Italy - Torino GP	GP	5462	€ 200,00		€ 190,00	€ 73 373,13
10-juil-08	Sale 1 IGC Sticker	MISC		€ 0,65		€ 0,65	€ 73 373,78
11-juil-08	SF Italy WGC Rieti	WGC		€ 9 075,00			€ 73 373,78
11-juil-08	SF Italy - Copa Del Mediterraneo	RS	5187	€ 350,00		€ 350,00	€ 73 723,78
14-juil-08	SF Austria - Sudwestmeisterschaft Marpingen	RS	5522	€ 300,00		€ 300,00	€ 74 023,78
25-juil-08	SF Poland - Leszno	RS	5296	€ 300,00		€ 300,00	€ 74 323,78
29-juil-08	SF Russia - Russian Nats	RS	5411	€ 350,00		€ 350,00	€ 74 673,78
02-août-08	SF France Bailleau Womens National Championship	RS		€ 50,00			€ 74 673,78
15-août-08	Reimburse B. Spreckley CS Rieti	WGC			€ 1 817,84		€ 72 855,94
28-août-08	SF Aystria - TAL	RS	5534	€ 200,00		€ 200,00	€ 73 055,94
03-sept-08	LX Navigation 3000 Celje FR Modifications	GFAC		€ 600,00		€ 600,00	€ 73 655,94
03-sept-08	SF Brazil - Bededoura	RS	5515	€ 250,00		€ 238,00	€ 73 893,94
05-sept-08	Reimburse CS Dick Bradley Lusse WGC	WGC			€ 1 440,50		€ 72 453,44
05-sept-08	Reimburse JP Tor Johannesson Lusse WGC	WGC			€ 1 440,50		€ 71 012,94
07-sept-08	SF SGP France St Auban	GP		€ 200,00			€ 71 012,94
07-sept-08	SF SGP UK Lasham	GP		€ 200,00			€ 71 012,94
11-sept-08	SF Slovak Republic - MAM	RS		€ 250,00		€ 250,00	€ 71 262,94
07-oct-08	SF Spain - Copa Pirineos	RS	5570	€ 182,00		€ 182,00	€ 71 444,94
16-oct-08	Reimburse JP Tor Johannesson Lusse and Rieti WGC	WGC			€ 560,00		€ 70 884,94
21-oct-08	Reimburse K. Nicholson - Administration of Ranking System	RS			€ 3 212,50		€ 67 672,44
23-oct-08	Reimburse R. Henderson - Meetings GC and IGC Bureau	MP			€ 1 057,65		€ 66 614,79
24-oct-08	Reimburse P. Eriksen - IGC Bureau Meeting	MP			€ 374,18		€ 66 240,61
13-oct-08	SF France - National Championships	RS		€ 300,00		€ 300,00	€ 66 540,61
19-nov-08	Sale to K Umetaki Japan - 10 stickers and 4 patches	MISC				€ 20,69	€ 66 561,30
05-déc-08	SF - Barron Hilton Cup (US\$ 1590)	BHC				€ 1 246,45	€ 67 807,75
	Balance Carried Forward			€ 38 291,24	€ 21 647,61	€ 28 711,38	€ 67 807,75

Summary by Type	Type	Invoiced	Debits	Credits
Total Continental Championships	CGC	€ 0,00	€ 0,00	€ 0,00
Total World Gliding Championships	WGC	€ 20 125,00	€ 5 833,59	€ 11 050,00
Total World Air Games	WAG	€ 0,00	€ 0,00	€ 0,00
Total WGC Medals	MWGC	€ 0,00	€ 797,25	€ 0,00
Total Grand Prix's	GP	€ 600,00	€ 1 594,33	€ 190,00
Total Ranking System	RS	€ 13 459,66	€ 6 642,50	€ 12 097,66
Total OLC	OLC	€ 0,00	€ 0,00	€ 0,00
Total BHC	BHC	€ 0,00	€ 0,00	€ 1 246,45
Total Protest	PRO	€ 0,00	€ 0,00	€ 0,00
Total Flight Recorders	GFAC	€ 4 100,00	€ 1 337,46	€ 4 100,00
Total Miscellaneous	MISC	€ 6,58	€ 0,00	€ 27,27
Total For Presidents attendance at Meetings	MP	€ 0,00	€ 4 844,25	€ 0,00
Total for others to attend meetings	MO	€ 0,00	€ 598,23	€ 0,00
Totals for all cost/profit centers		€ 38 291,24	€ 21 647,61	€ 28 711,38

Total OK

Total OK

Total OK

IGC - Detailed Ledger 1st January to 31st December 2009.

Date	Description	Type	FAI Event Number	Invoiced	Debit Amount	Credit Amount	Balance of Funds
01-janv-08	Balance Brought Forward					€ 67 807,75	€ 67 807,75
31-mai-08	SF Italy National Championships	RS		€ 450,00		€ 450,00	€ 68 257,75
11-juil-08	SF Italy WGC Rieti 2008	WGC		€ 9 075,00		€ 0,00	€ 68 257,75
02-août-08	SF France Bailleau Womens National Championship	RS		€ 50,00		€ 0,00	€ 68 257,75
07-sept-08	SF SGP France St Auban	GP		€ 200,00		€ 0,00	€ 68 257,75
07-sept-08	SF SGP UK Lasham	GP	5464	€ 200,00		€ 190,00	€ 68 447,75
30-nov-08	Australia - Qualifying GP	GP		€ 200,00		€ 0,00	
12-janv-09	Slovakia Pribina Cup	RS	5815	€ 350,00		€ 350,00	€ 68 797,75
19-janv-09	Slovakia FCC Gliding	RS	5817	€ 250,00		€ 250,00	€ 69 047,75
23-janv-09	South Africa - National Championships	RS		€ 300,00		€ 300,00	€ 69 347,75
26-janv-09	T Johannessen Expenses General Council Meeting	MO		€ 0,00	€ 660,00	€ 0,00	€ 68 687,75
29-janv-09	Chille - National Championships	RS		€ 200,00		€ 200,00	€ 68 887,75
02-févr-09	Italy - Citta de Torino	RS	5876	€ 250,00		€ 250,00	€ 69 137,75
02-févr-09	Australia - Benalla	RS		€ 250,00		€ 250,00	€ 69 387,75
18-févr-09	Germany - Hockenheim	RS	5919	€ 400,00		€ 400,00	€ 69 787,75
27-févr-09	USA - National Championship 2008	RS		€ 304,00		€ 304,00	€ 70 091,75
05-mars-09	Sweden - National Championship	RS	5945	€ 400,00		€ 400,00	€ 70 491,75
05-mars-09	Sweden - National Championship	RS	5949	€ 250,00		€ 250,00	€ 70 741,75
06-mars-09	Chile - Qualifying GP	GP	5467	€ 200,00		€ 200,00	€ 70 941,75
12-mars-09	Segelflugszene - OLC	OLC		€ 0,00		€ 660,28	€ 71 602,03
13-mars-09	France - WWGC Romorantin 2007	WGC		€ 4 800,00		€ 0,00	€ 71 602,03
13-mars-09	Austria - Qualifing GP	GP	5469	€ 200,00		€ 200,00	€ 71 802,03
16-mars-09	Switzerland -	RS	5950	€ 232,35		€ 232,35	€ 72 034,38
16-mars-09	A. Reich Travel Expenses to IGC Meeting Rome March	MO		€ 0,00	€ 183,81	€ 0,00	€ 71 850,57
18-mars-09	2009 Championship Medals	MWGC		€ 0,00	€ 1 464,05	€ 0,00	€ 70 386,52
19-mars-09	Germany - Winzein	RS	5980	€ 50,00		€ 50,00	€ 70 436,52
19-mars-09	Germany - Aalen	RS	5981	€ 300,00		€ 300,00	€ 70 736,52
19-mars-09	Slovenia - LX Navigation	RS	5983	€ 200,00		€ 200,00	€ 70 936,52
23-mars-09	Germany - Klix International Open	RS	5984	€ 200,00		€ 200,00	€ 71 136,52
25-mars-09	Switzerland - Birrfeld	RS	5979	€ 350,00		€ 350,00	€ 71 486,52
26-mars-09	Germany - Mengen	RS	5982	€ 100,00		€ 100,00	€ 71 586,52
30-mars-09	R. Henderson Travel Expenses - Plenay meeting 2009	MP		€ 0,00	€ 1 622,12	€ 0,00	€ 69 964,40
02-avr-09	France - CVVE	RS	5511 + 12	€ 287,50		€ 287,50	€ 70 251,90
03-avr-09	E. Mozer - Travel Expenses SWG/IGC Lausanne May 0	MO		€ 0,00	€ 848,62	€ 0,00	€ 69 403,28
15-avr-09	R.Stuck - Expenses for WAG Test Torino	WAG		€ 0,00	€ 524,26	€ 0,00	€ 68 879,02
15-avr-09	B. Spreckley - Expenses for WAG Test Torino	WAG		€ 0,00	€ 385,00	€ 0,00	€ 68 494,02
17-avr-09	Poland - Eurobeskidy	RS	5916	€ 200,00		€ 200,00	€ 68 694,02
21-avr-09	Slovakia - QGP 2008	GP	5465	€ 200,00		€ 200,00	€ 68 894,02
22-avr-09	Norway - National Championships	RS	6053	€ 200,00		€ 200,00	€ 69 094,02
22-avr-09	P. Eriksen Tavel Expenses IGC Meeting Lausanne 2009	MO		€ 0,00	€ 770,00	€ 0,00	€ 68 324,02
23-avr-09	Poland - Qualifying GP	GP		€ 200,00		€ 0,00	
23-avr-09	Netherlands - National Championships	RS	6086	€ 350,00		€ 350,00	€ 68 674,02
24-avr-09	WAG - Contribution to IGC Officials Travel Expenses	WAG		€ 500,00		€ 500,00	€ 69 174,02
24-avr-09	Germany - Hahnweide 2009	RS	6051	€ 400,00		€ 400,00	€ 69 574,02
26-avr-09	Norway - Everum Open	RS		€ 200,00		€ 0,00	€ 69 574,02
01-mai-09	Switzerland - Lenzburg	RS		€ 350,00		€ 0,00	€ 69 574,02
08-mai-09	Poland - Nationals Leszno	RS		€ 200,00		€ 0,00	€ 69 574,02
10-mai-09	Spain - Copa Pirineos	RS		€ 200,00		€ 0,00	€ 69 574,02

Duplicate - see line 107

Duplicate - see line 107

€182 Paid in Oct 2008 not sure how this will reflect in out accounts???

11-mai-09	Italy - Ferra 2008	RS		€ 440,00		€ 440,00	€ 70 014,02
12-mai-09	Finland -	RS	6118	€ 250,00		€ 250,00	€ 70 264,02
13-mai-09	Belgium - Open	RS	6024	€ 300,00		€ 300,00	€ 70 564,02
14-mai-09	France - Womens Nationals	RS	6022	€ 200,00		€ 187,50	€ 70 751,52
22-mai-09	Czech Rep - Jeseniky	RS	6028	€ 200,00		€ 200,00	€ 70 951,52
25-mai-09	EGC Issoudun 2007	CGC	3507	€ 0,00		€ 8 175,00	€ 79 126,52
28-mai-09	Germany - Hahnweide 2009	RS	6051	€ 400,00		€ 400,00	€ 79 526,52
31-mai-09	Italy - Nationals Volovelistico Ferrarese	RS		€ 450,00		€ 0,00	€ 79 526,52
04-juin-09	Austria - Multi Class Nationals	RS		€ 400,00		€ 0,00	€ 79 526,52
11-juin-09	Slovenia - National Championships	RS	5918	€ 250,00		€ 250,00	€ 79 776,52
18-juin-09	Spain - National Championships Club/Std/15m/Open	RS		€ 250,00			
22-juin-09	R. Bradley Travel Expenses EGC Lithuania	CGC		€ 0,00	€ 318,12	€ 0,00	€ 79 458,40
26-juin-09	R. Stuck - Travel Expenses	WAG		€ 0,00	€ 378,62	€ 0,00	€ 79 079,78
26-juin-09	Slovakia - Fatraglide 2008	RS	5277	€ 200,00		€ 200,00	€ 79 279,78
26-juin-09	Slovakia - Fatraglide 2009	RS	5816	€ 200,00		€ 200,00	€ 79 479,78
27-juin-09	Hungary - Nationals	RS		€ 200,00		€ 0,00	€ 79 479,78
06-juil-09	Ake Pettersson - Travel Expenses Lausanne - WWGC	WGC		€ 0,00	€ 246,10	€ 0,00	€ 79 233,68
06-juil-09	Germany - Hahnweide 2009 Duplicate Payment reverse	RS		€ 0,00	€ 400,00	€ 0,00	€ 78 833,68
06-juil-09	R. Stuck - Travel Expenses QGP Feldkirchen	GP		€ 0,00	€ 528,36	€ 0,00	€ 78 305,32
11-juil-09	UK - Club Class Nationals	RS		€ 450,00		€ 0,00	
11-juil-09	France - Nationals Club/Std	RS		€ 250,00		€ 0,00	
25-juil-09	Austria - Nationals Multi Class	RS		€ 250,00		€ 0,00	€ 78 305,32
24-juil-09	France - Qualifying GP	GP				€ 179,34	€ 78 484,66
26-juil-09	Czech Rep - Regionals	RS		€ 200,00		€ 0,00	€ 78 484,66
27-juil-09	Slovakia - EGC Nitra 2009	CGC	5317	€ 7 800,00		€ 7 800,00	€ 86 284,66
03-août-09	Hungary - Womens WGC Szeged	WGC		€ 5 175,00		€ 5 175,00	€ 91 459,66
04-août-09	R Henderson - WAG Referee	WAG			€ 152,60		€ 91 307,06
04-août-09	Italy - Copa del Mediterraneo	RS		€ 350,00		€ 350,00	€ 91 657,06
04-août-09	France - Bailleau	RS		€ 250,00		€ 0,00	€ 91 657,06
10-août-09	Russia - Cup of Russia	RS		€ 300,00		€ 0,00	
14-août-09	Poland - Nationals Grudziadz	RS		€ 300,00		€ 0,00	€ 91 657,06
19-août-09	Lithuania - 15th EGC Std/Club/World/20m	CGC		€ 7 425,00		€ 7 425,00	€ 99 082,06
24-août-09	R Bradley - Travel Expenses EGC Lithuania	CGC			€ 159,13	€ 0,00	€ 98 922,93
24-août-09	T Johannessen Expenses Jury President JWGC Rayska	WGC			€ 1 325,76	€ 0,00	€ 97 597,17
24-août-09	A Pettersson Expenses Chief Steward EGC Hungary	CGC			€ 964,00	€ 0,00	€ 96 633,17
24-août-09	IGC Bureau Meeting Hotel Aulac Meeting Room	MO			€ 182,67	€ 0,00	€ 96 450,50
02-sept-09	R Bradley - Accom Expenses EGC Lithuania	CGC			€ 662,00	€ 0,00	€ 95 788,50
04-sept-09	R Henderson - Travel Expenses IGC Bureau Meeting	MP			€ 939,60	€ 0,00	€ 94 848,90
04-sept-09	N. Kellermann - Clearnav Flight Recorder	GFAC				€ 990,00	€ 95 838,90
17-sept-09	B Ramseyer - Expenses JP WWGC Hungary	WGC			€ 713,73	€ 0,00	€ 95 125,17
17-sept-09	A Reich - Expenses CS JWGC Finland	WGC			€ 867,60	€ 0,00	€ 94 257,57
17-sept-09	P Ryder - Expenses JP EGC Lithuania	CGC			€ 1 749,34		€ 92 508,23
29-sept-09	I Strachan - GFAC Expenses	GFAC			€ 1 093,35		€ 91 414,88
07-oct-09	Italy - Nats 2009	RS				€ 540,00	€ 91 954,88
08-oct-09	France - Issoudun International	RS				€ 250,00	€ 92 204,88
12-oct-09	Finland - 2011 Finnish Nationals - Efry	RS				€ 350,00	€ 92 554,88
12-oct-09	Denmark - National Championships	RS		€ 300,00		€ 291,98	€ 92 846,86
12-oct-09	Denmark - National Championships	RS		€ 100,00		€ 91,98	€ 92 938,84
15-oct-09	Russia - National Championships	RS				€ 200,00	€ 93 138,84
15-oct-09	Russia - Cup of Russia	RS				€ 250,00	€ 93 388,84
20-oct-09	Germany - 14th Int Military Competition	RS				€ 350,00	€ 93 738,84
21-oct-09	Poland - Ostrow	RS				€ 300,00	€ 94 038,84
22-oct-09	France - Angers 2008	RS				€ 250,00	€ 94 288,84

22-oct-09	P Eriksen Attendance Bureau Meeting	MO		€ 360,80	€ 0,00	€ 93 928,04
26-oct-09	Poland - Polish Nationals and Leszno Cup	RS			€ 400,00	€ 94 328,04
05-nov-09	Slovakia - 52nd Sloval Int Cup	RS			€ 300,00	€ 94 628,04
16-nov-09	Japan E Sugita 2 x Patches	MISC			€ 1,60	€ 94 629,64
19-nov-09	R Stuck Attendance FAI GC Korea	MO		€ 914,03		€ 93 715,61
20-nov-09	Czech Cz and Slv Championships	RS			€ 300,00	€ 94 015,61
03-déc-09	W Wenturine - USA 3 x Stickers + 3 x Patches	MISC			€ 11,49	€ 94 027,10
04-déc-09	B Spreckley - Travel Expenses GP Final Chile	GP		€ 1 522,10		€ 92 505,00
30-déc-09	M Hytten Chile - 20 x Stickers	MISC			€ 15,75	€ 92 520,75
						€ 92 520,75
			€ 0,00		€ 0,00	€ 92 520,75
			€ 0,00		€ 0,00	€ 92 520,75
			€ 0,00		€ 0,00	€ 92 520,75
	Balance Carried Forward		€ 49 938,85	€ 19 935,77	€ 44 648,77	€ 92 520,75

Unpaid Invoices	€ 18 525,00
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Summary by Type	Type	Invoiced	Debits	Credits	Surplus
Total Continental Championships	CGC	€ 15 225,00	€ 3 852,59	€ 23 400,00	€ 19 547,41
Total World Gliding Championships	WGC	€ 19 050,00	€ 3 153,19	€ 5 175,00	€ 2 021,81
Total World Air Games	WAG	€ 500,00	€ 1 440,48	€ 500,00	-€ 940,48
Total WGC Medals	MWGC	€ 0,00	€ 1 464,05	€ 0,00	-€ 1 464,05
Total Grand Prix's	GP	€ 1 400,00	€ 2 050,46	€ 969,34	-€ 1 081,12
Total Ranking System	RS	€ 13 763,85	€ 400,00	€ 12 925,31	€ 12 525,31
Total OLC	OLC	€ 0,00	€ 0,00	€ 660,28	€ 660,28
Total BHC	BHC	€ 0,00	€ 0,00	€ 0,00	€ 0,00
Total Protest	PRO	€ 0,00	€ 0,00	€ 0,00	€ 0,00
Total Flight Recorders	GFAC	€ 0,00	€ 1 093,35	€ 990,00	-€ 103,35
Total Miscellaneous	MISC	€ 0,00	€ 0,00	€ 28,84	€ 28,84
Total For Presidents attendance at Meetings	MP	€ 0,00	€ 2 561,72	€ 0,00	-€ 2 561,72
Total for others to attend meetings	MO	€ 0,00	€ 3 919,93	€ 0,00	-€ 3 919,93
					€ 0,00
Totals for all cost/profit centers		€ 49 938,85	€ 19 935,77	€ 44 648,77	€ 24 713,00
		Total OK	Total OK	Total OK	

25-mars-10 Line 6 2008 Italian Nationals - paid, but was shown in line 96. Taken out of 96 to show correctly.
01-avr-10 Line 52 Spain paid €182 in Oct 2008 - not sure how this will credited to our account?
01-avr-10 line 45 Poland GP, line 51 Nats not o/s duplicate of line 107 which was paid.

IGC Detailed Ledger 1st January to 31st December 2010.

Date	Description	Type	FAI Event Number	Invoiced	Debit Amount	Credit Amount	Balance of Funds
01-janv-10	Balance Brought Forward					€ 92 520,75	€ 92 520,75
01-janv-10	R. Henderson Travel IGC Plenary Meeting	MP		€ 0,00	€ 1 605,03	€ 0,00	€ 90 915,72
01-janv-10	Brasil - National Championships	RS		€ 250,00		€ 0,00	€ 90 915,72
04-janv-10	Australia - Multi Class National Championships	RS		€ 350,00		€ 0,00	€ 90 915,72
17-janv-10	Argentina - 2nd South American CGC	RS		€ 360,00		€ 0,00	€ 90 915,72
19-janv-10	T. Johannessen Attendance FAI GC Korea	MO		€ 0,00	€ 540,00	€ 0,00	€ 90 375,72
22-janv-10	South Africa National Championships	RS		€ 300,00	€ 0,00	€ 300,00	€ 90 675,72
02-févr-10	B. Spreckley - GP Final Chile Travel	GP		€ 0,00	€ 266,00	€ 0,00	€ 90 409,72
02-févr-10	R. Stuck - GP Final Chile Travel	GP		€ 0,00	€ 355,61	€ 0,00	€ 90 054,11
01-mars-10	B. Spreckley - GP Final Chile Travel - Duplicate see 22 Dec 10	GP		€ 0,00	€ 266,00	€ 0,00	€ 89 788,11
01-mars-10	Germany - Klix	RS	6577	€ 300,00	€ 0,00	€ 300,00	€ 90 088,11
01-mars-10	Spain - Pirineos	RS	6606	€ 100,00	€ 0,00	€ 100,00	€ 90 188,11
03-mars-03	Hungary - Kohasz Kupa	RS	6662	€ 200,00	€ 0,00	€ 200,00	€ 90 388,11
04-mars-10	Germany - Hahnweide	RS	6650	€ 300,00	€ 0,00	€ 300,00	€ 90 688,11
05-mars-10	Germany - German Womens GC	RS	6643	€ 200,00	€ 0,00	€ 200,00	€ 90 888,11
05-mars-10	Germany - Heidepokal	RS	6610	€ 200,00	€ 0,00	€ 200,00	€ 91 088,11
12-mars-10	Germany - Tai 2009	RS	6052	€ 250,00	€ 0,00	€ 250,00	€ 91 338,11
05-mars-10	France - E. Petersen 10 IGC Stickers	MISC		€ 0,00	€ 0,00	€ 8,00	€ 91 346,11
15-mars-10	USA - US Nationals	RS		€ 400,00	€ 0,00	€ 400,00	€ 91 746,11
16-mars-10	Argentina - 2nd South American CGC	CGC	6231	€ 1 500,00	€ 0,00	€ 1 500,00	€ 93 246,11
18-mars-10	Slovakia - Pribina Cup	RS	6578	€ 300,00	€ 0,00	€ 300,00	€ 93 546,11
19-mars-10	Sweden - Aborga Open	RS	6612	€ 250,00	€ 0,00	€ 250,00	€ 93 796,11
22-mars-10	A. Reich - Junior WGC Finland	WGC		€ 0,00	€ 235,74	€ 0,00	€ 93 560,37
22-mars-10	Germany - Lilienthal Glide	RS		€ 300,00	€ 0,00	€ 300,00	€ 93 860,37
24-mars-10	Switzerland - Birmfeld	RS		€ 180,00		€ 0,00	€ 93 860,37
24-mars-10	R.Henderson IGC Plenary Travel	MP		€ 0,00	€ 779,50	€ 0,00	€ 93 080,87
28-mars-10	UK - Pocklington 2009	RS	6027	€ 450,00	€ 0,00	€ 450,00	€ 93 530,87
29-mars-10	T. Johannesson IGC History Project Expenses	HIS		€ 0,00	€ 1 425,47	€ 0,00	€ 92 105,40
29-mars-10	P. Eriksen - IGC Plenary Meeting Travel expenses	MO		€ 0,00	€ 968,55	€ 0,00	€ 91 136,85
29-mars-10	Slovakia - EGC 2009 Refund for IGC Official	CGC		€ 0,00	€ 1 403,61	€ 0,00	€ 89 733,24
30-mars-10	Italy - Torino	RS	6618	€ 110,00	€ 0,00	€ 110,00	€ 89 843,24
31-mars-10	N. Farrell - Yellow Brick - GP Finla Chile	GP		€ 0,00	€ 1 586,97	€ 0,00	€ 88 256,27
01-avr-10	France - Womens WGC Romorantin 2007	WGC	3431	€ 0,00	€ 0,00	€ 4 800,00	€ 93 056,27
07-avr-10	Italy - WGC Rieti 2008	WGC	3434	€ 0,00	€ 0,00	€ 9 075,00	€ 102 131,27
12-avr-10	Austria - AAC Alpe	RS	6755	€ 180,00	€ 0,00	€ 180,00	€ 102 311,27
15-avr-10	B.Spreckley - Wasserkuppe GP Final Travel	GP		€ 0,00	€ 314,50	€ 0,00	€ 101 996,77
15-avr-10	R.Stuck - Wasserkuppe GP Final Travel	GP		€ 0,00	€ 253,08	€ 0,00	€ 101 743,69
16-avr-10	Italy - Rieti 2010	RS	6616	€ 300,00	€ 0,00	€ 300,00	€ 102 043,69
16-avr-10	Ukraine - National Championships	RS	6699	€ 120,00	€ 0,00	€ 120,00	€ 102 163,69
18-avr-10	Netherlands - Open Class National Championships	RS	6649	€ 320,00	€ 0,00	€ 320,00	€ 102 483,69
21-avr-10	WGC - CS and JP FAI Uniform	UNF		€ 0,00	€ 389,00	€ 0,00	€ 102 094,69
22-avr-10	Slovakia - FCC Gliding	RS	6613	€ 240,00	€ 0,00	€ 240,00	€ 102 334,69
23-avr-10	Chile - Chilean Nationals 2009	RS		€ 200,00	€ 0,00	€ 200,00	€ 102 534,69
23-avr-10	IGC Plenary Meeting - Use of Olympic Museum	MO		€ 0,00	€ 2 050,00	€ 0,00	€ 100 484,69
01-mai-10	Slovakia - Fatra Glide	RS		€ 160,00		€ 0,00	€ 100 484,69
09-mai-10	Sweden - Eskiltuna	RS		€ 160,00		€ 0,00	€ 100 484,69
03-mai-10	WGC - Medals	MWGC		€ 0,00	€ 1 005,00	€ 0,00	€ 99 479,69
11-mai-10	Norway - Elverum	RS	6817	€ 100,00	€ 0,00	€ 100,00	€ 99 579,69

Investigate see Argentina 16 Mar 2010

Error - duplicated refund - deducted from next claim 31.08.2010

11-mai-10	Norway - Nationals	RS	6817	€ 150,00	€ 0,00	€ 150,00	€ 99 729,69
12-mai-10	Denmark - Nationals	RS	6789	€ 100,00	€ 0,00	€ 100,00	€ 99 829,69
12-mai-10	Denmark - Nationals	RS	6790	€ 230,00	€ 0,00	€ 230,00	€ 100 059,69
13-mai-10	Russia - Cup of Russia	RS		€ 112,00		€ 0,00	€ 100 059,69
14-mai-10	Switzerland - National Championships - Yvardon	RS		€ 350,00	€ 0,00	€ 350,00	€ 100 409,69
14-mai-10	Belgium - Saint Hubert	RS	6843	€ 200,00	€ 0,00	€ 200,00	€ 100 609,69
20-mai-10	Austria - Salzburg Tal	RS	6788	€ 100,00	€ 0,00	€ 100,00	€ 100 709,69
21-mai-10	Spain - National Championships	RS	6607	€ 120,00	€ 0,00	€ 120,00	€ 100 829,69
21-mai-10	Serbia - Zrenjanin Soaring Cup	RS	6781	€ 100,00	€ 0,00	€ 100,00	€ 100 929,69
21-mai-10	Finland - Vesivehmeen Open	RS	6742	€ 160,00	€ 0,00	€ 160,00	€ 101 089,69
23-mai-10	Civis - Thermal Kupa	RS		€ 100,00		€ 0,00	€ 101 089,69
23-mai-10	Czech Republic - Gliding Competition	RS		€ 220,00		€ 0,00	€ 101 089,69
26-mai-10	B. Spreckley - SGP+ Meeting Paris	SGP		€ 0,00	€ 582,69	€ 0,00	€ 100 507,00
26-mai-10	Finland - Nationals	RS	6743	€ 200,00	€ 0,00	€ 200,00	€ 100 707,00
26-mai-10	R. Stuck - ASC Meeting Lausanne	SGP		€ 0,00	€ 552,20	€ 0,00	€ 100 154,80
26-mai-10	Germany - Bayreuth Wettbewerb	RS		€ 300,00		€ 0,00	€ 100 154,80
11-juin-10	R. Stuck - ASC Meeting Lausanne - 2 nights Hotel Aulac	SGP		€ 0,00	€ 199,00	€ 0,00	€ 99 955,80
11-juin-10	Poland - Oshow	RS	6689	€ 220,00	€ 0,00	€ 220,00	€ 100 175,80
13-juin-10	Romania - Challenge Cup	RS		€ 240,00		€ 0,00	€ 100 175,80
14-juin-10	Lithuania - Nationals	RS	6807	€ 270,00	€ 0,00	€ 270,00	€ 100 445,80
17-juin-10	Italy - Copa Int Mediterraneo - Rieti	RS	6782	€ 300,00	€ 0,00	€ 300,00	€ 100 745,80
22-juin-10	Austria - Multi Class Nationals - 2009	RS	5917	€ 400,00	€ 0,00	€ 400,00	€ 101 145,80
02-juil-10	R. Stuck - Wasserkuppe GP Final - Travel	GP		€ 0,00	€ 253,08	€ 0,00	€ 100 892,72
02-juil-10	LX9000 - GFAC Certification	GFAC		€ 0,00	€ 0,00	€ 500,00	€ 101 392,72
03-juil-10	UK - British Nationals	RS		€ 500,00		€ 0,00	€ 101 392,72
03-juil-10	Sweden - Nationals	RS		€ 120,00		€ 0,00	€ 101 392,72
08-juil-10	Poland - Altmak Polal	RS		€ 300,00		€ 0,00	€ 101 392,72
08-juil-10	Italy - Ferrara	RS		€ 280,00	€ 0,00	€ 280,00	€ 101 672,72
13-juil-10	Serbia - Open Nationals	RS	6889	€ 100,00	€ 0,00	€ 100,00	€ 101 772,72
15-juil-10	E. Mozer - Bureau Meeting Dublin	MO		€ 0,00	€ 802,20	€ 0,00	€ 100 970,52
18-juil-10	Netherlands - Dutch Nationals	RS		€ 260,00	€ 0,00	€ 0,00	€ 100 970,52
21-juil-10	Finland - National Championships	RS		€ 200,00	€ 0,00	€ 200,00	€ 101 170,52
22-juil-10	WGC Slovakia - Protest Fee	PRO		€ 0,00	€ 0,00	€ 200,00	€ 101 370,52
27-juil-10	31st WGC Prievidza Slovakia	WGC	4593	€ 9 450,00	€ 0,00	€ 9 450,00	€ 110 820,52
27-juil-10	Russia - 2 National Events	RS	6679	€ 400,00	€ 0,00	€ 400,00	€ 111 220,52
30-juil-10	Slovenia - National Championships	RS		€ 140,00	€ 0,00	€ 0,00	€ 111 220,52
06-août-10	31st WGC Sezged Hungary - Sanction Fee	WGC	4526	€ 12 225,00	€ 0,00	€ 12 225,00	€ 123 445,52
10-août-10	R. Stuck - CS WGC Prievidza Expenses	WGC		€ 0,00	€ 325,10	€ 0,00	€ 123 120,42
10-août-10	VM Leinnikki - JP WGC Prievidza Expenses	WGC		€ 0,00	€ 205,27	€ 0,00	€ 122 915,15
10-août-10	I. Strachan - GFAC Chairmans Expenses	GFAC		€ 0,00	€ 1 076,21	€ 0,00	€ 121 838,94
18-août-10	Italy - National Championships - Thiene	RS	6819	€ 120,00	€ 0,00	€ 120,00	€ 121 958,94
27-août-10	B. Spreckley Continental Hotel Lausanne - SGP+	SGP		€ 0,00	€ 161,20	€ 0,00	€ 121 797,74
31-août-10	R. Henderson - Bureau Meeting Dublin	MP		€ 0,00	€ 260,94	€ 0,00	€ 121 536,80
31-août-10	Czech Republic - Trebova	RS	6865	€ 300,00	€ 0,00	€ 300,00	€ 121 836,80
07-sept-10	LXNav - GFAC Certification	GFAC		€ 0,00	€ 0,00	€ 1 000,00	€ 122 836,80
02-sept-10	B. Spreckley - CS 31st WGC Sezged Hungary	WGC		€ 0,00	€ 1 939,00	€ 0,00	€ 120 897,80
03-sept-19	R. Stuck and VM Leinnikki CS & JP Prievidza Accom + Meals	WGC		€ 0,00	€ 1 444,34	€ 0,00	€ 119 453,46
06-sept-10	Germany - Rotenburg	RS		€ 340,00	€ 0,00	€ 340,00	€ 119 793,46
06-sept-10	Belgium - Belgium Masters	RS		€ 100,00	€ 0,00	€ 100,00	€ 119 893,46
06-sept-10	P. Ryder - JP 31st WGC Sezged Travel/Accom/Sub	WGC		€ 0,00	€ 3 132,04	€ 0,00	€ 116 761,42
10-sept-10	Slovakia - National Championships	RS	6901	€ 240,00	€ 0,00	€ 240,00	€ 117 001,42
20-sept-10	Switzerland St Moritz QGP	GP		€ 100,00		€ 0,00	€ 117 001,42
20-sept-10	B. Spreckley - SGP+ Meeting Lausanne (€435,47 - 266)	SGP			€ 169,47		€ 116 831,95

??????? Incorrect Amount for QGP

22-sept-10	Brazil - National Championships Bahia	RS	6915	€ 110,00		€ 110,00	€ 116 941,95
27-sept-10	Hungary - Szeged	RS	6611	€ 240,00		€ 240,00	€ 117 181,95
09-nov-11	P. Eriksen - Expenses - Dublin Bureau Meeting	MO			€ 620,89		€ 116 561,06
23-nov-10	T. Johannessen - GC Meeting Dublin	MO			€ 765,00		€ 115 796,06
24-nov-10	France - All Ranked Competitions	RS		€ 2 479,34		€ 2 479,34	€ 118 275,40
24-nov-10	E. Mozer - GC Meeting Dublin.	MO			€ 616,00		€ 117 659,40
07-déc-10	K. Nicholson - Admin Fee Ranking System	RS			€ 3 231,00		€ 114 428,40
18-déc-10	Carrard Associates, Lausanne - FAI Lawyers	SGP			€ 2 952,00		€ 111 476,40
21-déc-10	France - Ranked Competitions - Balance Due	RS		€ 22,66		€ 22,66	€ 111 499,06
24-déc-10	South Africa - Nationals 2010	RS		€ 300,00		€ 300,00	€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
							€ 111 799,06
	Balance Carried Forward			€ 40 279,00	€ 32 731,69	€ 52 010,00	€ 111 799,06

Unpaid Invoices	€ 3 852,00
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Summary by Type	Type	Invoiced	Debits	Credits	Surplus
Total Continental Championships	CGC	€ 1 500,00	€ 1 403,61	€ 1 500,00	€ 96,39
Total World Gliding Championships	WGC	€ 21 675,00	€ 7 281,49	€ 35 550,00	€ 28 268,51
Total World Air Games	WAG	€ 0,00	€ 0,00	€ 0,00	€ 0,00
Total WGC Medals	MWGC	€ 0,00	€ 1 005,00	€ 0,00	-€ 1 005,00
Total Uniforms for Officials	UNF	€ 0,00	€ 389,00	€ 0,00	-€ 389,00
Total Grand Prix's	GP	€ 0,00	€ 3 295,24	€ 0,00	-€ 3 295,24
Total SGP+	SGP	€ 0,00	€ 4 616,56	€ 0,00	-€ 4 616,56
Total Ranking System	RS	€ 17 004,00	€ 3 231,00	€ 13 252,00	€ 10 021,00
Total OLC	OLC	€ 0,00	€ 0,00	€ 0,00	€ 0,00
Total BHC	BHC	€ 0,00	€ 0,00	€ 0,00	€ 0,00
Total Protest	PRO	€ 0,00	€ 0,00	€ 200,00	€ 200,00
Total History Project	HIS	€ 0,00	€ 1 425,47	€ 0,00	-€ 1 425,47
Total Flight Recorders	GFAC	€ 0,00	€ 1 076,21	€ 1 500,00	€ 423,79
Total Miscellaneous	MISC	€ 0,00	€ 0,00	€ 8,00	€ 8,00
Total For Presidents attendance at Meetings	MP	€ 0,00	€ 2 645,47	€ 0,00	-€ 2 645,47
Total for others to attend meetings	MO	€ 0,00	€ 6 362,64	€ 0,00	-€ 6 362,64
					€ 0,00
Totals for all cost/profit centers		€ 40 179,00	€ 32 731,69	€ 52 010,00	€ 19 278,31

IGC Plenary Meeting March 2011.

Treasurer's Report.

Income Sources and Charge Rates.

World and Continental Gliding Championships excluding The Junior Worlds for which there is no sanction fee.	€1500 + €75/entry
World Air Games	€10000
GP Finals and Qualifying GPs	€200 per event
OLC	CHF1000
Ranking List. – New Fee Structure	Any Number of competitions, €100 minimum fee and €4/entry up to max of €500
New FR Certification	€1000
Review of Previously Certified FR	€250 to €500

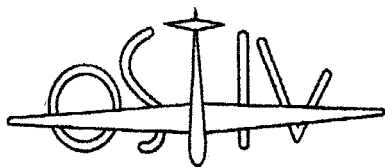
1. Our accounts are set out in the attached spread sheet, “Financial Statement to 31 Dec 2010 ” and details our current financial situation. The spreadsheet is made up of three work sheets, FINREP, Y08, Y09 and Y10.
2. FINREP is the consolidated financial report in the FAI format, showing the actual figures for previous years, the budget for 2010 and the actual figures for 2010. Work sheets Y08 and Y09 are detailed income and expense statements for the 2008 and 2009 years and are there for comparison purposes.
3. Worksheet Y10 is the detailed income and expenses statement for 2010 financial year. Please note that the “Invoiced” Column was introduced to help us track the invoices raised for the Ranking System. Items flagged in red are unpaid at the time of preparing this report and these total an amount of €3852. This is a significant improvement over the previous year. .
4. Income. Last year with the help of the respective Delegates we were successful in recovering the overdue amounts from previous WGC and the overdue amounts from the Ranking System. The amount recovered from the organisers of previous WGC amounted to €13875, thus the sanction fees from this years WGC's amounted to €21675, some €2.9k ahead of our budget for WGC . Overall and taking this adjustment into account our income was on budget, though and had all the invoiced Ranking System fees been paid promptly, our income would have been some €3000 over our budget.

5. Expenses. Our headline expenses came in below budget because the €17.5K budgeted for Tracking Systems, Safety Videos and WADA Doping Tests was not expended, if these items are excluded from the comparison, our expenses were some €4.36k over budget, which in the context of the huge amount of work done by all our officials is not significant. It should be noted that this amount includes an unbudgeted payment of €4616 to lawyers for their work on the SGP+ agreement with Planetaire. This was in fact half the lawyers fee, the other half was paid from FAI funds. As in the past, we must thank our President, Secretary, Jury Presidents, Chief Stewards and other officers for the careful use of our funds.
6. This leaves the IGC with a surplus for the year of €19,278 increasing the total of the funds that we hold, to €111,799.

Dick Bradley.
IGC Treasurer

IGC Budget to 2014

	Budget 2011	Budget 2012	Budget 2013	Budget 2014
Opening Balance of Funds	€ 111 799,06	€ 100 289,06	€ 106 345,56	€ 107 683,76
Income:				
1. Total income	€ 40 390,00	€ 41 092,00	€ 41 534,26	€ 45 284,26
1.1 Championship Income - Sanction Fees	€ 38 890,00	€ 39 592,00	€ 40 034,26	€ 43 784,26
Continental Championships	€ 18 000,00	€ 5 250,00	€ 18 000,00	€ 6 750,00
World Championships	€ 5 250,00	€ 18 000,00	€ 5 250,00	€ 20 250,00
QGP and GP Final	€ 1 000,00	€ 1 000,00	€ 1 000,00	€ 1 000,00
WAG				
BHC				
Ranking System	€ 14 040,00	€ 14 742,00	€ 15 184,26	€ 15 184,26
OLC	€ 600,00	€ 600,00	€ 600,00	€ 600,00
Protest Fees				
1.2 Sales	€ 1 500,00	€ 1 500,00	€ 1 500,00	€ 1 500,00
FR Certification	€ 1 500,00	€ 1 500,00	€ 1 500,00	€ 1 500,00
1.3 Miscellaneous Income				
Expenditure:				
2. Total Expenses	€ 51 900,00	€ 35 035,50	€ 40 196,07	€ 40 646,07
2.1 Travel and Administration	€ 0,00	€ 0,00	€ 0,00	€ 0,00
2.2 Meetings	€ 6 650,00	€ 7 300,00	€ 8 200,00	€ 9 350,00
President's attendance at meetings	€ 5 500,00	€ 6 000,00	€ 6 750,00	€ 7 750,00
Other Officials Attendance at Meetings	€ 1 150,00	€ 1 300,00	€ 1 450,00	€ 1 600,00
2.3 Stock Purchases				
IGC Stickers				
2.4 Championship Expenses	€ 28 250,00	€ 25 735,50	€ 29 996,07	€ 29 296,07
Medals	€ 1 320,00	€ 1 080,00	€ 1 560,00	€ 1 120,00
WADA Doping Test	€ 2 500,00	€ 2 500,00		€ 2 500,00
Officials Expenses WGC and CGC	€ 13 200,00	€ 10 890,00	€ 15 920,00	€ 13 200,00
Officials Expenses GPs	€ 5 000,00	€ 5 500,00	€ 6 000,00	€ 6 600,00
Officials Uniforms	€ 2 720,00	€ 2 080,00	€ 2 720,00	€ 2 080,00
Ranking List	€ 3 510,00	€ 3 685,50	€ 3 796,07	€ 3 796,07
2.5 Miscellaneous Expenses	€ 2 000,00	€ 2 000,00	€ 2 000,00	€ 2 000,00
GFAC	€ 1 000,00	€ 1 000,00	€ 1 000,00	€ 1 000,00
Sundry	€ 1 000,00	€ 1 000,00	€ 1 000,00	€ 1 000,00
Special Travel				
2.6 Capital Expenditure	€ 15 000,00			
Tracking System	€ 10 000,00			
Safety Videos for Championships	€ 5 000,00			
Total Income	€ 40 390,00	€ 41 092,00	€ 41 534,26	€ 45 284,26
Total Expenses	€ 51 900,00	€ 35 035,50	€ 40 196,07	€ 40 646,07
Retained Income	-€ 11 510,00	€ 6 056,50	€ 1 338,20	€ 4 638,20
Closing Balance of Funds	€ 100 289,06	€ 106 345,56	€ 107 683,76	€ 112 321,95



ORGANISATION SCIENTIFIQUE
ET TECHNIQUE INTERNATIONALE DU VOL „A VOILE
- O.S.T.I.V. -
INTERNATIONAL SCIENTIFIC AND TECHNICAL
ORGANISATION FOR GLIDING
(Affiliated Member of the Fédération Aéronautique Internationale,
F.A.I.)

President: L.M.M. Boermans

Delft, January 12, 2010

International Gliding Commission

Meeting on 4 and 5 March, 2011

Lausanne, Switzerland

REPORT ON THE ACTIVITIES OF THE INTERNATIONAL SCIENTIFIC AND TECHNICAL ORGANISATION FOR SOARING FLIGHT (OSTIV)

for the period March 1, 2010 to February 28, 2011.

Loek M.M. Boermans, President of OSTIV.

XXX OSTIV Congress

The main event of the reporting period was the **XXX OSTIV Congress**, held from 28 Juli to 4 August 2010 in Szeged, Hungary, at the site of the 31th World Gliding Championships 2010.

At the **Opening Ceremony** of the Congress, in the briefing hall on the airfield, the following Awards were presented:

The **OSTIV Prize and Morelli Award** was awarded to Prof. A. Puck for “his significant contributions to the early development of fibreglass-reinforced-plastic sailplanes, especially covering stress and strength substantiation and fatigue”.

The **OSTIV Special Prize and Morelli Award** was awarded to O. Liechti “for leading the team of experts and making significant contributions to the World Meteorological Organization / OSTIV publication *Weather Forecasting for Soaring Flight*”.

The **Mertens Award** for the best student contribution at the congress was given to R. Baardman for his paper “Cumulus Humilis: Wireless mesh-networking for gliders”.

The **OSTIV Diploma** for the best technical paper was given to L. Popelka, L. Zeleny, D. Simurda, M. Matejka for their paper presented at the XXIX OSTIV Congress in Lüsse, Germany 2008, titled “Wing-Body Interaction: Numerical Simulation, Wind-Tunnel and In-Flight Testing”.

The **OSTIV Diploma** for the best meteorological paper was given to J. Dumannn for his paper presented at the XXIX OSTIV Congress in Lüsse, Germany, 2008, titled “A Report on Glider Pilot Activities to Document Lee Wave-Events in Northern Germany and their Aims”.

The keynote lecture titled „Aerodynamic Developments for Sailplanes at Delft University of Technology” was presented by Loek Boermans, Faculty of Aerospace Engineering of the TU Delft, The Netherlands.

During the next 5 days of the **Congress**, 25 papers of good quality were presented on aerodynamics, flight mechanics, dynamic soaring, winch launches, design and development, materials, fatigue, instruments, airworthiness requirements, rescue systems, convection, mountain waves and meteorological predictions.

After review they will be published in the forthcoming quarterly issues of OSTIV's International Journal of **Technical Soaring**.

At the **General Conference**, on the last day of the Congress, the Board was re-elected.

The Board of OSTIV announced two new monetary Awards: the **Morelli Award** and the **Mertens Award**. The Morelli Award, sponsored by Morelli's son Henk-Peter in memory of his father Prof. Piero Morelli, is connected to the OSTIV Prize and Special Prize, like the (monetary) Klemperer Award is connected to the OSTIV Plaque. The Mertens Award is made available by the family Mertens in memory of Prof. Josef Mertens.

At the **Closing Dinner** the President of OSTIV expressed thanks to the Director of the World Gliding Championships Andras Zeno Gyongyosi for the support, to the OSTIV's Local Representative Imre Bano for the organisation of the excursion, and to Britta Schlenker for her indispensable help in organising the Congress to run smoothly.

For the first time OSTIV, in cooperation with the Soaring Society of America (SSA), organized an **OSTIV Speaker Track** at the SSA Convention, held from 28 to 30 January 2010 in Little Rock, Arkansas. During 3 days, 17 lectures were presented on a variety of technical, operational and meteorological subjects, and 2 panel discussions were held on safety and on OSTIV's activities.

The next **OSTIV Speaker Track** will be organized at the SSA Conference to be held from Januari 27 – 29, 2011 in Philadelphia, USA.

Panel meetings

The **Training and Safety Panel (TSP)**, chaired by Ian Odaker, had a Flying Training Seminar and biannual meeting in August 2009 at Terlet, the Gliding Center of the Netherlands. There the panel took up the worries of the IGC President about the safety awareness of (competition) pilots, and elaborated the report "Pilot Safety in Gliding, Recommendations for Immediate and Long-term Safety Initiatives" presented by Ian Oldaker at the IGC meeting in 2009. This was followed up by report "Implementing a Safety Management Program for Gliding Organisations" presented by Ian Oldaker at the IGC meeting in March 2010.

The **Sailplane Development Panel (SDP)**, chaired by Helmut Fendt had its annual meeting two days before the XXX OSTIV Congress, on 26 and 27 July 2010 in Szeged, Hungary. The SDP extensively discussed and finalized the document "Safety Pays" with proposals for competition rules to enhance flight safety. The document will be presented by Helmut Fendt at the IGC meeting in March 2011, Lausanne.

Other items on the agenda were: request to EASA on winch launch, aerotow and winch launch speeds, transponder/ADS-B issues, fire protection in powered gliders, motorglider propulsion recording, and the position of the SDP with respect to the new 13.5m Class.

The **next meetings** of the Training and Safety Panel and the Sailplane Development Panel, both separately and joined, will be on 19 and 20 September 2011 in Prague, Czech Republic.

The **Meteorological Panel (MP)**, chaired by Hermann Trimmel, had its last meeting from 25 to 27 September 2009 in Pfaffstätten near Vienna, Austria.

As mentioned before, member of the Meteorological Panel O. Liechti received the OSTIV Special Prize and Morelli Award for leading the team of experts and making significant contributions to the World Meteorological Organization / OSTIV publication “*Weather Forecasting for Soaring Flight*” published in August 2009. This publication in colour reflects the progress that has been achieved in numerical weather prediction and in the new interfaces between the predicted weather and the pilot to support pre-flight decision-making. The publication can be ordered at OSTIV and at WMO.

The **next meeting** of the Meteorological Panel will be from 23 to 25 September 2011 in Atalya, Turkey.



Communications and PR Committee Report For 2010

The publication of the President's Newsletters continues to our regular form of communication with Delegates. The newsletter is also provided to a number of soaring magazines.

Twitter and Face Book links have been activated by the FAI headquarters and are used to notify the gliding community of new posts on the website.

The addition of a communications person (Faustine Carrere) to the staff at the headquarters is hoped to provide us all with better coverage of stories and news, but this then places a responsibility on us all to provide Faustine with news and information that she can publish.

One of the key issues with PR is for us to ensure that we create the right FAI brand image with our championships. The use of the FAI flag and the FAI logo is critical to us gaining recognition and – as the Secretary General says:

Brand + Recognition = Value

The track record on the branding of our championships is not great. The logo needs to be prominent on websites, letterheads, documents, scores sheets and so on. Faustine is working on a branding strategy to improve the use of the FAI brand by everyone in the FAI.

The Flying Aces contract is being revised, but at the moment they have the right to turn up at any FAI Championship. They are required to advise us at the beginning of the season if they do not intend to take film of a championship so that the local organisers can arrange for coverage of the event. The contract with Flying Aces does not exclude coverage being given by local TV news outlets.

Last year I reported that our safety initiatives would include briefing videos. These have yet to be prepared as they are relatively manpower intensive and we have limited capability. We are working with the FAI headquarters for assistance with this project.

My annual request is for information, stories and just good old fashioned news to be sent to the Webmaster and to the FAO office so that it can be published.

I am thinking that we should instigate an “*IGC Prize*” for the best story published on the website about developments or initiatives in gliding that either improve membership or enhance youth gliding. Your ideas in this area would be appreciated.

Bob Henderson
President, IGC

To: IGC Plenum – Lausanne, Switzerland – March 2011
From: Championship Management
Re: Agenda Item 6.2.2
Date: January 2011

FAI World Gliding Championships – 2011

The official dates of the 2011 FAI World Gliding Championships are as follows:

7.1.5. 6th FAI Women's World Gliding Championships

Arboga, Sweden <http://www.wwgc2011.se/>

- Training – June 11-14, 2011
- Opening Ceremony – June 14, 2011
- Competition – June 15-25, 2011
- Closing Ceremony – June 26, 2011

7.1.6. 7th FAI Junior World Gliding Championships

Musbach, Germany <http://www.jwgc2011.de/>

- Training – August 6-7, 2011
- Opening Ceremony – August 7, 2011
- Competition – August 8-19, 2011
- Closing Ceremony – August 20, 2011

IGC Officials for FAI World Gliding Championships - 2011

The Officials selected for the 2011 FAI World Gliding Championships are as follows:

7.2.1.a. 6th FAI Women's World Gliding Championships – Arboga, Sweden

- Chief Steward – Arild Solbakken
- Steward – Marina Vigorito
- Jury President – Tor Johannessen
- Jury Members – Juho Silvennoinen

7.2.1.b. 7th FAI Junior World Gliding Championships – Musbach, Germany

- Chief Steward – Brian Spreckley
- Steward – Marina Vigorito
- Jury President – Eric Mozer
- Jury Members – Roland Stuck, Hans-Martin Tronnier

FAI Continental Gliding Championships – 2011

The official dates of the 2011 FAI Continental Gliding Championships are as follows:

7.1.5. 16th FAI European Gliding Championships -

World/Standard/Club/20 Meter Two-Seater - Nitra, Slovakia

- Training – July 11-16, 2011
- Opening Ceremony – July 16, 2011
- Competition – July 17-30, 2011
- Closing Ceremony – July 31, 2011

7.1.6. 16th FAI European Gliding Championships -
15/18/Open – Pociunai, Lithuania <http://www.pociunai.lt/>

- Training – July 26 - 29, 2011
- Opening Ceremony – July 30, 2011
- Competition – July 31 – August 13, 2011
- Closing Ceremony – August 14, 2011

IGC Officials for FAI Continental Championships - 2011

The Officials selected for the 2011 FAI Continental Gliding Championships are as follows:

7.2.1.a. 16th FAI European Gliding Championships – Nitra, Slovakia

- Chief Steward – Jaroslav Vach
- Steward – Jiri Cihlar
- Jury President – Fred Gai
- Jury Members – Marina Vigorito, Jozef Snirc (remote)

7.2.1.b. 16th FAI European Gliding Championships – Pociunai, Lithuania

- Chief Steward – Robert Danewid (tentative)
- Steward – Bob Bickers
- Jury President – Angel Casado
- Jury Members – Janusz Szczupak, Raimo Houviala

Chief Stewards for 2013 Events

The Chief Stewards selected for the 2013 FAI events are as follows:

7.2.3.b 7th FAI Women's World Gliding Championships – Issoudun, France

- Chief Steward – TBD after CS Training meeting in Lausanne

7.2.3.a 8th FAI Junior World Gliding Championships – Leszno, Poland

- Chief Steward – TBD after CS Training meeting in Lausanne

7.6.1 - FAI World Gliding Championships – 2014 Bids

33rd FAI World Gliding Championships – 15/18/Open

Three applications were received to host the 33rd FAI World Gliding Championships in the 15/18/Open classes. The applications were received from:

- *AeroKlub Polski – Leszno, Poland*
- *Federation Francais de Vol a Voile – Vinon, France*
- *Finnish Aero Club - Räyskälä, Finland*

33rd FAI World Gliding Championships - World/Standard/Club/20 Meter Two-Seater

No applications were received to host the 33rd FAI World Gliding Championships in the World, Standard/Club/20 Meter Two-Seater classes

7.6.2 – FAI Continental Gliding Championships - 2013 Bids

One application has been received for 17th European Championships in 2013.

- *AeroKlub Polski - Lotnisko Michałów, Poland– Standard/Club/World/20 Meter Two Seat*

7.1 – FAI Championships - 2010

The 2010 FAI World Gliding Championships are now official. Congratulations to the winners of these competitions. As pointed out in President Henderson's report, the competitions for the most part went well. There were several incidents, however, that we will be studying carefully to determine what, if any, actions can be taken to mitigate these types of incidents from happening in future competitions. The Jury and Stewards reports from both Slovakia and Hungary will be used as the foundation for these efforts.

Charlotte, January 2011
Eric Mozer



FAI Sporting Code

*Fédération
Aéronautique
Internationale*

Section 3 – Gliding

CLASS D (gliders)
Including Class DM (motorgliders)

2011 Edition

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This edition is valid from 1 October 2011

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All international sporting events organised wholly or partly under the rules of the Fédération Aéronautique Internationale (FAI) Sporting Code¹ are termed *FAI International Sporting Events*². Under the FAI Statutes³, FAI owns and controls all rights relating to FAI International Sporting Events. FAI Members⁴ shall, within their national territories⁵, enforce FAI ownership of FAI international Sporting Events and require them to be registered in the FAI Sporting Calendar⁶.

Permission and authority to exploit any rights to any commercial activity at such events, including but not limited to advertising at or for such events, use of the event name or logo for merchandising purposes and use of any sound and/or image, whether recorded electronically or otherwise or transmitted in real time, must be sought by way of prior agreement with FAI. This includes specifically all rights to the use of any material, electronic or other, that forms part of any method or system for judging, scoring, performance evaluation or information utilised in any FAI International Sporting Event⁷.

Each FAI Air Sport Commission⁸ is authorised to negotiate prior agreements on behalf of FAI with FAI Members or other entities as appropriate, of the transfer of all or parts of the rights to any FAI International Sporting Event (except World Air Games events⁹) which is organised wholly or partly under the Sporting Code section¹⁰ for which that Commission is responsible¹¹. Any such transfer of rights shall be by "Organiser Agreement"¹² as specified in the current FAI Bylaws Chapter 1, para 1.2 "Rules for Transfer of Rights to FAI International Sporting Events".

Any person or legal entity which accepts the responsibility for organising an FAI Sporting Event, whether or not by written agreement, in doing so also accepts the proprietary rights of FAI as stated above. Where no formal transfer of rights has been established, FAI retains all rights to the event. Regardless of any agreement or transfer of rights, FAI shall have, free of charge for its own archival and/or promotional use, full access to any sound and/or visual images of any FAI Sporting Event, and always reserves itself the right to have any and all parts of any event recorded, filmed and/or photographed for such use, without charge.

1 FAI Statutes, Chapter 1, para 1.6

1 FAI Statutes, Chapter 1, para 1.6

2 FAI Sporting Code, General Section, Chapter 3, para 3.1.3

3 FAI Statutes, Chapter 1, para 1.8.1

4 FAI Statutes, Chapter 2, paras 2.1.1, 2.4.2, 2.5.2 and 2.7.2

5 FAI Bylaws, Chapter 1, para 1.2.1

6 FAI Statutes, Chapter 2, para 2.3.2.2.5

7 FAI Bylaws, Chapter 1, para 1.2.3

8 FAI Statutes, Chapter 5, paras 5.1.1, 5.5, 5.6 and 5.6

9 FAI Sporting Code, General Section, Chapter 3, para 3.1.7

10 FAI Sporting Code, General Section, Chapter 1, paras 1.2 and 1.4

11 FAI Statutes, Chapter 5, para 5.6.3

12 FAI Bylaws, Chapter 1, para 1.2

Sporting Code review and amendment process

The review and amendment process is illustrated by the flowchart below. A proposal for an amendment to the Sporting Code or its annexes must be submitted to the IGC Bureau at least six months prior to the next IGC Plenary meeting. A proposal must refer to the paragraphs affected and give reasons for the amendment. It is preferable for the proposed change to be in the format of the Code.

A substantial change is effective on 1 October following the IGC meeting at which it is approved, except that if it has flight safety implications it may be approved by the Bureau prior to the IGC meeting. A simple clarification to the Code becomes effective on 1 October following approval by the Bureau. In either case, the amended Sporting Code is then placed on the FAI web site at www.fai.org/gliding/sporting_code.

The latest amendments to the Code text are indicated by a vertical line to the right of any paragraph that has been changed, as shown here.

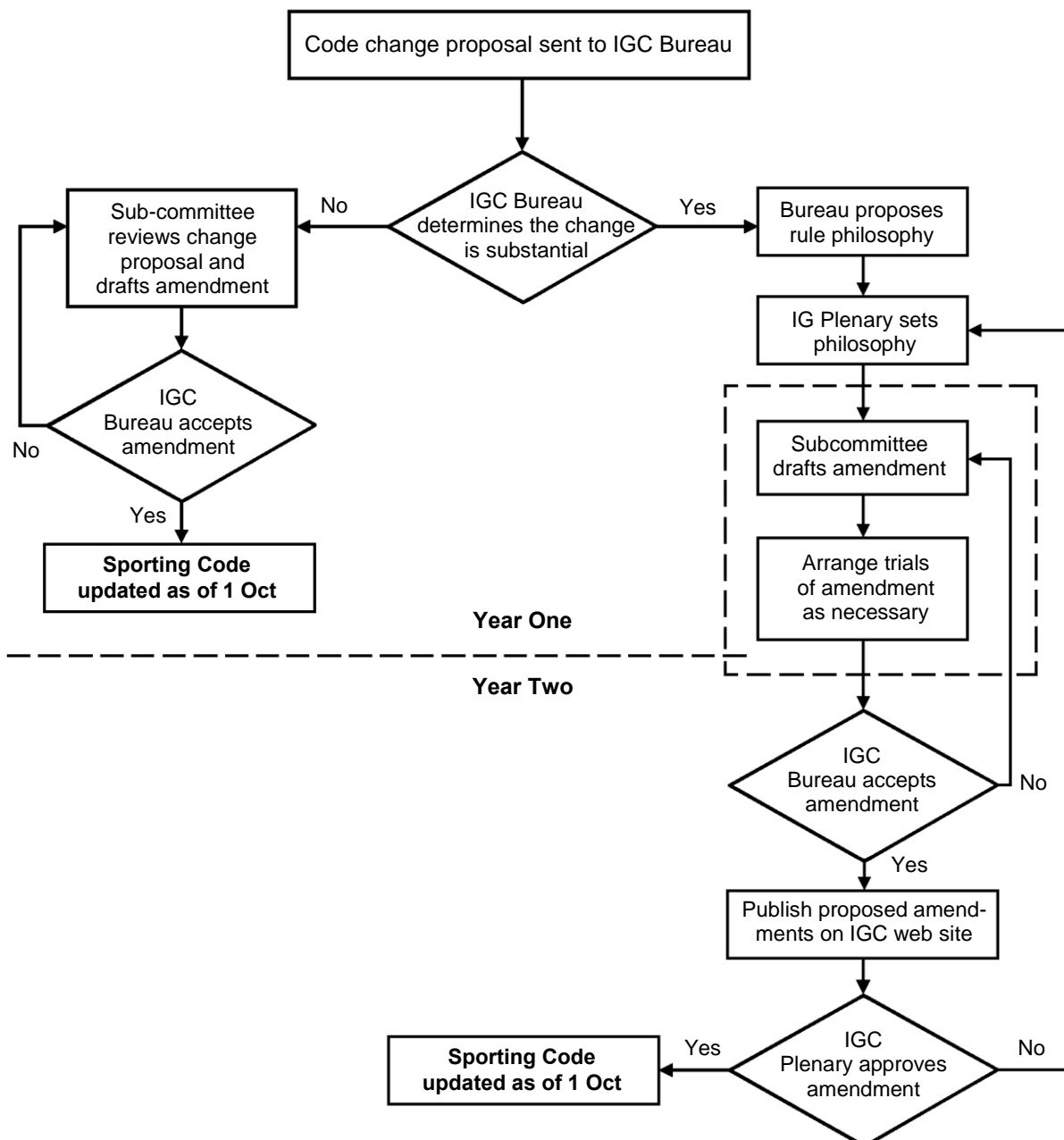


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Chapter 1

GENERAL DEFINITIONS and RULES

The FAI Sporting Code for gliders (the “Code”) sets out the rules to be used to verify a soaring performance. The essence of these rules is to ensure that the level of proof achieved is consistent for all flights. When processing the evidence supplied, Official Observers (OOs) and the National Airsport Control (NAC) should ensure that these rules are applied in the spirit of fair play and competition.

Text in italic is informational in nature and not part of the rules of the Code.

1.0 INTRODUCTION

1.0.1 The General Section of the Sporting Code (GS) contains general definitions and rules that apply to all air sports. This Section (SC3) gives specific rules that apply to FAI badge and record flights in gliders and motor gliders defined in GS 2.2.14 as “Class D” aircraft. A GLIDER is a fixed wing aerodyne capable of sustained soaring flight and having no Means of Propulsion (MoP). A MOTOR GLIDER is a fixed wing aerodyne equipped with a MoP, capable of sustained soaring flight without thrust from the MoP.

1.0.2 Terms, rules, and requirements in SC3 are defined first in their most general sense. Where an exception to a general rule exists, it will be described in the text of the Code where the exception occurs. For example, the term “glider” includes “motor glider” unless the difference is relevant in the given text. Reference to a flight recorder or GPS position recorder implies all recorders if more than one is carried on a flight. A word or phrase in small capital letters in this chapter indicates that it has a distinct Code definition.

1.0.3 SC3 includes the following annexes:

- a. Annex A Contains rules for world and other FAI-sanctioned gliding competitions.
- b. Annex B Covers requirements for equipment used for flight validation.
- c. Annex C Gives non-regulatory guidance, methods and sample calculations to assist Official Observers and pilots in complying with SC3.
- d. Annex D Contains the rules for the IGC Ranking list that gives the current World ranking position of pilots who have entered IGC competitions.

1.0.4 Records available within FAI Class D are defined by SC3 in the following sub-classes:

- a. OPEN any FAI Class D aircraft.
- b. 15 METRE any FAI Class D aircraft with a wingspan not exceeding 15,000 mm.
- c. WORLD a PW-5 glider as defined in Chapter 6.5.8.
- d. ULTRALIGHT an FAI Class D aircraft with a takeoff mass not exceeding 220 kg.
(A MICROLIFT glider is an ULTRALIGHT with a wing loading not exceeding 18 kg/m². It does not have separate records).

1.0.5 “International record” applies to World or Continental records and within SC3, “record” can apply to either or both types according to context. “Badge” applies to flights at FAI Silver, Gold, Diamond or Diploma achievement levels and “NAC” refers to each National Airsport Control organization having administrative responsibility for these gliding activities.

1.0.6 Related documents

The FAI document, “Technical Specifications for IGC-Approved GNSS Flight Recorders” gives information for FR manufacturers. Section 6 covers gliding aerobatic competition, Section 7, hang gliders and paragliders (GS 2.2.1.13, class O), and Section 10, microlights (GS 2.2.1.15, class R). Gliding championship classes are defined in SC3, paragraph 6.5.

1.1 GENERAL DEFINITIONS

OFFICIAL OBSERVER	1.1.1	The person having control of a flight undertaken for an FAI badge or record attempt and of the data gathered to prove the SOARING PERFORMANCE (Chapter 5 refers).
DECLARATION	1.1.2	The official pre-flight data and description of a SOARING PERFORMANCE (details in 4.2).
GNSS / GPS	1.1.3	A Global Navigation Satellite System such as the Global Positioning System (GPS) using multiple satellites operating with receivers to create position data.
FLIGHT RECORDER	1.1.4	An electronic device that has been approved by the IGC to record GPS flight data.
GPS POSITION RECORDER	1.1.5	A GPS device that can record time and horizontal position. The Appendix to Chapter 4 defines their approval and use.
BAROGRAPH	1.1.6	An electronic recording barometer incorporated into a FLIGHT RECORDER or a stand-alone mechanical or electronic device.
BAROGRAM	1.1.7	The altitude data output of a FLIGHT RECORDER or electronic BAROGRAPH or the “trace” recorded by a mechanical BAROGRAPH.
MEANS of PROPULSION (MoP) RECORDER	1.1.8	A device that records noise level or other data indicating MoP use. A device failure must either register as MoP use, or as MoP data with a numeric value of “000” in the .igc file.

1.2 DEFINITIONS of FLIGHT TERMS

SOARING PERFORMANCE	1.2.1	The portion of a glider flight from the START POINT to the FINISH POINT.
WAY POINT	1.2.2	A point on the surface of the earth precisely specified by a set of coordinates or by a word description. A WAY POINT may be a START POINT, TURN POINT, or FINISH POINT.
LEG	1.2.3	The straight line between two successive WAY POINTS. The claimed length of a LEG may be reduced as given in 1.3.9.
COURSE	1.2.4	All the LEGS of a SOARING PERFORMANCE. A CLOSED COURSE has the START and FINISH at the same WAY POINT.
OBSERVATION ZONE	1.2.5	The airspace a glider must enter to attain a WAY POINT. An OBSERVATION ZONE (OZ) may be either a CYLINDER (1.3.6) that is usable for TURN POINTS only, or a SECTOR (1.3.8) that is useable for all WAY POINTS. A START LINE or FINISH LINE has no OZ.
RELEASE POINT	1.2.6	The point on the ground vertically below where the glider releases or ceases using a MoP.
FIX	1.2.7	A single data point selected from recorded flight data giving latitude, longitude, time, and from a FLIGHT RECORDER, pressure altitude.
START POINT	1.2.8	The WAY POINT that marks the beginning of a SOARING PERFORMANCE at either: a. the RELEASE POINT, b. a declared START POINT, c. the midpoint of a START line, or d. on a free record flight, a FIX selected post-flight as a START POINT.
START LINE	1.2.9	A horizontal line, 1 km in length, oriented approximately perpendicular to the first LEG. The midpoint of the line (the START POINT) is at ground level.
TURN POINT	1.2.10	A WAY POINT between two LEGS of a flight.
FINISH POINT	1.2.11	The WAY POINT that marks the end of a SOARING PERFORMANCE at either: a. the landing, where the nose of the glider comes to rest without external assistance,

- b. a declared FINISH POINT, or
- c. the midpoint of a FINISH line, or
- d. a FIX selected post-flight as a FINISH POINT, or established by starting a MoP.

FINISH LINE

1.2.12 A horizontal line, 1 km in length, oriented approximately perpendicular to the last LEG. The midpoint of the line (the FINISH POINT) is at ground level.

GOAL FLIGHT

1.2.13 A SOARING PERFORMANCE that requires a declared START and FINISH POINT. (1.4.4 and 1.4.6 refer.)

1.3 DEFINITIONS of SOARING MEASUREMENT TERMS

START TIME and ALTITUDE

1.3.1 The time and altitude (msl) at which the SOARING PERFORMANCE begins, both determined by the type of SOARING PERFORMANCE and the type of START POINT claimed:

- a. When a declared START POINT is not required for a given performance, START TIME and ALTITUDE may be taken at the RELEASE POINT or, for a free distance performance, at a FIX selected post-flight as the START POINT.
- b. When a declared START POINT is claimed for a distance performance, START TIME and ALTITUDE may be taken at:
 - (i) the exit from the START OZ SECTOR,
 - (ii) the crossing of a START LINE, or
 - (iii) the most favourable FIX recorded within the START OZ SECTOR.

The SECTOR OZ radius for GOAL or CLOSED COURSE distance performances is 1000m.

- c. For speed performances, a declared START / FINISH POINT is required; START TIME and ALTITUDE must be taken at an exit from the START OZ SECTOR with a 1000 metre radius or on crossing a START LINE.

FINISH TIME and ALTITUDE

1.3.2 The time and altitude (msl) at which a SOARING PERFORMANCE ends, both determined by the type of SOARING PERFORMANCE and the type of FINISH POINT claimed:

- a. For a finish at landing (1.2.11a), FINISH TIME is the time of landing and FINISH ALTITUDE is the landing site msl elevation.
- b. For an airborne finish at a declared FINISH POINT, FINISH TIME and ALTITUDE may be taken at:
 - (i) the glider's entry into the FINISH OZ SECTOR,
 - (ii) the crossing of a FINISH LINE, or
 - (iii) a FIX within the FINISH OZ SECTOR.

The SECTOR OZ radius for a GOAL or CLOSED COURSE flight is 1000m.

- c. When a declared FINISH POINT is not claimed, FINISH TIME and ALTITUDE may be taken at landing, starting of the MoP, or any FIX selected as the FINISH POINT.

Paragraph A.7 to the Chapter 4 Appendix gives provisions for start and finish altitudes and times when a GPS position recorder is used.

DURATION

1.3.3 The elapsed time between the START TIME and the FINISH TIME.

LOSS OF HEIGHT

1.3.4 The START ALTITUDE minus the FINISH ALTITUDE (4.4.3 refers).

GAIN OF HEIGHT

1.3.5 The greatest altitude difference between a recorded high point and a previous low point during a SOARING PERFORMANCE.

CYLINDER OZ

1.3.6 The airspace within a vertical cylinder of 500 metres radius centred on a TURN POINT.

OZ CORRECTION

1.3.7 Each time a LEG crosses a CYLINDER OZ boundary, 500 metres shall be subtracted from the length of that LEG. This correction does not apply where a FIX is used as a WAY POINT in free record performances.

SECTOR OZ

- 1.3.8 The airspace above a quadrant having its apex at the WAY POINT. Except as limited by 1.3.1 and 1.3.2 for CLOSED COURSE and GOAL flights, the radius of the OZ is unlimited and its orientation is:
- For a TURN POINT, symmetrical to and remote from the bisector of the inbound and outbound LEGS at the TURN POINT,
 - For a START POINT, symmetrical to and remote from the outbound LEG,
 - For a FINISH POINT, symmetrical to and remote from the inbound LEG.

OFFICIAL DISTANCE

- 1.3.9 The sum of the LEGS, with OZ CORRECTION deducted where applicable, less any LOSS OF HEIGHT penalty. This distance is to be used in any calculation of COURSE speed.

1.4 SOARING PERFORMANCE TYPES and REQUIREMENTS

The following paragraphs define all the SOARING PERFORMANCES that may be flown for records or badges. Table 1 at the end of this chapter presents the information in spreadsheet form.

1.4.1 General

- A SOARING PERFORMANCE may be claimed from any flight that meets the requirements of proof for that performance.
- A DECLARATION and electronic flight data are required except where specifically exempt (4.2 refers).
- WAY POINTS must be declared and used in the sequence declared, except where specifically not required in these rules.
- No more than three TURN POINTS may be declared and no more than four LEGS may be claimed for a SOARING PERFORMANCE.

1.4.2 Duration, gain of height and absolute altitude performances

A DECLARATION is not required for duration and gain of height badge flights that use only a barograph for evidence. The SOARING PERFORMANCE for an absolute altitude record must be preceded by a gain of height of at least 5000 metres.

1.4.3 Distance performance for badges only

STRAIGHT DISTANCE A COURSE having one LEG, with distance measured from the RELEASE POINT or a declared START POINT to any type of FINISH POINT. If no WAY POINTS are declared, data recording by a stand-alone barograph is sufficient.

1.4.4 Distance performance for records only

DISTANCE TO A GOAL A COURSE having one LEG, with OFFICIAL DISTANCE measured from a declared START POINT to a declared FINISH POINT. The OZ radius at each of these WAY POINTS is 1000 metres.

1.4.5 Distance performance for badges and records

DISTANCE USING UP TO THREE TURN POINTS A COURSE with distance measured from the RELEASE POINT or a declared START POINT to any type of FINISH POINT, via at least one and not more than three declared TURN POINTS. TURN POINTS may include the START POINT and/or FINISH POINT if desired. The TURN POINTS must be at least 10 kilometres apart, and each may be claimed only once in the sequence attained.

1.4.6 Distance and speed performances for badges and records

The following CLOSED COURSES may be used for badge distance and must be used for speed records and Diamond Goal flights. All WAY POINTS must be declared, and the OZ SECTOR radius at the START and FINISH is 1000 metres.

- OUT AND RETURN FLIGHT* A CLOSED COURSE having two LEGS.
- TRIANGLE FLIGHT* A CLOSED COURSE having three LEGS. The geometry may be either:
 - A triangle having two TURN POINTS, or
 - A triangle having three TURN POINTS independent of the position of the START/FINISH POINT. The distance is given by the sum of the LEGS of the triangle formed by the TURN POINTS. The minimum OFFICIAL DISTANCE (1.3.9) is 300 kilometres.

For triangle record COURSES of 750 km or more, the length of each LEG shall be 25% to 45% of the OFFICIAL DISTANCE. For record COURSES shorter than 750 km, no LEG may have a length of less than 28% of the OFFICIAL DISTANCE.

1.4.7 Free distance performances for records only

Free distance WAY POINTS may be selected from FIXES claimed post-flight. The free distance record types are:

- a. *FREE STRAIGHT DISTANCE* A COURSE having one LEG.
- b. *FREE DISTANCE USING UP TO THREE TURN POINTS* A COURSE via at least one, and not more than three TURN POINTS. TURN POINTS may include the START POINT and/or FINISH POINT if desired. TURN POINTS must be at least 10 km apart and each may be claimed only once.

1.4.8 Free distance closed course records

The START POINT is a FIX chosen by the pilot to suit the record being claimed. This location also marks the apex of a 1000 metre radius FINISH OZ SECTOR that the pilot must enter to complete the course. The free distance closed course record types are:

- a. *FREE OUT AND RETURN DISTANCE* A CLOSED COURSE having two LEGS.
- b. *FREE DISTANCE AROUND A TRIANGLE* A CLOSED COURSE having three LEGS.

The restrictions on triangle geometry given in 1.4.6b apply. The pilot may fly either:

- (i) A triangle using two TURN POINTS, or
- (ii) A triangle using three TURN POINTS independent of the position of the START/FINISH POINT. In this case, the triangle distance is given by the sum of the LEGS of the triangle formed by the TURN POINTS.

TABLE 1

SOARING PERFORMANCE	SC3 Citation	Task Choices	GENERAL REQUIREMENTS			START ALTERNATIVES			FINISH ALTERNATIVES		
			Items required in declaration	Maximum # of TPs declared / claimed	Course Legs claimed	FR START Fix	Release or MoP stop	Start Line or declared Start Point (OZ radius)	By Landing (1.2.11a)	Finish Line or declared Finish Point (OZ radius)	Using a Finish Fix (1.2.11d)
Straight Distance	1.4.3	Badge	4.2.1 a to g as appropriate	3 / 0	1	No	OK	OK (unlimited)	OK anywhere	OK (unlimited)	OK anywhere
Distance using up to 3 Turn Points	1.4.5	Badge or Record		3 / 3	2 to 4						
Distance to a Goal	1.4.4	Record		3 / 0	1		Only if declared as the START POINT	Required (1000 m)	Only in FINISH OZ Sector	Required (1000 m)	Only in FINISH OZ Sector
Out & Return flight	1.4.6a 2.1.3b	Badge Distance, Diamond Goal & Distance or Speed Record		1 / 1	2				Only in FINISH OZ Sector at declared START POINT	Same as declared START POINT (1000 m)	Only in FINISH OZ Sector at declared START POINT
Triangle flight (2 Turn Points)	1.4.6b(i) 2.1.3b			2 / 2	3						
Triangle flight (3 Turn Points))	1.4.6b(ii) 2.1.3b			3 / 3	3						
Free Straight Distance	1.4.7a	Distance Record	4.2.1 a to d	3 / 0	1	OK	OK	OK (unlimited)	OK anywhere	OK (unlimited)	OK anywhere
Free Distance using up to 3 Turn Points	1.4.7b			3 / 3	2 to 4						
Free Out & Return Distance	1.4.8a			3 / 1	2			OK (1000 m)	OK in FINISH OZ Sector at claimed START POINT	OK at declared START POINT (1000 m)	OK in FINISH OZ Sector at claimed START POINT
Free Triangle Distance (2 Turn Points)	1.4.8b(i)			3 / 2	3						
Free Triangle Distance (3 Turn Points)	1.4.8b(ii)			3 / 3	3						
Absolute Altitude	1.4.2 3.1.2b	Record	4.2.1 a to d as appropriate	N • When a start or finish line is used there is no OZ in effect. O • GPS position recorders are permitted as provided for in the Appendix to Chapter 4. T • 3-TP triangle distance for badges and records is measured: TP1 – TP2 – TP3 – TP1. E • For records, the minimum leg length for distance or speed triangles of less than 750 km is 28% of the official distance. For courses 750 km or longer, no leg may be less than 25% or more than 45% of the official distance. S							
Gain of Height	1.3.5 1.4.2	Badge or Record									
Duration	1.3.3 1.4.2	Badge									

Chapter 2

FAI BADGES

This chapter defines and gives the requirements to meet the international standard levels of soaring achievement.

2.0 GENERAL

The FAI badges are international standards of achievement that are not required to be renewed. Flights qualifying for badges shall be controlled in accordance with the requirements of this Code. The distance requirement for each badge shall be the calculated official distance (1.3.9).

- a. The pilot must be alone in the glider, and the OO must certify that this was the case.
- b. Each NAC should keep a register of badge flights it has validated.
- c. In addition to the use of IGC-approved FRs, position for the Silver and Gold badges may be verified with NAC-approved GPS position recorders for flights made within that NAC's area of authority. See Appendix, Chapter 4.

2.1 BADGE REQUIREMENTS

The soaring performances required to qualify for the FAI badge standards of achievement are:

2.1.1 Silver Badge

The Silver badge is achieved on completing the following three soaring performances:

- a. SILVER DISTANCE a flight on a straight course of at least 50 km. Any leg of 50 kilometres or more of a longer pre-declared course may qualify, subject to the requirements of 4.4.3 on altitude difference applied to the whole course flown.

Note: the Silver distance flight should be flown without navigational or other assistance given over the radio (other than permission to land on an airfield) or help or guidance from another aircraft.

- b. SILVER DURATION a duration flight of at least 5 hours.
- c. SILVER HEIGHT a gain of height of at least 1000 metres.

2.1.2 Gold Badge

The Gold badge is achieved on completing the following three soaring performances:

- a. GOLD DISTANCE a distance flight of at least 300 kilometres,
- b. GOLD DURATION a duration flight of at least 5 hours,
- c. GOLD HEIGHT a gain of height of at least 3000 metres.

2.1.3 Diamonds

There are three Diamonds, each of which may be worn on the Silver or Gold badge, and the badges for flights of 750 kilometres or more. NACs should maintain a register of these badges and, on notification by a NAC, the FAI will enter the names of pilots attaining the three Diamond award in an international register.

- a. DIAMOND DISTANCE a distance flight of at least 500 kilometres.
- b. DIAMOND GOAL a goal flight of at least 300 kilometres over an out-and-return course (1.4.6a) or triangular course (1.4.6b).
- c. DIAMOND HEIGHT a gain of height of at least 5000 metres.

2.1.4 Badges and Diplomas for flights of 750 kilometres and more

These are a family of badges that are achieved on completing a distance flight of 750 kilometres or more, in increments of 250 kilometres (ie. 750 km, 1000 km, 1250 km, etc.). One badge is awarded per flight for the incremental distance immediately less than the distance flown. NACs should maintain a register of these badges and on notification by a NAC, FAI will award a special Diploma for flights of 1000 km and more.

2.2 BADGE DESIGN (reproduced approximately twice real size):



2.2.1 Silver and Gold Badge



2.2.2 Three Diamonds Badge (1 & 2 Diamonds similar)



2.2.3 750 Kilometre and more Badges (1000 km illustrated, others and with one and two Diamonds, similar.)

Chapter 3

INTERNATIONAL GLIDING RECORDS

3.0 GENERAL

These rules cover International (World and Continental) records. The following general requirements must be met:

- a. No advance notice for a record attempt is required provided that arrangements have been made for controlling the flight.
- b. The pilot must possess a valid FAI Sporting Licence (GS 8.1).
- c. The flight data must be from an IGC flight recorder approved at the “all flights” level.
- d. To be a World record, the flight claimed must be first be approved as a National record.

3.1 RECORD CATEGORIES, CLASSES, and TYPES

Record categories are related to the pilot, record classes to the glider, and record types to the nature of the soaring performance.

3.1.1 Pilot categories

The General category includes any pilot; the Feminine category includes only female pilots, and female crew if applicable.

3.1.2 Glider classes

International records are recognised in the classes listed in 1.0.4. Multi-place gliders and motor gliders are included in these record classes where applicable.

- a. When a multi-place glider is being used, all flight crew must be named on the FR declaration, be named in full on the claim form, and be at least 14 years old. Only flight crew members possessing a valid Sporting Licence will be named in the FAI records register.
- b. For World records using a multi-place glider, the flight crew may be categorised as a team. In this case, all crew must have a Sporting Licence, the claim need not be also a National record, and the claim will be registered to the declared pilot-in-command.
- c. Absolute altitude and gain of height records are restricted to the Open record class (see 3.1.4k and 3.1.4m).

3.1.3 International record achievement margins

- a. A new record claim must exceed the current value by 1 km for distance, 1 km/h for speed, and 3% for altitude.
- b. When a new International record category, class, or type is created, a minimum performance level may be set by the IGC and published on the FAI web site.

3.1.4 Designation of records

Glider records are designated by code letters, starting with the FAI code letter for gliders (D), then the glider class, and finally the pilot category (general or feminine):

Open Class glider records are designated by adding the letter O.

15m Class glider records are designated by adding the number 15.

Ultralight glider records are designated by adding the letter U.

World Class glider records are designated by adding the letter W.

The General pilot category is designated by the letter G.

The Feminine pilot category is designated by the letter F.

Examples: DWF Gliding, World class, Feminine
 D15G Gliding, 15 metre class, General

TABLE 2

Types of record flights

<i>Flight Performance</i>	<i>Ref.</i>	<i>Remarks (see Chapter 1 for details)</i>
Free distance records		
3.1.4a Free Straight Distance	1.4.7a	No turn points
3.1.4b Free Distance using up to 3 TPs	1.4.7b	1 to 3 free turn points
3.1.4c Free Out-and-Return Distance	1.4.8a	Closed course with one free turn point
3.1.4d Free Triangle Distance	1.4.8b	Closed course with 2 or 3 free turn points
Declared distance records		
3.1.4e Distance to a Goal	1.4.4	Declared goal with no turn points
3.1.4f Distance Using Up to 3 TPs	1.4.5	1 to 3 declared turn points
3.1.4g Out-and-Return Distance	1.4.6a	Closed course with one declared turn point
3.1.4h Triangle Distance	1.4.6b	Closed course with 2 or 3 declared turn points
Speed records		
3.1.4i Speed over an out and return course of 500 km and all multiples of 500 km	1.4.6a	1 declared turn point
3.1.4j Speed over a triangular course of 100, 300, 500, 750, 1250 km and all multiples of 500 km	1.4.6b	2 or 3 declared turn points
Altitude records		
3.1.4k Absolute altitude	1.4.2	Open class only, 5000m gain required
3.1.4m Gain of Height	1.4.2	Open class only

3.2 CONTINENTAL REGIONS

The continental regions defined in GS 3.4.5 will be used, with the exception that the part of the Russian Federation east of the 61° meridian will be assigned to Asia. A flight which crosses the border between continental regions will be credited to the region in which the take-off occurs.

3.3 FALSIFICATION of EVIDENCE

Should it be proven that any person involved in a world record claim has altered, concealed, or in any other way misrepresented the evidence with the intent to deceive, the claim shall fail. The FAI will invalidate the Sporting Licences of those guilty of the fraud and may cancel permanently or for a period of time any other award, record, title, etc. it has conferred. The NAC(s) may be asked to cancel the appointment of the OO(s) involved where appropriate (5.1.7 refers).

3.4 TIME LIMITS on RECORD CLAIMS**3.4.1 Claim notice**

Notice of a claim for an **International** record must be submitted by the NAC or the OO controlling the attempt, and the FAI must receive the claim within seven days of the flight. In exceptional circumstances, the president of the IGC may grant an extension. Telephone, fax, email, and similar types of notification are acceptable. (GS 6.8.4 refers).

3.4.2 Claim documentation

The NAC shall forward claim documentation to reach the FAI within 120 days of the date of the flight unless an extension of time has been authorised by the IGC President (GS 6.8.2 refers).

Chapter 4

VERIFICATION REQUIREMENTS and METHODS

This chapter defines the evidence, measurements and calculations required to verify soaring performances. Annex C gives examples of ways and means by which this may be done, such as the calculation of distances, and GPS flight recorder data analysis methods.

4.1 FLIGHT DATA REQUIREMENTS

A badge or record flight may require evaluation of some or all of the following flight data. Different soaring performances will require subsets of this list:

- | | |
|----------------------------------|-----------------------------------|
| a. declaration (1.1.2) | f. finish altitude & time (1.3.2) |
| b. start point (1.2.8) | g. absolute altitude (1.4.2) |
| c. start altitude & time (1.3.1) | h. loss of height (1.3.4) |
| d. turn point(s) (1.2.9) | i. gain of height (1.3.5) |
| e. finish point (1.2.10) | j. flight continuity (4.3.2) |

4.2 DECLARATION REQUIREMENTS

A *pre-flight* declaration that includes the 4.2.1 items noted below is required for all flights except badge flights that use only a barograph for evidence. The most recent declaration is the valid one. (See Annex C para 6.3 on the format of a flight declaration as it appears in a downloaded .igc file.)

- For record flights, the declaration must be recorded in an .igc file from an FR and must include items 4.2.1a through 1d. Item 4.2.1e is not required for gain of height, absolute altitude, or any free distance record flight.
- For badge flights using evidence from an FR or a GPS position recorder and barograph, the declaration shall be recorded in an .igc file or written on a single sheet of paper. Items 4.2.1a through 1d are required. Item 4.2.1e is not required for straight distance flights claimed from release to the landing or to a finish fix. A written declaration must be signed as in 4.2.1f and 1g, retained by the OO, and submitted with claim materials.
- Where more than one FR is used, they must have identical flight task data input, and if one fails, the other becomes the direct replacement.

Consult the FR manufacturer's user manual to determine which method a FR uses to record declaration date and time. Date and time for a written declaration are as certified by the OO.

4.2.1 Declaration content

- Date of flight.
- Name of the pilot-in-command, and the flight crew if any (see Annex C, para 6.3c).
- Glider type, and its registration or serial number or unique NAC-assigned contest number.
- The make, model and serial number of the FR used (as recorded in the .igc file for the flight). For any barograph or GPS position recorder used, the make, model and serial number as verified by the OO before flight.

Additional content for *distance and speed* flights

- Way points and, for a closed course, the sequence to be flown.

Additional content when any *written* declaration is made for a badge flight

- Pilot-in-command signature.
- Official Observer signature, with date and time.

4.2.2 Declaration analysis

- When any way point is declared using a word description, abbreviation or code and coordinates, the coordinates are definitive. When a word description, abbreviation or code alone is used to declare any way point, its coordinates must be taken from a published source designated by the NAC.

- b. When more than one FR is carried on the flight, data files from each FR must be submitted (paragraph 4.5.6e refers). A difference in the declaration among FRs carried could be grounds for refusal to accept any claim from that flight.

4.3 FLIGHT DATA VERIFICATION

4.3.1 Sampling rate

A data sampling rate setting must be no slower than once per minute.

4.3.2 Flight continuity

There must be evidence that the glider did not land and that no MoP was used during the soaring performance.

- a. An interruption in barograph-recorded data will not compromise proof of flight continuity provided that the OO and NAC are convinced that no critical data is missing and the evidence remains indisputable.
- b. Evidence of flight continuity may also be assessed from a time plot of GPS height data.
- c. The Silver duration flight does not require a barogram for flight continuity evidence if the flight is made under the continual attention of an OO. In this case, release altitude may be certified by the tow pilot or ground launch supervisor, and the OO must be satisfied that the loss of height is significantly less than 1000 metres.

4.3.3 Landing data

The evidence of the actual landing must be by one or both of the following:

- a. By recorded GPS position data (see 4.5.6b).
- b. By an OO or two independent witnesses arriving soon after the event, with no doubt about the position of landing (see 5.3.2d).

4.4 CALCULATIONS and CALIBRATIONS

Time, position, altitude, and MoP use are flight performance data that must be recorded or measured for some or all types of flights. The minimum data required for each type of soaring performance is given in the record and badge application forms.

4.4.1 Combinations of measurement methods

Any mix of measuring methods is acceptable for any type of flight. Each method used shall comply with this Code as if it were the only means of proof employed. Any measurement or calculation inaccuracy is to be interpreted to the maximum disadvantage of the pilot.

4.4.2 Earth model and distance calculations

- a. The WGS84 earth model shall be used for all lat/long data that is recorded for flight analysis. For record flights, distances between two points in excess of 1000 kilometres, and in any case of dispute over a distance, the distance flown is deemed to be the length of the geodesic line joining the start point and the finish point or, if there are turn points, the sum of the geodesic lines for each leg of the course, corrected as in 1.3.7.
- b. For badge flights, less accurate distance calculation methods may be used unless the exact distance is critical. Annex C refers.

4.4.3 Limits to the loss of height

- a. For distance flights of more than 100 kilometres, where the loss of height exceeds 1000 metres, a height penalty equal to 100 times the excess over 1000 metres loss of height shall be subtracted from the length of the course to give the official distance.
- b. For distance flights of 100 kilometres or less, a loss of height exceeding 1% of the length of the course will invalidate the soaring performance.
- c. For speed and duration flights, a loss of height exceeding 1000 metres will invalidate the soaring performance.

4.4.4 Barograph calibration time limits

The recording barometer functions of both flight recorders and stand-alone barographs must be calibrated as follows:

- a. **PRIOR TO FLIGHT** Calibration is required within 12 months prior to the flight or, for IGC-approved electronic barographs and FRs, 24 months.
- b. **AFTER FLIGHT** Calibration is required within one month after the flight or, for IGC-approved electronic barographs and FRs, two months.

For altitude and gain of height records, both (a) AND (b) calibrations are required, and the less favourable of the two shall be used making the calculations for the record. Either (a) OR (b) is required for all other records and badges.

4.4.5 **Calibration and pressure correction**

When absolute altitude is to be determined, pressure altitudes recorded during flight must be corrected for both instrument error and non-standard atmospheric pressure. Guidance in calculating a corrected altitude is given in Annex C.

4.5 **FLIGHT EVIDENCE REQUIREMENTS**

4.5.1 **Time evidence**

GPS time data is used when substantiated by independent evidence confirming take-off and landing times and locations. When a stand-alone barograph is used to record altitude and relative times, pertinent time evidence must be determined by an OO based on his or her observations and reconciled with barograph data. The time at which a glider crosses the boundary of a start or finish OZ is determined by linear interpolation between the last fix before crossing and the first fix after crossing.

The tow pilot or ground launch supervisor may certify the time of release for a Silver duration flight done with the OOs continual attention.

4.5.2 **Position evidence**

For records, and badge flights at Diamond or higher level, position data shall be recorded by a flight recorder. For badge flights, position data for a Silver or Gold badge distance flight may also be recorded by a GPS position recorder. Confirmation of position at specific locations is done by the following:

- a. **POINT OF RELEASE** Point of release shall be taken from FR data or, when a GPS position recorder is used for a badge flight, release position shall be reconciled with the “notch” recorded by a stand-alone barograph (the appendix to this chapter refers). If a notch is not evident, the release position may be estimated by the OO or the person who served as the tow pilot or ground launch operator for the flight.
- b. **WAY POINTS** GPS evidence must show indisputable proof that the glider crossed a start or finish line, a fix was recorded either exactly on the way point coordinates or within its OZ, or a straight line drawn between two consecutive valid fixes crosses the OZ boundary.

4.5.3 **Altitude evidence**

Except as provided by 4.3.2, pressure data must be recorded by an FR or barograph throughout the flight and in-flight altitudes are calculated as given in the Appendix to this chapter and SC3 Annex C. The altitudes at which a glider crosses a start or finish line or the boundary of a start or finish OZ are determined by linear interpolation between the altitudes at the last fix before crossing and the first fix after crossing.

4.5.4 **Means of propulsion evidence and MoP recorder procedures**

The OO must certify the means used to determine the MoP recorder functioned correctly.

- a. An MoP recorder incorporated within an FR is required for record attempts and the OO must complete Record Form D.
- b. When a MoP recorder that is not incorporated within an FR is used for badge flights, the device must be installed in the aircraft out of the pilot's reach and a seal shall be applied to the MoP in such a way that the generation of forward thrust by the MoP will break the seal.

4.5.5 **Stand-alone barograph procedures** (Appendix to this Chapter refers)

When a stand-alone barograph is the only means of data recording or is carried to supplement GPS position recorder data, the following procedures shall be used:

- a. **BEFORE FLIGHT** For mechanical barographs, the OO shall make an identification mark on the barogram paper or foil. For any barograph, the OO seals the barograph and supervises its installation in the aircraft, out of the pilot's reach and free of any cable or mechanism that could alter or adversely affect accurate data recording.
- b. **TAKE-OFF and LANDING** The OO shall ensure there is evidence of the times and locations of take-off and landing, either by witnessing these events or consulting other witnesses and/ or soaring site flight logs.
- c. **DURING FLIGHT** As soon as possible after release, the pilot should establish a low point and make a steep turn so the barogram and position data (if any) clearly indicates the release point. Any marking of a barogram during flight shall be done by remote control, not by direct access to the barograph.
- d. **AFTER FLIGHT** For mechanical barographs, the OO shall take control of the barograph and ensure its seal is secure, and confirm that the barogram has the identification mark that was placed on it prior to take-off. The information required in 5.3.3b to 3i shall then be added to the barogram.

For electronic barographs, an OO must either supervise the transfer or printing of the barographic data while the instrument is in the glider, or supervise its removal from the glider and take charge of it until the flight data is downloaded or printed, then make note of the date and time the flight data was downloaded or printed.

- e. **DATA ANALYSIS** An OO shall determine if the barograph-recorded altitude data confirms relevant aspects of the claimed performance, considering events witnessed or verified by the OO. Where used to supplement GPS position recorder data, its satellite derived altitude data must compare favorably overall to barograph-recorded pressure altitude data.

4.5.6 **GPS recording procedures**

IGC FR approval is discussed in Annex B Chapter 1. The Appendix to this Chapter outlines the minimum standards for NAC approval of GPS position recorders. The OO shall be familiar with the applicable terms of approval, and:

- a. **BEFORE FLIGHT** The OO shall verify the installation, set-up, and sealing of each recorder used. When a GPS position recorder is used, a written declaration is required.
- b. **TAKE-OFF and LANDING** An OO shall use evidence independent of the GPS recorder(s) to confirm the times and points of take-off and landing, pilot name(s), glider type and registration, and the make, model, and serial number of each GPS recorder used.
- c. **DURING FLIGHT** As soon as possible after release, the pilot should make a steep turn so that the GPS data clearly indicate the release point and altitude. Any pilot inputs into any GPS recorder must be confined to functions not critical to the validation of the flight, such as entering a pilot event marker or changing the sampling rate in flight.
- d. **AFTER FLIGHT** After landing, the OO shall check any seals applied to each GPS recorder before flight and perform or supervise the transfer of flight data from each device. The OO shall perform a security check on each resulting data file using the appropriate validation program. The OO shall review the flight data for completeness, and if it is to be sent to another person for complete analysis, the following shall be forwarded:
 - The original data on the memory device (the first copy) storing the flight data for each GPS recording device. This must include the data file in .igc format, and the file in its original format (if different) as transferred from each device immediately after landing.
 - The appropriate claim form(s), including OO's evidence that manually recorded times and exact locations correspond to the equivalent flight recorder data.
- e. **DATA ANALYSIS** Analysis of the flight data shall be performed by a person approved by the NAC. The analyst shall ensure that the appropriate evidence is present to verify the soaring performance. For free record claims, the achieved way points shall be determined from the FR evidence and specified in the record claim. Analysis guidance is in Annex C.

CHAPTER 4 APPENDIX

The use of GPS position recorders for Silver and Gold badge flights

A-1 General Many Global Positioning System devices can record the coordinates of their position at intervals. If this data can be downloaded in the same format as an .igc file, NACs may allow suitable GPS position recorders to be used to validate the horizontal position of the glider for Silver or Gold badges ONLY. Altitude data must be produced from a separate record of pressure altitude throughout the flight, to normal IGC standards (see A-7 below). This Appendix may duplicate some rules within Chapters 1 and 4, but only covers GPS units that are not IGC-approved flight recorders (FRs), and their use for Silver or Gold badges. Each NAC is to determine the specific GPS position recorders approved for use within their area of responsibility and to maintain a current list of them.

The IGC GFA Committee is available to support NACs in this process. NACs are encouraged to consult GFAC for advice before publication of any list of NAC-approved GPS position recorders. The IGC may advise the NAC of any specific problems that could occur with that GPS position recorder or where it does not comply with IGC rules and procedures. Both IGC and the NAC must be satisfied that the rules below can be complied with before accepting any particular model for use. Further guidance is given in Annex C, para 6.1.

A-2 Earth Model GPS position recorders must use the WGS 84 Earth Model and it must not be possible to change this during the flight.

A-3 Averaging and predicted positions Any GPS position recorder that can produce fixes both derived from real time satellite lines of position and estimated fixes produced through averaging or predicting based on past fixes is acceptable only if the estimation functions are disabled. The OO must supervise the disabling process or verify that it was completed before flight and certify that this was done.

A-4 Frequency of fixes Fix frequency must be at least once per minute.

A-5 Declaration A written declaration including all appropriate items listed in 4.2.1 is the only acceptable form.

A-6 Downloading and verification Downloaded data from the GPS position recorder must be converted as closely as possible to the .igc format. Any download and conversion program must be approved by the NAC and include a validation system that will identify any changes to the .igc format file made after the initial download.

A-7 Altitude Evidence must be provided by a pressure altitude record that conforms to IGC rules and procedures for barographs (these include electronic pressure altitude recorders), and include calibration to the ICAO Standard Atmosphere (SC3 Annex C, Appendix 5). The profile of GPS-derived altitudes from a GPS position recorder must correspond to the profile of the pressure altitude record, but GPS altitude may only be used to prove continuity of flight. Where altitude measurement is required, pressure altitude is used in the normal way.

A-8 Presence of GPS position recorder in the glider. There must be incontrovertible proof, independent of the recorded data, that the recorder was in the glider flown by the pilot claiming the soaring performance.

A-9 Before flight The OO must ensure the GPS position recorder is installed, configured, or sealed in such a way that switches and buttons that could affect the downloaded flight data or allow connection to devices that could alter the data, cannot be used.

A-10 Takeoff and landing The OO must ensure that there is evidence of the position and time of take-off and landing. This evidence must be independent of the data produced by the recorder.

A-11 After flight As soon as possible the OO shall check any seals applied before the flight, supervise the download of data from the GPS position recorder and perform a preliminary analysis of the flight claim. Both the .igc format data file and any other data file (if applicable) from the recorder shall then be sent, using NAC-specified methods, to a NAC-approved person to analyse the data.

A-12 Analysis The analysis of the data must be done in the same manner as the data from an IGC-approved FR, including the validation process. See A-7 regarding altitude.

Chapter 5

OFFICIAL OBSERVERS and CERTIFICATION

5.1 OFFICIAL OBSERVER AUTHORITY

5.1.1 Official Observer appointment

OOs are appointed by a National Airsport Control (NAC) on behalf of the FAI and IGC. Directors of contests sanctioned by FAI or a NAC are automatically OOs for badge or record flights undertaken during a contest.

5.1.2 Official Observer duties

As the FAI and IGC representative, the OO shall control and certificate: record flights and FAI badge flights, flights in international championships and competitions sanctioned by the FAI, and other soaring performances that NACs may define within their area of authority.

5.1.3 Certification terms

- a. **CONTROL** Refers to OO actions taken to ensure the integrity of evidence supporting a badge or record performance, and to the required evidence gathering and evaluation functions performed related to a given flight..
- b. **VERIFICATION** Refers to confirmation of the aircraft flown, the name(s) of the crew, and take-off and landing times and locations.
- c. **CERTIFICATE** Refers to a written statement signed ("certified") by a person who has first-hand knowledge that the statement is true.

5.1.4 Competence

- a. OOs must be familiar with the Code and have the integrity, skill and competence necessary to control and certify glider and motor glider flights without favour. An OO should be briefed or given training appropriate to the duties of an OO prior to being approved by a NAC. Annex C paragraph 1.4 gives recommended NAC practice to administer OOs.
- b. For international records, the OO must be approved for this role, in writing, by the controlling NAC. Previous satisfactory experience as an OO for FAI badges or national records should be a requirement. Where more than one OO is involved, an OO with the controlling NAC shall oversee and certify that the work of other OOs is correct.
- c. The OO shall be familiar with the operation and limitations of all evidence-gathering equipment used on a given flight. See also Annex C, App 6 paragraph 2.3.

5.1.5 Geographical area of authority

OOs are entitled to control and certificate flights of gliders and motor gliders in the country of their own NAC, and in any country and for glider pilots of any nationality if that country's NAC (the controlling NAC) so permits. General Section 6.4 refers. For world records, the OO must have written approval from the NAC controlling the flight.

5.1.6 Conflict of interest Ref: <http://www.fai.org/documents/otherdocs/code_ethics>

All persons involved in data verification and claim approval must conform to the FAI Code of Ethics, evaluating the claim objectively according to the rules and procedures of the Sporting Code. As such, no one involved in ratifying a world record claim may have a special personal interest in the outcome of that claim, and OOs may not act for any record or badge attempt in which they have any financial interest or in which they are the pilot or passenger.

Ownership of the glider shall not be considered "financial interest". The essence is that monetary or other substantial gain shall not depend on the successful certification of the claim by the OO or other individuals concerned.

5.1.7 Violation of duty

In case of violation of duty by an OO, the appointment of the OO shall be withdrawn. In addition, negligent certifications or wilful misrepresentations are grounds for disciplinary action by the NAC concerned. See also 3.3.

5.2 FLIGHT CONTROL and VERIFICATION

5.2.1 Pre-flight control actions For each GNSS recording device, an OO must perform the actions required by 4.5.6a and, if used:

- a. sign the written pre-flight declaration and add the date and time (4.2 refers),
- b. perform installation and operational checks of any MoP recorder not incorporated into a flight recorder and seal the MoP (4.5.4 refers)
- c. perform the required actions for any stand-alone barograph (4.5.5a refers),

5.2.2 Post-flight control actions For each GNSS recording device, an OO must perform the actions required by 4.5.6d and, if used:

- a. perform the actions required by 4.5.5d for claims using a stand-alone barograph with or without MoP recorder capability; and
- b. for a flight in a motor glider, perform a post-flight check of MoP sealing and complete FAI Claim Form D or NAC equivalent (4.5.4 refers)

5.2.3 Control of a duration flight made under an OOs continual attention

When a duration flight does not carry a barograph but is being continually observed by an OO, this OO must witness both take-off and landing and verify release time and altitude MSL based on a tow release certificate from the tow pilot or ground launch supervisor for the flight (5.3.5 refers.).

5.2.4 Verification When a flight is recorded by barograph or GNSS device, the OO performing claim certification may verify the aircraft flown, crew name(s), and the times and locations of take-off and landing based on personal observation, supplemented if necessary by the written flight logs maintained at the take-off and landing site(s). In the latter case, the OO shall attach to the claim form legible photocopies of the pertinent flight logs.

If any required detail is not verified as above, the appropriate verification certificate is required (5.3.4 refers).

5.3 CLAIM CERTIFICATION

5.3.1 General

Whether part of a pre-printed claim form or provided as an attachment, any required certificate must clearly relate to the flight, contain the information required and be signed by the appropriate person(s). Except for OO control, barograms and calibration certificates, each person who signs a certificate shall also provide his or her name, address and, if possible, contact phone number or e-mail address.

5.3.2 Certificates required

- a. **PILOT CERTIFICATE OF REGULATORY COMPLIANCE** For all claims, the pilot must certify that the soaring performance was conducted in accordance with the FAI Sporting Code, was flown in compliance with all the glider manufacturer's and national operating limitations, and in accordance with national flight regulations respecting airspace use, night flight, etc. *For records, this certification is on the IGC Record Forms A, B, and C.*
- b. **OO CERTIFICATE** For all claims, this certificate shall list applicable control actions and for each one, the date it was performed, the signature and OO number of the OO who performed it.
- c. **UNWITNESSED LANDING** When no one has witnessed the landing, this certificate must be signed by one OO or two independent witnesses who arrive soon afterward and certify the precise location of the glider, including the date and time of that observation.

- d. **START FROM RELEASE** This certificate shall indicate the location of release from aerotow or ground launch, and must be signed by an OO or the tow pilot or ground launch supervisor for the flight. (4.5.2a refers). For a Silver duration flight done under an OO's continual attention, the certificate shall include release time and altitude MSL, *and must be signed by the tow pilot or ground launch supervisor for the flight (4.3.2 and 4.5.1 refer).*

- e. **CALIBRATION CERTIFICATE**

Instrument errors shall be listed on a current calibration certificate that includes the laboratory's logo or name, and the certificate shall include:

- Type, serial number, and altitude range of barograph
- Date of calibration
- Calibration trace, graph or table
- Date, name, and signature of calibration laboratory official

5.3.3 **Flight barogram**

Except as permitted for FRs and electronic barographs (see 4.5.5 and 4.5.6), a barogram shall have the following information clearly registered on it:

- a. Identification mark of OO before take-off
- b. For altitude and gain of height records, ground level pressure (QFE) at time of take-off
- c. Date of flight
- d. Name of pilot
- e. Type, serial number and altitude range of barograph
- f. Type and registration of glider
- g. Altitude of release (or of stopping the MoP for motor gliders)
- h. Proof of no intermediate landing
- i. Date and signature of OO after landing

Additionally, if the barograph is also the MoP recorder:

- j. Means of propulsion was stopped prior to leaving the start point
- k. Means of propulsion was not used between the start point and the finish point

5.3.4 **Verification certificates**

For each of the following flight details not verified as provided by 5.2.4, the corresponding certificate is required:

- a. **PILOT & CREW NAMES** This certificate shall name of each person aboard the glider and must be signed by one OO who witnessed take-off or landing or two independent witnesses present at take-off or landing.
- b. **TAKE-OFF** This certificate shall list the time and location of take-off and must be signed by an OO or an air traffic controller who witnessed the take-off.
- c. **LANDING** This certificate must list the time and location of landing and be signed by an OO or an air traffic controller who witnessed landing. In the absence of any such witness, the certificate listed in 5.3.2d is required.

5.3.5 **Claim certification**

Claims shall be certified by the OO who completes and verifies the information in the applicable FAI record claim form(s) and/or NAC-specified badge claim form(s). The OO who certifies a claim must be satisfied the flight meets soaring performance standards and the flight was done in compliance with procedural rules. At a minimum, this OO shall:

- a. Review and evaluate any recorded flight data and the pre-flight declaration (see Annex C).
- b. Confirm that all applicable OO control actions were performed (5.2.1 through 5.2.3 refer).
- c. Verify the aircraft flown, each occupant's name and the times and locations of take-off and landing; countersign photocopied flight logs if applicable (5.2.4 refers).
- d. Obtain required certificates and countersign those that are complete and consistent with the claim (5.3.2 through 5.3.4 refer).

5.4 FAI RECORD CLAIM FORMS

For claims submitted to the FAI, the current FAI Official Claim Forms approved by IGC must be used. For national records, the NAC may issue its own forms similar to the FAI versions.

Designation	Record type	Remarks
Form A	Absolute Altitude or Gain of Height	Open class records only
Form B	Distance	
Form C	Speed	
Form D	Motor Gliders	Form D is additional to other forms if appropriate to the claim.
Form E	Completed by all NACs involved.	Must be included with claim file.

The FAI forms are available from the IGC web site <<http://www.fai.org/gliding>>, and in hard copy from the FAI office and NACs.

5.5 SUBMISSION of CLAIMS

OO certification of take-off and landing evidence, MoP status, witness statements, and any other data or auxiliary material required by a NAC to support the mandatory evidence (see examples in Annex B, Appendix 1) for a soaring performance shall be forwarded to the NAC using the media and methods the NAC specifies.

- 5.5.1 If the soaring performance was recorded by an FR, send in the original data (the first copy) in the format produced by the FR during download. If conversion to .igc format is done after the download, *both* the original and the .igc files must be submitted. This process must be performed for all FRs carried on the the flight. For all record claims, a copy of the .igc file along with a record notification is to be sent to the FAI within 7 days (3.4.1 refers).
- 5.5.2 If a badge performance was recorded by a stand-alone barograph, send in the original barogram and, if a GPS position recorder was used, the original data file (the first copy), in the format produced by the GPS position recorder. Where any conversion to .igc format is done during download or afterward, *both* the original and the .igc files must be submitted.

Chapter 6

GLIDER CLASSES and INTERNATIONAL COMPETITIONS

6.0 GENERAL

This chapter gives the class structure and some general rules for FAI World Gliding Championships and other international competitions. If a claim is made for a badge or a record during a competition, the requirements of the Code must be fulfilled regardless of the regulations of that competition.

Detailed rules for World Championships and International Competitions are given in Annex A to this code (SC3A) and also in the General Section of the FAI Sporting Code. Where “competition” shows in any of these rules, the rule applies to both World Championships and international competitions.

6.1 CLASS CONFORMITY

6.1.1 Record flights

An OO shall certify that the glider used for a record flight complies with the requirements for the class rules of the record classification involved and shall certify any measurement and checking required.

6.1.2 Competitions

Gliders shall be presented to the competition organiser as prescribed in the local regulations in order to be checked and measured for compliance with class rules.

6.1.3 Measurement of wing span

Wing span, for the purpose of conformity with class rules, is the maximum distance between the two planes tangent to the wing tips and parallel to the glider plane of symmetry and the weight of each wing supported to allow the wing to match its unloaded shape.

The unloaded shape depends on the design of the glider, but will generally mean that the trailing edge is straight along the length of the wing.

6.1.4 Mass limits

The competition rules may limit the maximum mass of a glider in any class. Any limit must be stated in the official bid and must be approved by the IGC.

6.1.5 Change of components

Except where allowed in the Championship rules, a glider shall use the same set of wings or wing components, fuselage and tail unit for the duration of the competition.

6.1.6 Airworthiness certificates

A glider must hold a valid Certificate of Airworthiness or Permit to Fly that does not exclude competition flight and comply with the conditions of its airworthiness documents.

6.2 HANDICAPPING

The purpose of handicapping shall be to equalise the performance of competing gliders as far as possible. The handicap values used shall be directly proportional to the expected cross-country speeds of gliders in typical soaring conditions for the competition concerned.

If handicapping is to be used, it shall be applied directly to the speed or distance achieved: for finishers, to the speed only, for non-finishers, to the distance only. Competitors completing the task shall not be given less than full distance points, and competitors not completing the task shall not be given more than full distance points. Any list of handicaps proposed for a competition must be approved by the IGC.

6.3 TIME PERIOD for CLASS CHANGES

The minimum period between the announcement and implementation of a new class or major alteration to the rules of an existing class shall not normally be less than four years. Minor alterations not requiring design changes shall normally have two years notice. The IGC may reduce the period of notice for special reasons.

6.4 WORLD CHAMPIONSHIPS

World Gliding Championships are organised in the classes defined below. Women's Championships and Junior Championships may also be organised at the World Championship level. Motor gliders are integrated into the other championship classes (except the World Class) under championship rules for motor gliders (Annex A refers).

6.5 COMPETITION CLASSES

6.5.1 Open Class No limitations.

6.5.2 20 metre multi-place

- a. ENTRY This class consists of gliders having a crew of two persons. If handicaps are to be used, the gliders must have a handicap factor within the range agreed for the competition.
- b. CREW The crew must represent the same NAC and have a Sporting Licence issued by that NAC. The winning crew shall jointly hold the title of Champion.
- c. WINGS The span must not exceed 20,000 mm.
- d. BALLAST Water ballast that can be discharged in flight is permitted.
- e. SCORING Championship scoring formulas may include handicap factors.

6.5.3 18 metre Class The only limitation is a maximum span of 18,000 mm.

6.5.4 15 metre Class The only limitation is a maximum span of 15,000 mm.

6.5.5 Standard Class

- a. WINGS The span must not exceed 15,000 mm. Any method of changing the wing profile other than by normal use of the ailerons is prohibited. Lift increasing devices are prohibited, even if unusable.
- b. AIRBRAKES The glider must be fitted with airbrakes that cannot be used to increase performance. Drag parachutes are prohibited.
- c. WHEEL The undercarriage may be fixed or retractable. The main landing wheel shall be at least 300 mm in diameter and 100 mm in width.
- d. BALLAST Water ballast that can be discharged in flight is permitted.

6.5.6 13.5 metre Class

- a. WINGS The span must not exceed 13,500 mm.
- b. BALLAST Disposable ballast that may be discharged in flight is permitted.

Note: 13.5 metre Class championships will begin after 1 October 2014.

6.5.7 World Class

The World Class glider is the PW-5. No modifications are permitted except as approved and circulated in writing by the FAI to all NACs on behalf of the IGC.

- a. ALTERATION TO AIRFLOW Any alteration affecting airflow around the glider is prohibited. This includes, but is not limited to, the use of turbulation devices, fairings, and special surface treatment. The only exceptions are:

- a yaw string,
 - a total energy probe,
 - adhesive tape to seal gaps between wings, fuselage and tail. Sealing between moveable control surfaces and the airframe is not permitted.
- b. ELECTRICAL DEVICES Electrical and electronic devices are allowed, including instruments and navigational aids.
 - c. BALLAST Ballast cannot be jettisoned in flight. In a World Class competition, a flight mass shall be specified between the maximum gross mass and the lowest take-off mass attainable by the heaviest entrant. To attain the specified mass, each glider shall incorporate a fixed ballast system approved by the IGC, which may include tail ballast.
 - d. CENTRE OF GRAVITY CONTROL Any device capable of altering the centre of gravity location of the glider during flight is prohibited.

Note: World Class championships will cease after 1 October 2014

6.5.8 Club Class

The purpose of the Club Class is to preserve the value of older high performance gliders, to provide inexpensive but high quality international championships, and to enable pilots who do not have access to gliders of the highest standard of performance to take part in contests at the highest levels.

- a. ENTRY The only limitation on entry of a glider into a Club Class competition is that it is within the agreed range of handicap factors for the competition.
- b. BALLAST Water ballast is not permitted.
- c. SCORING Championship scoring formulas shall include handicap factors.

6.6 INTERNATIONAL COMPETITIONS

International competitions may be held in the World Championship classes and in other classes specifically approved by the IGC. Certain championships have a restricted entry:

- a. WOMEN'S CHAMPIONSHIPS Championships in one or more of the approved classes, which are open to female flight crew members only.
- b. JUNIOR CHAMPIONSHIPS Championships in one or more of the approved classes, which are open to pilots whose 25th birthday occurs in the calendar year (1 January to 31 December) that includes the date of the start of the championships, or occurs later.

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Report of the Sporting Code Committee 2010.

The Sporting Code committee has had an unusual year. Continental records were approved in 2010 and the wording of the necessary amendments to SC3 were accepted by IGC, however, it was then pointed out that the General section of the Code had been amended from January 1st 2010 and the SC3 amendments were in conflict with the new General section. In particular, the need for a Continental Record to be a National record was in contention. It was immediately obvious that this would be unfair to some countries whose national record was already a world record performance. The General Section requires the Sport Commissions Sections to follow the General section so this was an area where Gliding was not entitled to be in conflict with the General Section. The SC3 amendments were therefore not published.

Discussions with the Bureau led to IGC proposals to CASI that the General section should be amended to avoid this conflict. In fact the question was asked, why do World records need to be National records at all? At the same time, a French proposal to treat multiseat Gliders and Motor Gliders as a team performance, thus avoiding the need for the performance to be a National record, was for CASI to consider. As this was also linked with the same paragraphs of the General Section the Bureau made a combined proposal which covered both the problems. The CASI meeting was at the beginning of October and the SC3 committee chairman attended along with Tor Johannessen the IGC representative. While the IGC proposal gave more than one way to solve the problem area, CASI decided that the question of the need for World Records to be National Records should be referred to a working group. As a member of this group, I can report in advance of their findings, three of the four members have indicated that they cannot see the need for this provision. The next CASI meeting in Belgrade will make the final decision.

Meantime the SC3 committee has adjusted the wording for SC3 to be in compliance with the General Section as it came into effect on 1st January, and is part of the SC3 proposals for this plenary. If the CASI decision is in line with the working party, there will need to be further amendments next year.

I wish to thank and commend the members of the SC3 committee for their efforts and commitments to seek the right words and ideas to keep the code both up to date and maintain its integrity. Tony Burton, Judy Ruprecht, Tor Johannessen and Axel Reich are very knowledgeable with SC3 matters and are willing to spend many hours to get the wording just right. They will be willing to stay on the committee for 2011.

Ross Macintyre
Chair, SC3 Committee

- 1.2.3 The total period of the event shall not exceed 16 days including two days on which the Opening and the Closing Ceremonies are held. Events should be separated by a minimum period of 4 days . At least one non-flying rest day shall be given during the period. An official practice period of about seven days immediately preceding the opening of the Championships shall be made available to all competitors.
Attendance on at least the last official practice day is mandatory for all pilots.

=====

4.1.2 Each competing sailplane shall be flown within the limitations of its Certificate of Airworthiness or Permit to Fly and:

- a. Must have been issued a valid Certificate of Airworthiness or Permit to Fly not excluding competitions.
- b. Shall be made available to the Organisers at least 72 hours before the briefing on the first championship day for an acceptance check in the configuration in which it will be flown. This configuration shall be kept unchanged during the whole competition. Exception: In the Open Class only it is allowed to change complete wing panels and/or winglets. No instruments permitting pilots to fly without visual reference to the ground may be carried on board, even if made unserviceable. The Organisers may specify instruments covered by this rule in their Local Procedures.

All discrepancies found during the acceptance check must be corrected no later than 20:00 on the day before the first scheduled competition day. Noncompliance will result in denied competition launches. By that time Flight Logs - including Pilot ID and Contest Number in the IGC file - from all FRs in use must also have been delivered to the Competition Office. Noncompliance will result in denied competition launches.

=====

4.2.1 f. **20 metre Multi-seat Class – 750 kg.**

=====

- 5.4 d. FR's shall be switched on for at least two minutes before first take off to establish an altitude baseline. **To provide a positive record on the Flight Log from** motor gliders having an MoP capable of being started in flight (including sustainer MoP) the engine must be started and run for a maximum of two minutes either before the launch, or within 5 minutes after release if the motor glider is launched by aerotow. **This procedure needs to be followed only on the first competition day, provided that:**

- 1) **Flight Logs from both FR,s submitted on the first competition day show a positive record of the engine run.**
- 2) **Flight Logs on each subsequent competition day also show evidence that detection of MoP is enabled.**

- f. Competitors must submit a Flight Log for evaluation on each Championship Day on which a launch was made, regardless of the outcome of the flight(s). **All Flight logs submitted must include Pilot ID and Contest Number in the IGC file.**

- 7.3.3 **Release Areas** Release areas and towing patterns shall be described in the Local Procedures. The release areas shall be clearly separated and positioned in a way that makes it possible to establish safe and efficient towing patterns.

The standard release height or altitude shall be given in the Local Procedures and may be modified at Briefing.

- a. Each release area **should normally** be used by one class at a time.

=====

- 7.7.2 b. **Finish Ring** A circle of specified radius (**minimum 3 km**) around the Finish Point encompassing the contest site and the landing circuits. A minimum altitude (MSL) shall be imposed for crossing the ring. Competitors crossing the finish ring below the minimum altitude, shall be penalized.

*Option b. Finish Ring is **to be regarded as the normal finish procedure as** it allows each pilot to slow down and concentrate on **the landing** procedures and other sailplanes prior to landing.*

Organisers are encouraged to use a Final Turn Point to align the sailplanes with the desired direction of landing. If possible, separate Final Turn Points should be used for each class.

=====

7.7.3 **Validity of Finishes**

- a. A Finish is valid if the Flight Log shows that the glider crossed the Finish Line in the direction specified on the task sheet or enters the Finish Ring.
- b. A sailplane landing within the contest site boundary without crossing the Finish Line shall be deemed to have finished and shall be given as Finish Time the time at which the glider stopped moving plus five minutes.
- c. **A sailplane entering the Finish Circle but landing outside the contest site boundary shall be deemed to have finished but 5 minutes will be added to the Finish Time.**

=====

- 9.2.3. The amount of the Protest Fee shall be stated in the Local Procedures. **Minimum amount is € 250.** The protest fee shall be returned if the protest is upheld, or is withdrawn prior to the hearing by the Jury.

=====

- b. A Protest shall be handed to the Championship Director or his designated official, by the Team Captain, together with the protest fee within 14 hours (2 hours on the last day) of the publication of the ruling or decision against which the protest is made. **At that time the protest time for previous days will also expire.**

ANNEX A SUBCOMMITTEE REPORT

For IGC Plenary 2011

Chairman: Göran Ax (SWE)

Members: Rick Sheppe (USA), Axel Reich (GER) and Jiri Chilar (CZE)

FAI Championships held during 2010

Two world Championships were held during 2010:

Prievdza hosted the Standard, Club and World Class WGC and

Szeged hosted the Open, 18m and 15m WGC.

Annex A 2010 was approved by the IGC Plenary 2010 to be valid from 1 April 2010 and thus valid for both competitions.

Feedback from Chief Stewards at both WGCs revealed that some further adjustments were needed in the interest of flight safety and a revised issue, Annex A 2010 / Version 2, was approved by the Bureau to be valid from 1 October 2010.

Missing information in the IGC Club Class Handicap List are still an unsolved problem and a shorter list was produced for the Prievdza WGC. This solved most problems but not all and the reference weights seem to be the cause of most problems. The Annex A Committee is of the opinion that the reference weights no longer serves any useful purpose and that they can be removed without compromising fairness. A Proposal to that effect has been submitted to the 2011 Plenum.

Sincere thanks go to everyone who has provided feedback to the Committee and my personal thanks to my fellow members: Axel, Jiri and Rick.

Göran Ax



FAI Sporting Code

*Fédération
Aéronautique
Internationale*

Annex A to Section 3 – Gliding

RULES FOR WORLD AND CONTINENTAL SOARING CHAMPIONSHIPS

CLASS D (GLIDERS)
Including Class DM (Motor Gliders)

2010 Edition / Version 2

This amendment is valid from 1 October 2010

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PRELIMINARY REMARKS

- a) The Local Procedures describe operational procedures relevant to the site and complement these Rules.
- b) In this Annex the words "must", "shall", and "may not" indicate mandatory requirements; "should" indicates a recommendation; "may" indicates what is permitted; and "will" indicates what is going to happen.
- c) In this document words of masculine gender should be taken as including the feminine gender unless the context indicates otherwise.
- d) The numbering format of the Sporting Code General Section has been used in the layout of these Rules.
- e) Explanatory text and notes are included as unnumbered paragraphs in *italic Arial 10 font*.
- f) In this document, wherever the word pilot, entry, champion or participant is used, it should be taken as crew, team-entry, champions or team, with reference to the **20 metre Multi-seat Class**.
- g) Geometric terms and standards, as used in these Rules, shall be in accordance with the following table:

Distance	Unless otherwise specified, the terms "Distance", "Length", "Radius," "Separation," etc. shall be determined along the geodesic.
Direction	All bearings, courses, tracks and headings shall be referenced to True North and shall be specified at the point of origin.
Lines	Unless otherwise specified, the terms "Line", "Straight Line," "Line Segment," "Leg," etc. shall be considered to be geodesics.

Yellow outlining marks all text changes.

Changes in Version 2

- 3.4.3 a Name of class corrected to conform with SC3.
- 3.4.3 c Name of class corrected to conform with SC3.
- 4.1.2 b Handling of discrepancies found during the acceptance check clarified.
- 4.2.1 f Name of class corrected to conform with SC3.
- 5.4 d Engine-Run Procedure for Motor Gliders simplified.
- 5.4 f Requirement to include Pilot ID and Contest Number added.
- 7.3.3 a Changed wording.
- 7.7.2 b Rules for Finish Ring expanded and clarified.
- 7.7.3 c Rules for a valid Finish expanded and clarified.
- 8.2.4 Name of class corrected to conform with SC3.
- 9.2.3 Minimum Protest fee specified.
- 9.2.3 b Handling of Protests clarified.
- App. 3 Name of class corrected to conform with SC3.

PART 1 GENERAL

1.1 OBJECTIVES OF THE CHAMPIONSHIPS The objectives are to:

- a. Select the champion in each competition class on the basis of the pilot's performance in the tasks set;
- b. Foster friendship, co-operation and exchange of information among soaring pilots of all nations;
- c. Promote worldwide expansion of the public image of soaring;
- d. Encourage technical and operational development of the sport;
- e. Encourage the development of safe operational procedures, good sportsmanship, and fairness in the sport of soaring.

The Organizers may state any additional objectives in their Local Procedures.

1.2 GENERAL REQUIREMENTS

1.2.1 The Championships shall be controlled in accordance with the FAI Sporting Code, General Section and Section 3 (Gliders & Motor Gliders), and specifically with Chapter 7 of Section 3 and with this document, which is approved by the IGC plenary and which constitutes Annex A to Section 3. Any competitor or Team Captain violating or tolerating the violation of these rules shall be suspended or disqualified from the Championships.

1.2.2 The winner is the pilot having the highest total score, obtained by adding the pilot's points for each championship day. In case of a tie, see paragraph 10.2.3. The winner will be awarded the title of World Champion, provided that there have been at least four championship days (see 8.2.1) in that class.

Final places, for all tied results, should also be determined by the procedure stated in 10.2.3.

1.2.3 The total period of the event shall not exceed 16 days including two days on which the Opening and the Closing Ceremonies are held. Events should be separated by a minimum period of 4 days. At least one non-flying rest day shall be given during the period. An official practice period of about seven days immediately preceding the opening of the Championships shall be made available to all competitors.

The Organizers may declare further rest days for stated reasons such as pilot fatigue. A rest day is a day declared a rest day in advance by the organizers or a day declared a rest day at first briefing.

1.2.4 The official language of the Championships shall be the English language; this shall include all regulations and information circulated to the competitors, any public announcements during the event, and briefings.

1.3 CHAMPIONSHIP CLASSES

- 1.3.1 The Championships shall consist of the one or more classes as described in the main body of Section 3 of the Sporting Code, Chapter 6, and as listed in the Local Procedures.
- 1.3.2 If any one class does not have at least ten participants from at least five (four for Continental Championships) NAC's on the first Championship day, the contest shall take place but no Champion will be declared.
- 1.3.3 Motorised sailplanes shall be permitted to participate in their appropriate classes, provided they have fully functioning MoP recorders.

1.4 RESPONSIBILITIES OF THE ORGANISERS

- 1.4.1 **Safety** The Organisers shall pay due regard to safety and fairness in all aspects of the championships.
- 1.4.1.1 The Organisers shall, in cooperation with the Chief Steward, form a Safety Committee consisting of at least one of the event Stewards and one pilot from each competing class. The representative pilots shall be selected by vote of the other pilots in the class.

The role of the safety committee is to receive and investigate complaints regarding poor airmanship. The Committee has no powers of discipline but may censure a pilot and is required to advise the Organisers if a pilot repeatedly offends against sound airmanship.

The Organisers may issue additional rules regarding safety in the Local Procedures.

- 1.4.2 **Facilities** The Organisers shall provide:
- a. All facilities necessary for the satisfactory operation of the Championships.
 - b. The travel and living expenses for Stewards and Jury Members, other than the Chief Steward and Jury President.

Other arrangements may be agreed upon with the individual Officials. The travel and living expenses for the Chief Steward and Jury President are the responsibility of IGC.

- 1.4.3 **Fees** The Organisers must pay sanction fees to FAI as decided by IGC.
- 1.4.4 **Documentation** The Organisers shall provide references to current versions of all documents described in this section and shall provide hardcopies of these documents to the Team Captains upon request. All of the documents in this section shall be published with these names and shall include the effective dates and times. After the Opening Ceremony, changes to these documents require formal notice to be given to the Team Captains. Only one format of each file will be official. In addition, a large scale map section showing each of the Start, Turn, and Finish Points shall be supplied to each competitor and Team Captain.
- 1.4.4.1 **Local Procedures**

The original publication of the Local Procedures shall be no later than 90 days before the first scheduled day of competition.

1.4.4.2 Control Points

The Control Points are the Start Points, Finish Points and Turn Points that may be used during the Championships. The official format of the Control Point file shall be specified in the Local Procedures. The original publication of the Control Points file shall be no later than 30 days before the first scheduled day of competition.

Organisers are encouraged to make a clear distinction between Start, Turn, and Finish Points in the names or numbers of the Control Points. A single point may be used for more than one purpose, but this should also be made evident.

Changes to the Control Point file after the Opening Ceremony should be allowed only in exceptional circumstances, and only with the consultation of the Chief Steward.

1.4.4.3 Forbidden Airspace

The Forbidden Airspace file shall be published in the "Open Air" format. It shall include all airspace that may result in a penalty if entered. Particular regions of forbidden airspace may be activated or deactivated at Briefing, but addition or permanent deletion of forbidden airspace requires a new publication of the Forbidden Airspace file. The original publication of the Forbidden Airspace file shall be no later than 30 days before the first scheduled day of competition.

Absolute altitude limits and Start altitude limits (if used) are specified in the Local Procedures and are not included in the Forbidden Airspace file.

Changes to the Forbidden Airspace file after the Opening Ceremony should be allowed only in exceptional circumstances, and only with the consultation of the Chief Steward.

1.4.4.4 Task Sheet

The Task Sheets will be distributed at Briefing. The Task Sheet must include:

- a) The date and Competition Day number
- b) The Class (in Multiclass Championships)
- c) The Task specification (see 6.2)
- d) Operational Procedures in use
- e) Any changes to forbidden airspace or altitude limits
- f) Grid Time
- g) Anticipated time of first launch
- h) End of legal daylight
- i) Any other information relevant to the day's flying.

Organisers are strongly encouraged to provide a graphical depiction of the task and nearby forbidden airspace, and relevant distances and bearings. However, these depictions and parameters are not to be taken as official for scoring purposes.

A change of task at Grid Briefing (see 5.2c) should include the distribution of new task sheets.

1.4.4.5 Results

- a) Any scores published before all Flight Logs have been analysed shall be labeled "Preliminary Results."
- b) After all the Flight Logs have been analysed, the scores shall be published as "Unofficial Results." Unofficial Results are subject to review by the competitors and Team Captains.

After the expiry of the protest time and after all complaints and protests have been dealt with the scores shall be published as "Final Results".

PART 2 CHAMPIONSHIP OFFICIALS

2.1 THE CHAMPIONSHIPS DIRECTOR

- 2.1.1 The Championship Director shall be in overall operational charge of the Championships and be approved by the IGC. He shall have a Deputy Director and Technical Officials to assist him. The Championship Director is responsible for good management and the smooth and safe running of the Championships.
- a. He shall make operational decisions in accordance with the rules of the Sporting Code and of the Championships. The decisions shall be published without delay in writing on the Official Information Board in the Briefing Hangar.
 - b. He may penalise or disqualify a competitor for misconduct or infringement of the rules.
 - c. He shall give evidence to the International Jury if requested.
 - d. He shall publish the officially accepted entry list, issue daily results with the minimum of delay, and report the full results to his NAC and to FAI.
- 2.1.2 The Director or his named deputy shall be available at the contest site at all times while Championships flying is in progress.

2.2 STEWARDS AND JURY MEMBERS

Stewards and Jury Members may not be competitors, nor hold any operational position in the organisation.

The Stewards and Jury Members must understand and speak English and possess a thorough knowledge of: the FAI Sporting Code, General Section and Section 3; the FAI International Jury Members Handbook, and, Rules and Local Procedures for the Championships.

- 2.2.1 **Stewards** The IGC-Bureau shall nominate a Chief Steward, at least one year prior to the event, plus at least one other Steward, of nationalities different to that of the Organisers, except that in the event of a last minute failure to attend, a replacement Steward of any nationality and acceptable to the other Stewards may be invited.
- a. The nominations shall be approved by IGC.
 - b. One Steward shall be present at the contest site throughout all major operational activities including during the official practice period.

The primary responsibility of the Chief Steward is to ensure the timely completion of all organisational aspects of the competition.

The role of the Stewards is to provide advice and/or support to the Director, the International Jury, the Team Captains and the competitors. Stewards must have extensive experience of soaring competitions and conduct themselves in accordance with the guidance provided in the IGC Steward Handbook.

2.2.2 **International Jury**

- a. A nominated Jury shall consist of the President of the Jury plus two Members. The President shall be appointed by the IGC. Both Members shall normally be appointed by the IGC, except that, in exceptional circumstances, the President may be empowered to appoint one Member, in consultation with the President of the IGC, from amongst persons present at an event. One or both members may be absent from the event provided:
 - (i) They are able to attend at the event site as required by the Jury President to hear a protest, and
 - (ii) They are present at the event site for the final day of competition to hear any protests arising from the last day of competition, and to attend the final Jury Meeting to confirm the results.
- b. In addition to being the Chairman at Jury meetings, the President and has the right to require the Organisers to abide by the FAI Sporting Code and the published Rules and Procedures for the Championships. If the Organisers fail to do so the President of the Jury has the power to stop the Championships until a Jury meeting has considered the situation.
- c. The Jury has the right to terminate the Championships if the Organisers fail to abide by the FAI Sporting Code and the published Rules and Procedures. They may recommend to the FAI Secretary General that all entry fees be returned.
- d. **Meetings of the International Jury**
 - (i) Attendance at Jury meetings is compulsory for Jury members, except for special reasons such as illness or emergencies. In such cases the Jury President may accept an eligible replacement nominated by the Jury member concerned.
 - (ii) Jury meetings are to be conducted in accordance with the FAI International Jury Members Handbook.
 - (iii) Decisions by the Jury shall be reached by simple majority. The President of the Jury shall report the details of any protest to FAI.
- e. **Dissolution of the International Jury** The Jury shall only cease its functions after it has given its decision on all protests that have been correctly made. If no protests are outstanding it shall not cease its functions until the time limit set for the receipt of protests following the last task. The last action of the Jury is to approve the competition results of the Championships and declare the Championships valid, providing they have been conducted in accordance with the rules and the decisions of the Jury.

The International Jury deals with protests made by competitors. The Jury Members must strive to be neutral and independent of the Championships Director's decisions but be prepared to give advice and answer queries regarding interpretation of the rules and the general running of the event if raised by officials of the event.

PART 3 NATIONAL TEAMS

3.1 SELECTION OF TEAMS Each NAC shall select its own Team Captain, competitors, and assistants. The NAC's shall certify to the Organisers (normally in the entry form) that the team members qualify under these rules.

3.1.1 The Team Captain, competitors and crew members, by virtue of entering, agree to be bound by these Rules and the Local Procedures issued for the Championship, by any rulings and requirements stated by the Organizers at any briefings, and the airspace regulations in force during the Championships. They are also deemed to accept, without reservation, any consequences resulting from the event (for instance see 3.6 on insurance).

3.2 QUALIFICATIONS A competitor must be a citizen or resident of the country of the entering NAC and satisfy the conditions of the FAI Sporting Code, General Section 3.7 on citizenship and representation, and must;

- a. Hold a gold badge, or, hold a silver badge and have competed in at least two National Championships;
- b. Have flown at least 250 hours as a pilot in command, of which at least 100 hours must be in sailplanes;
- c. Hold an FAI Sporting Licence with a current FAI stamp;
- d. Hold a Pilot Licence or equivalent document issued or endorsed by the authorities of the country in which the sailplane is registered, or of the country where the Championships take place;
- e. Know, understand, and abide by the FAI Sporting Codes and the Rules and Procedures issued for the event.

A Team Captain:

- *Should be of the nationality of his NAC but a substitute of another nationality, holding written authority from the NAC concerned, may be accepted at the discretion of the Organisers.*
- *May be a competitor or crew member but preferably be additional to them.*

A crew member may be of any nationality.

3.3 TEAM CAPTAIN'S RESPONSIBILITIES The Team Captain represents his NAC and is the liaison between the Organisers and his team members. A Team Captain not fulfilling his responsibilities, as detailed in this Section, may be suspended or disqualified in accordance with paragraph 1.2.1. The Team Captain:

- a. Should endeavor to ensure the proper conduct of his team members and that the pilots do not fly if ill or under the influence of alcohol or drugs, or suffering from any disability that might endanger the pilot or others.
- b. Is responsible for compliance by his team members with the terms of the Certificate of Airworthiness or Permit to Fly of the competing sailplanes and, where appropriate, with the laws of his own and those of the Organisers' country.
- c. Is responsible for ensuring that all members of his team receive and understand all information given at any Championships briefing.

3.4 ENTRY

- 3.4.1 **Application for Entry** Application for entry shall be accepted only on the official entry form, and accompanied by the entry fee in full. Incomplete entry forms or those containing inaccurate information will not be accepted.

After four months before the opening day applications may be accepted, only if there are vacancies, at the discretion of the Organisers. Exceptions may be made for applications from the opposite hemisphere.

- 3.4.2 **Entry Fee** The entry fee shall cover all operational costs during the Championships, except that aero tows may be paid as used, at the discretion of the Organisers.

- a. Entry fees shall be returned:
 - (i) In full, if the Championships do not take place,
 - (ii) Unused fees shall be paid back if the Championships are stopped or cancelled for reason of force majeure,
- b. A competitor who withdraws shall have no right to the return of any fees.

3.4.3 **Pilots**

- a. Each NAC may enter the number of pilots approved by the IGC and specified in the Local Procedures, but not more than two pilots (two crews in the **20 metre Multi-seat Class**) in any class, or 3 pilots in any class at Junior and Women Championships. A pilot withdrawing after the final entry deadline may be replaced by another pilot from the same country provided he is eligible according to the allocation procedure.

For Continental Championships with a limited number of nations participating the IGC Bureau may approve a higher number of pilots per class.

- b. Any number of entries is allowed if evidence is provided that the conditions and Local Procedures make it safe to do so (as per section 1.4.1). The entry numbers per class for each specific contest will be decided by the IGC Bureau in conjunction with the Organisers. The maximum number of entries per class shall be 50 plus the World Champions (see 3.4.3d).
- c. The current Champions of the FAI multiclass WGCs, the Current Champions of the FAI Women WGC and the current Champions of the FAI Junior WGC may compete as additional members of their team in their relevant classes, even in excess of the 50 per class limit.
- d. Two-seater sailplanes may compete in the Open class either flown solo or dual. The crew member is considered to be variable ballast and can be changed on a daily basis. Only the nominated pilot in command shall be listed in the results.
- e. In the **20 metre Multi-seat Class** the sailplanes must be flown dual. The two pilots on board constitute a crew that can not be changed, each pilot may occupy either seat on a given competition day. Both pilots on board the two-seater shall be listed in the results and both must fulfill the requirements for competitors in accordance with the FAI Sporting Code, General Section.
- f. If the total number of entries or the number of entries per class exceeds the

maximum numbers set for the event the number of entries will be reduced in accordance with the IGC Country Ranking List. A detailed procedure is found in Appendix 4.

- 3.4.4 **Rejection of Entries** The organising NAC may not reject any entry to a Championship made in good faith and complying with the terms of entry.

3.5 REGISTRATION

- 3.5.1 On arrival at the contest site, each Team Captain and his competitors shall report to the Organisers' Registration Office to have their documents checked and to receive any supplementary information.

- 3.5.2 After the close of registration, no change of sailplanes or pilots shall be permitted. Pilots whose documents have not been checked and found to meet all requirements shall not be permitted to fly until the requirements are met.

- 3.5.3 The Organisers, if appropriate, shall require the following documents and translations:

- a. Documentary proof of insurance, or medical insurance cards.
- b. For the pilot:
 - (i) Proof of nationality or certificate of residence (FAI General Section 3.7);
 - (ii) Valid Pilot Licence or equivalent document and proof of qualification regarding hours and badges; and
 - (iii) FAI Sporting Licence valid for the year of the event.
 - (iv) A Therapeutic Use Exemption (TUE)

If, due to health problems, you are taking any medicines that are on WADA's prohibited list you should obtain a Therapeutic Use Exemption(TUE). You should contact your NAC to get information on how to obtain a National TUE. A national TUE is automatically recognized by FAI. Put the TUE in a sealed envelope and hand it to the Event staff upon arrival. This is extremely important in case of doping testing

- c. For the sailplane:
 - (i) Valid Certificate of Airworthiness or Permit to Fly; and
 - (ii) Third party insurance certificate for the sailplane.

- 3.5.4 The Organisers shall state in the Local Procedures:

- a. If additional documents are required, and
- b. Which documents shall be carried on board the sailplane.

3.6 INSURANCE

- 3.6.1 Third party insurance, as specified in the Local Procedures, is the responsibility of the entering NAC.
- 3.6.2 Personal medical insurance is required for all team members, covering accidents and sickness, including any local hospital costs and the costs of transport back to the team member's home country.

PART 4 TECHNICAL REQUIREMENTS

4.1 SAILPLANES AND EQUIPMENT

4.1.1 The competitors shall provide sailplanes, trailers, retrieve cars, and other equipment, including GNSS Flight Recorders, radios, oxygen systems, parachutes, and survival equipment of a performance and standard suitable for the event.

- a. The airworthiness, safety and safe operation of competing sailplanes and any associated equipment and vehicles, as appropriate, shall be the responsibility of the competitors at all times.
- b. Each occupant of a competing sailplane shall use seat belt and shoulder harness and wear a serviceable parachute on each competition flight .

*It is highly recommended to use an energy absorbing seat cushion.
The use of Flarm (or compatible proximity warning device) is also highly recommended.*

The Organisers may specify in the Local Procedures additional mandatory equipment if the conditions of their country so require.

4.1.2 Each competing sailplane shall be flown within the limitations of its Certificate of Airworthiness or Permit to Fly and:

- a. Must have been issued a valid Certificate of Airworthiness or Permit to Fly not excluding competitions.
- b. Shall be made available to the Organisers at least 72 hours before the briefing on the first championship day for an acceptance check in the configuration in which it will be flown. This configuration shall be kept unchanged during the whole competition. Exception: In the Open Class only it is allowed to change complete wing panels and/or winglets. No instruments permitting pilots to fly without visual reference to the ground may be carried on board, even if made unserviceable. The Organisers may specify instruments covered by this rule in their Local Procedures.

All remarks made during the inspection must be complied with not later than 20:00 on the day before the first scheduled competition day. By that time Flight Logs (see 5.4) from all FRs in use must also have been delivered to the Competition Office. Noncompliance will result in denied competition launches.

Configuration refers to the shape, and dimensions of the primary structure of the sailplane and includes movable controlling surfaces, landing gear, winglets, and wing tip extensions. The configuration is considered to be changed if the shape, or dimensions of the primary structure are altered, or, for a motor-glider, if either the engine installation or the propeller is modified. "Instruments" includes any portable devices which use a gyro or inertial platform or high precision GNSS positioning and/ or attitude sensing technology.

Any navigational equipment is permitted.

The Organisers will state in their Local Procedures if they require competing sailplanes to:

- *Be marked with high visibility markings to improve in-flight conspicuousness.*
- *Carry GNSS data transmitters to enable the public display of GNSS flight records during competition flights. Such a display will not begin before the start line is opened and the actual position of the sailplanes shall be displayed with a time delay of at least 15 minutes. This delay should be reduced to zero prior to the finish.*

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- 4.1.3 Damage to a sailplane must be reported to the Organisers without delay. A damaged sailplane may be repaired. The following items may be replaced instead of being repaired: control surfaces; the complete horizontal stabiliser; airbrakes or flap surfaces; canopy; undercarriage gear and doors; propellers; non-structural fairings; and, wing tips and winglets but not the entire outer wing panels.

If the damage was no fault of the pilot, the whole sailplane or any part of it may be replaced with the consent of the director of the Championships. Landing damage is normally assumed to be the fault of the pilot.

- 4.1.4 A competitor involved in a collision in the air shall not continue the flight but land as soon as practicable. Both pilots will be scored as having landed at the position at which the collision occurred.
- 4.1.5 During the Championships, on days when tasks are set, sailplanes entered in the event may only be flown on Championship tasks, except that the Organisers, at their discretion, may permit a sailplane to be test flown.
- 4.1.6 The Organisers have the right to inspect a competing sailplane at any time during the Championship up to the Prize Giving.

4.2 MAXIMUM TAKE OFF MASS

- 4.2.1 The following Maximum Take Off Mass (MTOM) shall be enforced:

- a. Open Class – 850 kg.
 - (i) Changes to the wing panels and winglets shall be permitted during a Championship.
 - (ii) The mass limit and configuration changes shall remain in force until 30 September 2017.
- b. 18 M Class – 600 kg.
- c. 15 M and Standard Classes – 525 kg.
- d. Club Class – No ballast permitted and MTOM limited to the lowest of:
 1. Maximum certified weight of non-lifting parts plus weight of lifting parts (wings without any form of ballast); or
 2. Maximum certified Take Off Mass without water according to Type Certificate Data Sheet (TCDS).
- e. World Class – 300 kg.
- f. **20 metre Multi-seat Class** – 750 kg.
- g. Organisers may impose additional restrictions to the above maximum take-off masses to take into account any operational factors such as obstacles, airfield limits, runway and tow plane limitations, and prevailing weather.

MTOM according to TCDS for any specific glider must not be exceeded under any circumstances.

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- 4.2.2 Checking take off mass shall normally be completed before the sailplanes reach the grid. Adding mass, or changing configuration/crew member (Open Class), beyond the weighing point is prohibited.

The procedures for establishing the mass of the World Class glider are set out in Appendix 1 to this Annex. The Local Procedures shall give details of the procedures for checking the mass for all Classes.

4.3 CONTEST NUMBERS

- 4.3.1 The contest numbers, as validated by the Organisers, shall be displayed:

- a. On the underside of the right wing, approximately 2.5 m from the centreline of the sailplane with the top of the figures or letters towards the wing leading edge. The height of the letters or figures should be not less than approximately 80% of the wing chord.
- b. On both sides of the tail fin and/or rudder. These must be at least 30 cm high.
- c. On the glider trailer and crew car.

- 4.3.2 Contest numbers shall consist of not more than three letters or figures or a combination of letters and figures in a plain block style with a single colour that contrasts strongly with the sailplane's background colour.

- 4.3.3 The Organisers may require competitors to modify contest numbers that they deem to be similar, confusing or not complying with this paragraph 4.3. Competitors not complying with the Organiser's requirements shall be denied competition launches.

Contest numbers on the sailplane and vehicles not only assist the Organiser's and other competitors to identify the sailplane, but also enable the public and the media to identify the sailplane, the pilot, the crew and the country.

PART 5 GENERAL FLYING PROCEDURES

5.1 GENERAL Cloud flying and unauthorized aerobatics are prohibited. Any maneuvers hazardous to others in the air or on the ground shall be avoided and will be penalized and competitors shall avoid dropping water ballast in any manner likely to affect other competing sailplanes.

5.2 BRIEFING A briefing shall be held each morning, during the training and championship flying periods, at which full meteorological and operational information appropriate to the task of the day shall be given. This shall include units of measurement and times as appropriate if not already stated in the Local Procedures.

- a. All pilots shall attend briefing except that a competitor who is unable to attend, for reasons outside his control, shall be represented by his Team Captain.
- b. Flight and safety requirements given at briefing shall carry the status of Local Procedures.
- c. The time between the end of briefing and first launch must not be less than 30 minutes. For grid briefings involving task setting the corresponding minimum time between briefing and first launch is 15 minutes.

All flight and safety requirements shall be provided in writing for the Team Captains.

5.3 EXTERNAL AID TO COMPETITORS The following limitations are imposed so that the competition shall, as far as possible, be directly between the individual competitors, neither controlled nor helped by external aid.

5.3.1 Radio Transmitters and Transceivers Com. radios are for voice transmissions between team members and between them and the Organisers only.

- a. They may not be used to contact Air Traffic Services other than for obtaining permission from an airfield to land on it, unless the Organisers add specific requirements in the Local Procedures.
- b. Voice transmissions may only be made on frequencies prescribed by the Organisers.
- c. The Local Procedures shall designate common radio frequencies that shall always be used by competitors for flight safety.

A single frequency should be designated for the launch, start, finish, and landing. One frequency should be designated for each Class flying within a common task area. To improve safety, competitors should maintain a listening watch on the designated frequencies, especially during the launch, prior to starting, while finishing and landing, and when thermalling with other sailplanes.

5.3.2 Other Types of Aid Leading, guiding, or help in finding lift by any non-competing aircraft is prohibited. Competing sailplanes abandoning their task or still airborne after cancellation of their task must land or return to the competition site without delay and may not lead, guide or help in any way competitors in other classes still flying their assigned task.

5.4 CONTROL PROCEDURES

Flights shall be controlled by GNSS Flight Recorders (FR).

- a. All FR's approved by the IGC up to two months prior to the Opening Day shall be accepted. A valid calibration certificate must be provided for each FR.

The FAI SC Section 3 requires that Flight Recorders have been calibrated within the previous 24 months.

- b. Two FR's may be used. One being designated to the Organisers as the primary recorder and the other one as a back-up.
- c. FR's recording intervals shall be set to 10 sec or less. Non-compliance may be penalized.
- d. FR's shall be switched on for at least two minutes before first take off to establish an altitude baseline. To provide a positive record on the Flight Log from motor gliders having an MoP capable of being started in flight (including sustainer MoP) the engine must be started and run for a maximum of two minutes either before the launch, or within 5 minutes after release if the motor glider is launched by aerotow. This procedure needs to be followed only on the first competition day, provided that:

- 1) Flight Logs from both FR,s submitted on the first competition day show a positive record of the engine run.
- 2) Flight Logs on each subsequent competition day also show evidence that detection of MoP is enabled.

The FR's must remain switched on following an engine run on the ground.

The submitted Flight Log(s) must cover all flights made during the day.

- e. If both recorders fail and the Flight Record is interrupted for a period longer than one minute, then the glider shall be considered as having outlanded unless satisfactory evidence can be provided that the glider did not, during the interruption of the Flight Record, violate airspace or, in the case of a motor glider, use the MoP.
- f. Competitors must submit a Flight Log for evaluation on each Championship Day on which a launch was made, regardless of the outcome of the flight(s). Where possible the Flight Logs submitted must include Pilot ID and Contest Number in the IGC file.
- g. The Organisers will accept a Flight Log from the backup FR in the event that the primary FR fails to provide satisfactory evidence of correctly fulfilling the task as claimed by the pilot. Additionally, the Championship Director may require submission of Flight Logs from all FR's carried, regardless of equipment failures.
- h. The Organisers shall be informed of any change of equipment including the designation of the primary FR. Non-compliance may be penalized.

- 5.4.1 Penalties may be imposed by the Organisers for unauthorized interference with the GNSS equipment, data or internal program, or Tracking equipment.

PART 6 TASKS

6.1 TASK TYPES The following task types are available for use during the Championships. A single task type should not be used for more than 67% of the Championship Days in each class.

- **Racing Task**
- **Assigned Area Task**

6.2 TASK DEFINITIONS

6.2.1 Racing Task (RT) Speed over a course of two or more designated Turn Points, with a finish at the contest site. The task is specified by the designation of the Start, the Turn Points (in order), and the Finish.

Finishers receive “distance points” (the same number of distance points for each finisher) and “speed points”.

Non-finishers receive “distance points” only (the distance points are calculated relative to the maximum distance flown).

6.2.2 Assigned Area Task (AAT) Speed over a course through two or more designated Assigned Areas, with a finish at the contest site. The task is specified by the designation of the Start, the Assigned Areas (in order), the Finish, and the Minimum Task Time.

Finishers receive “distance points” (the same number of distance points for each finisher) and “speed points”. Speeds are calculated based on each finishers elapsed time or the Minimum Task Time, whichever is greater.

Non-finishers receive “distance points” only (the “distance points are calculated relative to the maximum distance flown).

6.3 EXPLANATIONS OF TASKS

6.3.1 Racing Task

- The Organisers shall set a Start, two or more Turn Points (7.5.1) to be achieved in order, and a Finish.
- The task is completed when the competitor makes a valid Start, achieves each Turn Point in the designated sequence, and makes a valid Finish. A Turn Point is achieved by entering that Turn Point’s Observation Zone.
- The Task Distance is the distance from the Start Point to the Finish Point via all assigned Turn Points, less the radius of the Start Ring (if used) and less the radius of the Finish Ring (if used).
- The score given to each competitor (in accordance with Part 8) shall take into account the Marking Distance and the Marking Time defined as follows:
 - For a completed task, the Marking Distance is the Task Distance.
 - If the competitor has outlanded on the last leg, the Marking Distance is the distance from the Start Point, less the radius of the Start Ring (if

used), through each Turn Point to the Finish point, less the distance from the Outlanding Position to the Finish Point. If the achieved distance on the last leg is less than zero, it shall be taken as zero.

- (iii) If the competitor has outlanded on any other leg, the Marking Distance is the distance from the Start Point, less the radius of the Start Ring (if used), through each Turn Point achieved plus the distance achieved on the uncompleted leg. The achieved distance of the uncompleted leg is the length of that leg less the distance between the Outlanding Position and the next Turn Point. If the achieved distance of the uncompleted leg is less than zero, it shall be taken as zero.
- (iv) For finishers, the Marking Time is the time elapsed between the last recorded valid Start Time and the Finish Time. For non-finishers the Marking Time is undefined.
- (v) For finishers, the Marking Speed is the Marking Distance divided by the Marking Time. For non-finishers the Marking Speed is zero.

6.3.2 **Assigned Area Task**

- a. The Organisers shall designate a Start, two or more Assigned Areas (7.5.2) to be achieved in order, a Finish and a Minimum Task Time.

The following distances should be included in the task information for pilots:

- *The nominal Task Distance, assessed via the center of each Assigned Area, and*
- *The minimum and maximum Task Distance achievable via the Assigned Areas.*

The Assigned Areas should be large enough to allow the pilots to adjust the length of their flight in order to avoid finishing before the Minimum Task Time if their speed is higher than expected.

- b. The task is completed when the Competitor makes a valid Start, passes through each Assigned Area, in the sequence designated by the Organisers, and makes a valid Finish.
- c. Credited Fix For each Assigned Area, a single fix will be determined which will be taken as the end of the previous leg and the beginning of the next leg. The scorer will choose the set of Credited Fixes that results in the maximum possible credited distance.
- d. The score given to each competitor (in accordance with Part 8) shall take into account the Marking Distance and the Marking Time defined as follows:
- (i) For a completed task, the Marking Distance is the distance from the Start Point to the Finish Point via all Credited Fixes, less the radius of the Start Ring (if used) and less the radius of the Finish Ring (if used).
 - (ii) If the competitor has outlanded on the last leg, the Marking Distance is the distance from the Start Point, less the radius of the Start Ring (if used), through each Credited Fix, to the Finish Point, less the distance from the Outlanding Position to the Finish Point. If the achieved distance on the last leg is less than zero, it shall be taken as zero.
 - (iii) If the competitor has outlanded on any other leg, the Marking Distance is the distance from the Start Point, less the radius of the Start Ring (if used), through each Credited Fix, to the point of the next Assigned Area which is nearest to the Outlanding Position, less the distance from the Outlanding Position to this nearest point. If the achieved distance of the uncompleted leg is less than zero, it shall be taken as zero.
 - (iv) For finishers, the Marking Time is either the time elapsed between the last recorded valid Start Time and the Finish Time, or The Minimum Task time, whichever is greater. For non-finishers the Marking Time is undefined.
 - (v) For finishers the Marking Speed is equal to the Marking Distance divided by the Marking Time. For non-finishers the Marking Speed is zero.

PART 7 COMPETITION PROCEDURES

7.1 THE LAUNCH GRID The classes shall be launched separately. The complete grid order shall be drawn by lot before the first flying day.

- a. The grid order of each class shall rotate after each Championship Day for that class, as follows:
 - i. a group of approximately 2/7 of the sailplanes shall be moved from back to front or:
 - ii. one or more rows of sailplanes shall be moved from back to front with the goal of moving approximately 2/7 of the total. Individual position in each row is irrelevant.
- b. The grid order shall be published in the early morning. Sailplanes must be on the grid at the time specified by the Organisers.
- c. "Grid Time" is the time at which all sailplanes in all classes must be in their proper positions for launching. The Organisers shall specify the Grid Time at Briefing and publish it on the task sheets.
- d. Only the sailplanes on the grid at Grid Time shall be considered in any changes to the opening or closing times of the start gate.
- e. The Organisers shall state in the Local Procedures whether water ballast may be discharged after mandatory weight checks, and any required control of the discharge.

7.2 LAUNCHING

7.2.1 Definitions

- a. The Contest Site Boundary defines the geographical area, or areas, near the departure airfield within which a competitor may land—and be entitled to another launch.
- b. The Release Area is defined as a geographical area within which the glider must be released from the tow plane or the MoP must be shut down for a motor glider.

7.2.2 Contest Site Boundaries Contest site boundaries shall be designated by the Organisers and described in the Local Procedures.

- a. The Organisers shall designate a re-landing area which shall be shown at briefing.
- b. A competitor landing outside the contest site boundaries after a regular launch shall not have any further competition launch on that day.

7.2.3 Launching Period The launching period shall be announced at briefing and given on the task sheet. The end of the launching period shall be before finishers are expected. If the Organisers delay the start of launching, other relevant times shall be delayed accordingly or the day cancelled.

The launch should be organised so that the time to launch the class is as short as possible. Competitors should not be refused a launch if they are ready to launch prior to the end of the launch period.

7.2.4 **Suspending Launching**

Once launching has started, the Organisers may suspend towing for reasons safety or fairness. If the suspension is sufficiently long to give an unfair advantage to those already airborne, the Championship Director shall either order the landing and regriding of the airborne competitors or cancel the task.

7.2.5 **Delaying or Canceling the Task**

The Organisers may delay or cancel the opening of the start gate if they consider that the conditions are not suitable for the task to be flown safely or fairly.

7.3 **LAUNCHING PROCEDURES**

7.3.1 **Number of Launches** Each sailplane is permitted a maximum of three launches per day.

- a. If, before the first launch in the class, a sailplane cannot be launched due to a fault by the Organisers, the launch in that class shall not be started.
- b. If a pilot postpones his first launch on his own initiative, or he is not ready when his turn comes up, he shall lose that launch (i.e. it will count as one of the three launches allowed).
- c. A competitor requiring a second or third launch shall be launched as soon as possible after a launch has been offered to the last sailplane in the class that is currently being launched.
- d. A failed take-off or a failure of the towplane resulting in jettisoning or premature release of a sailplane shall count as an official launch if the pilot elects to stay airborne. It shall not count as an official launch if the pilot lands immediately, even if outside the contest site boundaries, and reports to the launch point without delay.

7.3.2 **Motor Gliders** Motor gliders may self launch or launch by aero tow. The Organisers shall describe the launch procedures in the Local Procedures.

- a. If they self launch their MoP must be shut down in the designated release area at or below the maximum release altitude. Refer to 5.4d.
- b. If they require a second launch for a start, they must land prior to taking the new launch, otherwise they will be scored to the position at which they started their MoP.
- c. A procedure that allows a new Start to be made following the use of a MoP without an intervening landing may be used if:
 - i The procedure is described in the Local Procedures.
 - ii All gliders in the class are equipped with a MoP at the close of registration for the Championships.

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- 7.3.3 **Release Areas** Release areas and towing patterns shall be described in the Local Procedures. The release areas shall be clearly separated and positioned in a way that makes it possible to establish safe and efficient towing patterns.

The standard release height or altitude shall be given in the Local Procedures and may be modified at Briefing.

- a. Each release area **should normally** be used by one class at a time.
- b. Pilots shall not release until after the tow pilot has rocked the wings of the towplane. Pull-ups before releasing are prohibited.
- c. The Organisers shall ensure that the release areas and the release altitudes for launching are selected to enable competitors to land safely on the contest site for a relaunch, after allowing adequate time and altitude to search for lift after release.

The Organisers may establish areas around the contest site within which continuous circling is prohibited or is permitted in one direction only. The rules regarding circling in the vicinity of the contest site must be stated in the Local Procedures.

7.4 STARTING

7.4.1 **Definitions**

Start Point - is the midpoint of the Start Line or center of the Start Ring.

Start Time - is the time the competitor crosses the Start Line or leaves the Start Ring, interpolated to the nearest second.

- 7.4.2 **Start Options** The Organisers shall select which start option will be used during the contest. The Start Option selected for the Championship shall be stated in the Local Procedures. The options are:

- a. **Start Line** A straight line, of defined length, perpendicular to the course to the first Turn Point, or the center of first Assigned Area.
- b. **Start Ring** A circle, centered on a Start Point, and of sufficient radius to enclose the contest site and all release areas.

7.4.3 **Validity of Starts**

- a. A Start is valid if the Flight Log shows that the glider crossed the Start Line in the direction specified on the task sheet or leaves the Start Ring.
- b. If there is no proof that the competitor had a valid start after the opening of the start in his class, the start may nevertheless be validated if the Flight Log shows a valid fix within 500 m of the Start Line or the Start Ring after the opening of the start. The start position and the start time will be derived from that fix, but a penalty shall be applied. If no such event is detected the competitor shall be deemed not to have a valid start.

- 7.4.4 **Starting Procedures** The start shall normally be opened 30 minutes after a launch has been offered to the last sailplane in the class that is currently being launched. This time period may be reduced to 20 minutes if the distance from the center of the release area to the Start Point or Start Ring is less than 15 km.

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- a. The time of opening of the start shall be announced by radio. The radio procedures for announcing the start shall be detailed in the Local Procedures.
 - b. A maximum altitude, expressed in MSL (QNH), may be imposed prior to the opening of the start and shall be announced by the Organisers. The Organisers must describe the altitude procedures before start in the Local Procedures. The altitude(s) shall be specified at the briefing. At the time of opening the start the Organisers may:
 - (i) Keep the altitude limit unchanged; or,
 - (ii) Raise the altitude limit to an altitude at least 300 m below the main cloud base; or,
 - (iii) Delete the altitude limit.

7.4.5 **New Starts** A new valid start invalidates all previous performances of the day. Crossing a start line after passing through the observation zone of a Turn Point or an Assigned Area is not deemed to be a start unless the crossing time correlates with the pilot nominated start time (see 7.4.6)

7.4.6 **Communication of Start Times** Pilots shall communicate their start times to the Organisers within 30 minutes of their last valid start to an accuracy of two minutes and the Organisers shall publish starting times as quickly as possible. These times shall be used for display of performance and for preliminary results. Penalties may be given for non-compliance or incorrect notification.

7.5 TURN POINTS AND ASSIGNED AREAS

7.5.1 A Turn Point is a way point between two legs of a flight. The Observation Zone of a Turn Point is the airspace in a vertical cylinder of 500 m radius centered on a Turn Point.

7.5.2 An Assigned Area shall be formed by:

- a. A circle of a given radius, centered on a Turn Point, or
- b. A geometric figure on the ground bounded by two lines-of-constant-bearing from a Turn Point, a maximum distance from that point, and, optionally, a minimum distance from that point.

The Observation Zone of an Assigned Area is the airspace enclosed by the circle or geometric figure and extending vertically without limit.

7.5.3 Consecutive Assigned Areas must be separated by at least 1 km.

Organisers should avoid setting Turn Points or Assigned Areas too close to Start Points or Finish Points.

7.5.4 A competitor is credited with a valid achievement of a Turn Point or Assigned Area if the Flight Log shows a valid fix within the Observation Zone, or if a straight line between two consecutive valid fixes intersects the Observation Zone.

7.5.5 If a competitor fails to enter the Observation Zone, but the Flight Log shows a valid fix within 500 m of the Observation Zone then credit for achieving the Turn Point or Assigned Area will be given, and a penalty will be applied

7.6 OUTLANDING

- 7.6.1 **Real Outlandings** The position and time of a real outlanding shall be determined from the Flight Log as the fix showing the glider coming to rest, the use of the MoP, or the end of recording due to equipment failure, whichever occurs first.
- a. When landing out the competitors shall comply with the instructions given in the Local Procedures. The Organisers shall be informed of an outlanding without delay. Non-compliance shall be penalized.
 - b. The Organisers shall assist competitors and crews in every possible way to locate outlanded sailplanes.
 - c. The starting of a motor glider's MoP, except as allowed by 5.4d, or a complete failure of the GNSS flight record (see 5.4e) is regarded as a real outlanding.
- 7.6.2 **Virtual Outlandings** For incomplete flights, the fix that represents the point of best performance will be taken as the outlanding position and time, regardless of the real landing position..
- 7.6.3 **Aero Tow Retrieves** The Local Procedures shall state if aero tow retrieves are permitted, and in what way they will be handled.

7.7 FINISHING

7.7.1 **Definitions**

Finish Point - is the midpoint of the Finish Line or center of the Finish Ring.

Finish Time - is the time the sailplane first crosses the Finish Line or enters the Finish Ring, interpolated to the nearest second.

- 7.7.2 **Finish Options** The Organisers shall select which finish option will be used during the contest. The Finish option selected for the Championship shall be stated in the Local Procedures. The options are:

- a. **Finish Line** A straight line, of defined length, at the elevation of the contest site, clearly identifiable on the ground. The finish line shall be so placed that sailplanes can safely land beyond it. A minimum height (AGL) should be imposed for crossing the line. Competitors crossing the finish line below the minimum height, except straight in landings, shall be penalized.
- b. **Finish Ring** A circle of specified radius (minimum 3 km) around the Finish Point encompassing the contest site and the landing circuits. A minimum altitude (MSL) shall be imposed for crossing the ring. Competitors crossing the finish ring below the minimum altitude, shall be penalized.

Option b. Finish Ring is to be regarded as the normal finish procedure as it allows each pilot to slow down and concentrate on the landing procedures and other sailplanes prior to landing.

Organisers are encouraged to use a Final Turn Point to align the sailplanes with the desired direction of landing. If possible, separate Final Turn Points should be used for each class.

7.7.3 **Validity of Finishes**

- a. A Finish is valid if the Flight Log shows that the glider crossed the Finish Line in the direction specified on the task sheet or enters the Finish Ring.
- b. A sailplane landing within the contest site boundary without crossing the Finish Line shall be deemed to have finished and shall be given as Finish Time the time at which the glider stopped moving plus five minutes.
- c. A sailplane entering the Finish Ring but landing outside the contest site boundary shall be deemed to have finished but 5 minutes will be added to the Finish Time.

7.7.4 **Finish Procedures**

- a. Competitors shall announce their arrival on the finish line frequency by giving their contest number and the distance to go. The acceptance reply will be the contest number. The Local Procedures shall state the procedure in detail.
- b. The finish officials shall repeatedly announce strength and direction of the wind, together with other significant meteorological data at the contest site.
- c. The finish line or finish ring shall be closed at the end of legal daylight, or when all competitors are accounted for, or at a set time announced at Briefing. Competitors still on task after close of the finish line or finish ring shall be considered as outlanded at the last valid GNSS fix immediately preceding the closing time.

7.8 **LANDING**

- 7.8.1 The Local Procedures shall define the landing procedures, and give the radio frequency for landing, which preferably should be the same as the finish line frequency.
- 7.8.2 Hazardous maneuvers when approaching and after crossing of the finish line shall be penalized. Having crossed the finish line or finish ring the competitors shall land without delay.
- 7.8.3 Landing later than the end of legal daylight is not permitted. Non-compliance shall be penalized.

- 7.9 **FLIGHT DOCUMENTATION** All flight documentation, including Flight Logs and outlanding certificates shall be handed in after landing within a period which shall be stated in the Local Procedures. The Organisers may also require back-up documentation within a period stated in the Local Procedures. Non-compliance may be penalised.

- 7.9.1 Downloading of the Flight Logs from the Flight Recorder can be done by the competitor without the supervision of the organizers. These files can be handed in by any data device or transmission method, defined in the Local Procedures. All files are subject to validation. The Organizers may inspect Flight Recorders and Flight Recorder installations at any time, and may require a supervised data transfer from the Flight Recorder before accepting a Flight Log. Competitors shall retain daily Flight Logs in their Flight Recorders until that day's scores are published.

PART 8 SCORING AND PENALTIES

8.1 SCORING SYSTEM The Championships shall be scored according to the **1000-Points Scoring System**: The Score is expressed in points (the maximum available Score for the day is 1000 points). Each class shall be scored separately.

8.1.1 Team Cup: This may be used concurrently for a secondary ranking, but not to select the individual Champions. Organisers shall state in the Local Procedures if the Team Cup will be awarded.

Team Cup has been used at previous Championships under the labels “World Team Cup”, “World Soaring Cup” or “European Soaring Cup”. The actual Championships remain fundamentally based on an individual ranking.

8.2 COMMON RULES

8.2.1 Championship Day In order that a Day may be counted as a Championship Day:

- a. For each class, a launch opportunity shall have been given to each competitor in time for the competitor to carry out the task of the Day in question, and
- b. For each class, more than 25% of the competitors, who have had a competition launch on that Day, fly a Marking Distance of at least 100 km (after any handicapping is applied).

8.2.2 Daily Scores Each competitor shall be given a daily Score based on his performance on each Championship Day. The Score given to each competitor shall be rounded to the nearest whole number, the value of 0.5 being rounded up.

8.2.3 Finisher A competitor is deemed to be a “finisher” if he crosses the finish line or enters the finish ring after completing the task.

8.2.4 Handicaps Handicapping shall be used in the Club Class and may be used in the **20 metre Multi-seat Class**. Organisers shall state in the Local Procedures if Handicapping is to be used in the **20 metre Multi-seat Class**.

- a. Handicaps shall be taken from the valid IGC Handicap list or any other list approved by the IGC Bureau for the specific Championships.
- b. The Organisers shall publish a list of all competitors with their handicaps before the beginning of the Championships.
- c. Handicaps shall be applied according to 8.3.2.

8.2.5 Penalties Flights that have been disqualified shall be given a zero Score for the Day, but shall be counted in the scoring formula. Any penalties shall be deducted from the competitor's Score after it has been calculated, according to this Section.

If the penalty reduces a competitor's raw performance for the day (eg: outlanded at the point of airspace entry) the penalty must be applied before the calculation of the Score. The appropriate penalty should be applied each time an infringement occurs (eg exceeding the maximum permitted altitude is penalized for each infringement).

If the Day score after deduction of any penalties is less than zero, it shall be taken as zero, unless 8.6.4 applies.

- 8.2.6 **Cumulative Scores** Cumulative and Final Scores shall be calculated by adding the points obtained each Day on the nominated scoring system.

8.3 DEFINITIONS OF SCORING PARAMETERS

In the following tables the abbreviations RT and AAT are used for Racing Task and Assigned Area Task, respectively.

8.3.1 **Championship Days**

The parameters used for scoring each Championship Day are:

Dt	Task Distance. (Used in scoring RT only and defined in 6.3.1c)
Td	Minimum Task Time. (For the AAT, Td is specified at Briefing; for the RT, Td = 0).
Dm	Minimum Handicapped Distance to validate the Day. (Dm = 100 km).
n1	Number of competitors who achieve a Handicapped Distance (Dh) of at least Dm
n2	Number of finishers exceeding 2/3 of best Handicapped Speed (Vo).
N	Number of competitors having had a competition launch that Day
Ho	Lowest Handicap (H) of all competitors
Do	Highest Handicapped Distance (Dh) of the Day
Vo	Highest finisher's Handicapped Speed (Vh) of the Day
To	Marking Time (T) of the finisher whose Vh = Vo. In case of a tie, lowest T applies.
Pm	Maximum available Score for the Day, before the Day Factor is applied.
Pdm	Maximum available Distance Points for the Day
Pvm	Maximum available Speed Points for the Day
F	Day Factor
Day	If the Day is not a Championship Day (see 8.2.1) then all Scores = 0, subject to the application of penalties defined in 8.2.5.

8.3.2 Competitors

The parameters used for scoring each Competitor are:

D	Competitor's Marking Distance. (Defined in 6.3.1 for RT and in 6.3.2 for AAT)
H	Competitor's Handicap, if handicapping is being used; otherwise H=1
Dh	Competitor's Handicapped Distance. ($D_h = D \times H_o / H$)
T	Finisher's Marking Time. (Defined in 6.3.1 for RT and in 6.3.2 for AAT)
Pd	Competitor's Distance Points
V	Finisher's Marking Speed. ($V = D / T$)
Vh	Finisher's Handicapped Speed. ($V_h = D / T \times H_o / H$)
Pv	Finisher's Speed points
S	Competitor's Score for the Day expressed in points

Note for scorers:

Before closure of the finish line, in order to keep preliminary results representative, it shall be presumed that competitors not accounted for are finishers, with $D_h \geq D_m$ and $V_h = V_o$, but they shall not appear in the ranking.

8.4 CALCULATION OF SCORES

8.4.1 Racing Task

a. Day Parameters:

P_m = the least of either: 1000 or: $(5 \times D_o) - 250$ or: $(400 \times T_o) - 200$

F = the least of 1 and $(1.25 \times n_1 / N)$

$P_{vm} = 2/3 (n_2 / N) \times P_m$

$P_{dm} = P_m - P_{vm}$

The maximum points for the Day will be less than 1000 points if the Task Distance is less than 250 km or the winner's time is less than 3 hours, with the consequence that scoring gaps are limited to 4 points per Kilometer and 11 points per minute.

If there are no finishers, then P_m = the least of 1000 or: $(5 \times D_o) - 250$

b. Competitor's Score:

(i) For any finisher:

$P_v = P_{vm} \times (V_h - 2/3 V_o) / (1/3 V_o)$

$P_d = P_{dm}$

Except: If $V_h < 2/3 V_o$ then $P_v = 0$

(ii) For any non-finisher:

$P_v = 0$

$P_d = P_{dm} \times (D_h / D_o)$

(iii) **S = F x (P_v + P_d)**

If almost everyone finishes, a pilot with 2/3 of the winner's speed will get about 1/3 of the winner's score. All non-finishers will get fewer points, proportional to their distance.

8.4.2 **Assigned Area Task**

a. **Day Parameters:**

P_m = the least of either: 1000 or: $(5 \times D_o) - 250$ or: $(400 \times T_o) - 200$

F = the least of 1 and $(1.25 \times n_1 / N)$

$P_{vm} = 2/3 (n_2 / N) \times P_m$

$P_{dm} = P_m - P_{vm}$

The maximum points for the Day will be less than 1000 points if the Task Distance is less than 250 km or the Task Time is less than 3 hours, with the consequence that scoring gaps are limited to 4 points per Kilometer and 11 points per minute.

If there are no finishers, then P_m = the least of 1000 or: $(5 \times D_o) - 250$

b. **Competitor's Score:**

(i) For any finisher:

$P_v = P_{vm} \times (V_h - 2/3 V_o) / (1/3 V_o)$

$P_d = P_{dm}$

Except: If $V_h < 2/3 V_o$ then $P_v = 0$

(ii) For any non-finisher:

$P_v = 0$

$P_d = P_{dm} \times (D_h / D_o)$

(iii) **$S = F \times (P_v + P_d)$**

If almost everyone finishes, a pilot with 2/3 of the winner's speed will get about 1/3 of the winner's score. All non-finishers will get fewer points, proportional to their distance.

8.5 TEAM CUP

- 8.5.1 For the purpose of the Team Cup, a team is considered to consist of all the competitors entered in the Championships by a single NAC, with a minimum of two sailplanes entered.
- 8.5.2 A competitor's Relative Score is defined as the competitor's Score, divided by the Day winner's Score, multiplied by 1000.
- 8.5.3 The team's daily score is calculated by dividing the sum of the Relative Scores of all team competitors by the number of team competitors launched that day.

8.6 PENALTIES AND DISQUALIFICATION

- 8.6.1 The Championship Director shall impose penalties for infringement of, or non-compliance with, any Rule or Local Procedure. The severity of the penalties ranges from a minimum of a warning to disqualification as appropriate for the offence. The penalties imposed by the Championship Director shall be in accordance with the appropriate list of penalties stated in Section 8.7 below:
- 8.6.2 Offences not covered by this list may be penalized at the Championship Director's discretion in accordance with the provisions of the Sporting Code, General Section 5.2.
- 8.6.3 Penalties shall be listed on the Score sheet of the Day on which the penalty was given.
- 8.6.4 If a penalty is imposed on a Day which does not meet the requirements of a Championship Day (8.2.1), or non-competition Days, or during the practice week, then the penalty shall be added to the competitor's cumulative Score.

This rule is intended to apply to penalties that are awarded for disciplinary or safety reasons and not penalties that are awarded for a technical failure.

- 8.6.5 A competitor who has been disqualified shall surrender his Sporting License according to the Sporting Code, General Section 5.3.

8.7 LIST OF APPROVED PENALTIES

Type of Offence	First Offence	Subsequent Offence	Max Penalty
Overweight/Underweight of W kilograms	W x 2 pts	n x W x 2 pts	n x W x 2 pts
Wrong, late or missing information			
Documentation not complete	No launch	No launch	No launch
Configuration check not complete	No launch	No launch	No launch
Notification of start time > 30 min after start	Warning	10 pts	25 pts
Declared start time differing from the actual time	Warning	10 pts	25 pts
Changing FR without advising the Organisers	10 pts	20 pts	25 pts
Incorrect FR configuration (Time interval between fixes > 10 sec)	Warning	10 pts	25 pts
Late delivery of documentation (FR, outlanding certificate) according to time limit in LP.	Warning	10 pts	25 pts
Late delivery of backup documentation > 60 min.	Warning	10 pts	25 pts
Incomplete outlanding report	Warning	10 pts	25 pts
Incorrect Start			
Between 0 and 0.50 Km from the start line or Ring	50 pts	50pts	50pts
More than 0.50 km from the start line or Ring	No valid start	No valid start	No valid start
Incorrect claiming of Turn Points or Areas			
Less than 0.50 km from the boundary of the Turn Point or Area	50 pts	50 pts	50 pts
More than 0.50 km from the boundary of the Turn Point or Area	No Control	No Control	No Control
Dangerous or hazardous flying			
Cloud flying or unauthorized aerobatics, para 5.1	100 pts	Day Disqual.	Disqualification
Circling in wrong direction in the local zone	Warning	(n-1) x 25 pts	Disqualification
Circling in the start zone	Warning	(n-1) x 25 pts	Disqualification
Towing: early or late release	Warning	(n-1) x 25 pts	Disqualification
Towing: pull-up before release	Warning	Day Disqual.	Disqualification
Finish: crossing below height or altitude limit	Warning	(n-1) x 25 pts	Disqualification
Finish: hazardous maneuver	Warning	(n-1) x 25 pts	Disqualification
Landing: incorrect landing lane	Warning	(n-1) x 25 pts	Disqualification
Flying above the absolute altitude limit defined at briefing (Sporting Limit) if excess altitude < 100m	1 pt/m	n pts/m.	Day Disqual.
Flying above the absolute altitude limit defined at briefing (Sporting Limit) if excess altitude > 100m	Outlanded at the point of airspace entry	Day Disqual.	Disqualification
Starting above the altitude limit	1 pts/m	n pts/m	Day Disqual.
Entering forbidden airspace vertically or horizontally	Outlanded at the point of airspace entry	Day Disqual.	Disqualification
Landing after legal daylight	10 pts/min	Day Disqual.	Disqualification
Cheating or falsifying documents			
Falsifying documents	Disqualification	Disqualification	Disqualification
Attempt to obtain external help for finding lift from non competing glider or airplane	Day Disqual.	Disqualification	Disqualification
Other Violations			
Flying under influence of alcohol	Day Disqual.	Disqualification	Disqualification
Late start of MOP after release from tow	Warning	(n-1) x 25 pts	Disqualification
Positive doping control	See FAI policy	See FAI policy	
Wing Span Penalty in 20m-2-seater, 18m, 15m, STD Class, World Class & Club Class (#)	1 pt/cm	1 pt/cm	1 pt/cm

(#) If the span of a glider in the 20m-2-seater, 18m, 15 m, Standard, World or Club Class exceeds the wingspan definition of the relevant class, a penalty of a fixed number of points shall be subtracted from the daily score. The number of daily penalty points is obtained by subtracting 0.3 cm from the measured overspan, then rounding this number to the nearest whole cm.

Examples:

- (i) A 2.7 cm overspan will give daily penalty points of $2.7 - 0.3 = 2.4$ which is then rounded down to 2 points.
- (ii) A 3.9 cm overspan will give daily penalty points of $3.9 - 0.3 = 3.6$ which is then rounded up to 4 points.

PART 9 COMPLAINTS AND PROTESTS

9.1 COMPLAINTS

- 9.1.1 The purpose of a complaint is to obtain a correction without the need to make a formal protest.
- 9.1.2 Prior to the Championships a complaint may be made by an NAC. Such a complaint may concern only failure of the organizing NAC to comply with the regulations for entry or the eligibility or refusal of an entry. A copy of such a complaint shall be sent immediately to the Secretary General of the FAI, who shall keep the President of the IGC informed.
- 9.1.3 At any time during the Championships a complaint may be made through the Team Captain to the Championship Director or his designated official. Such complaint shall be dealt with expeditiously.
- 9.1.4 If a competitor has no separate Team Captain, he may lodge the complaint himself.

9.2 PROTESTS

- 9.2.1 Protests may not be filed against the Championship's Rules.
- 9.2.2 A protest against a decision on a complaint as described above in 9.1.2 must have been made prior to the start of the Opening Ceremony of the Championships.
- 9.2.3. The amount of the Protest Fee shall be stated in the Local Procedures. **Minimum amount is € 250.** The protest fee shall be returned if the protest is upheld, or is withdrawn prior to the hearing by the Jury.
- 9.2.4 When dissatisfied with a penalty or the decision on a complaint made during the Championships a competitor has the right of protest.
- a. Such a protest shall be made in writing, in English, and shall contain the following elements:
 - (i) It shall refer to the decision against which the protest is lodged,
 - (ii) It shall include reasons for the protest, and
 - (iii) It shall state the remedy sought by the protest
 - b. A Protest shall be handed to the Championship Director or his designated official, by the Team Captain, together with the protest fee within 14 hours of the publication of the ruling or decision against which the protest is made. **The protest time on the last competition day is two hours and, at that time the protest time for any previous day will also expire.**
 - c. If a competitor has no separate Team Captain, he may lodge the protest himself.

9.3 TREATMENT OF PROTESTS The Championship Director shall deliver a protest to the Jury President without delay.

- a. The President of the Jury shall call a meeting of the International Jury within 24 hours (as soon as possible on the last day) of receiving the protest from the Championship Director.
- b. The Jury shall hear both sides on the matter of any protest, applying correctly the relevant FAI Regulations and the Rules for the Championships. In considering the protest the Jury shall be provided with access to all persons and information to assist in their considerations.
- c. The Championship Director is bound by the decision of the International Jury.

9.4 APPEALS An NAC may appeal to FAI against a decision of the Jury in accordance with the provisions of FAI Sporting Code, General Section, Chapter 9.

PART 10 RESULTS AND PRIZEGIVING

10.1 RESULTS

10.1.1 Definition of status of results:

- a. Performance: The competitors' results expressed in distance, speed, or time. They may be displayed on screens only;
- b. Preliminary Results: Performances converted to points, before any verification. They may be displayed on screens only;
- c. Unofficial Results: Preliminary results after verification of flight records from all competitors and including penalties;
- d. Final Results: Unofficial results after expiry of the protest time and after all protests have been dealt with.

10.1.2 All Unofficial and Final Results shall be published with minimum delay clearly indicating the status of the result and the time of publication and with the pilots ranked by their performance for the day. Unofficial Results shall include the expiry time for protests and Unofficial Results and Final Results shall be signed by the Championship Director or his nominated Deputy.

Performance and Preliminary Results should be displayed as soon as possible to enhance media, public and competitor awareness of the championship results.

10.1.3 The cumulative scores of the Championships shall be final only after the Jury has ceased its functions. They shall be published before the Prizegiving is held.

10.2 PRIZEGIVING

10.2.1 At the Closing Ceremony the flags of the countries of the competitors placed first (the Champions), second and third should be flown and the national anthems of the countries of the Champions should be played. The Local Procedures shall state what flags, discs or tapes should be brought by the competitors.

10.2.2 The FAI will award a Gold, Silver and Bronze medal in each Championship class to the competitors placed respectively first, second and third.

- a. Up to 10 Diplomas will be awarded to the first third of the competitors in each class.
- b. Awarded Challenge Cups shall be held by the winners until they are put back into competition for the following Championships.
- c. The Organisers shall award prizes to at least the top 25% of competitors in each class, and give commemorative medals or badges to all competitors, their assistants, and officials.
- d. Small prizes may be given to the daily winners.

10.2.3 There shall only be one champion. If two or more pilots have the same number of points after the final competition day, the sequence between these pilots shall be decided by the daily results. The Champion shall be the pilot who has the most daily wins. If a tie still exists, the Champion shall be the pilot with the most second placings, and so on.

PART 11 LOCAL PROCEDURES

Organisers of Championships shall use these guidelines for their Local Procedures. Each Local Procedure is identified by the appropriate Annex A paragraph number.

*The details in **Part A CHAMPIONSHIP DETAILS** must be completed.*

The Local Procedures must be submitted to the Chief Steward (with a copy to the Annex A Committee) as a stand-alone document for approval before being published. To enable this approval process the Local Procedures must be submitted to the Chief Steward at least six months before the opening ceremony.

The Local Procedures should not be published in any public place, including on a website, before they are approved. This is to avoid confusion arising should changes be required as part of the approval process.

The IGC shall approve the appointment of the Jury and Stewards.

After approval the Local Procedures shall be published as a stand-alone document no later than 90 days before the first scheduled day of competition.

A CHAMPIONSHIP DETAILS

Name of the Event

Location of the Event

Time Schedule

Preliminary entries due

Final entries due 3.4.1

Deadline for approval of new GNSS FRs 5.4a

Airfield closed for training flights

Registration period 3.5.1/ 3.5.2

Technical inspection period (acceptance check) 4.1.2 b

Official training 1.2.3

Configuration change closes 4.1.2b

First official Team Captains briefing

Opening Ceremony 1.2.3

Contest flying 1.2.3

Farewell party 1.2.3

Closing Ceremony and Prizegiving 1.2.3

Competition Officials

Director of the Championships

Deputy Director

Task Setter

Chief Scorer

International Jury

President
Members

Stewards

Chief Steward
Steward(s)

Addresses for Correspondence and Entries

B GENERAL

- 1.1 Additional objectives of the Championships
- 1.3.1 Championship classes
- 1.4.1 *note* Additional safety rules
- 1.4.4.2 Control Point file format

C NATIONAL TEAMS

- 3.4.2 Entry fee
- 3.4.3 a. Number of allowable entries per NAC
- 3.4.3 c. Total number of allowable entries and number of entries per class
- 3.5.4 a. Additional documentation required
- 3.5.4 b. Documents required to be carried on board the sailplane
- 3.6.1 Third party insurance cover

D TECHNICAL REQUIREMENTS

- 4.1.1 *note* Mandatory additional equipment
- 4.1.2 b. Instruments that must be removed from the sailplane
- 4.1.2 *note* High visibility marking requirements
- 4.1.2 *note* Carriage of GNSS data transmitters for public displays
- 4.2.2 *note* Procedures for checking aircraft mass

E GENERAL FLYING PROCEDURES

- 5.2 Units of measurement
- 5.3.1 a. Radio communication required for contact with Air Traffic Services
- 5.3.1 c. Radio frequencies to be used during the Championships

G COMPETITION PROCEDURES

- 7.1 e. Requirements for discharging water ballast on the grid
- 7.2.2 Contest site boundaries
- 7.3.2 Launch procedures for motor gliders
- 7.3.2c Inflight procedures for motor gliders
- 7.3.3 Release Areas and Release Heights
- 7.3.3 *note* Areas where continuous circling is prohibited or permitted in one direction only
- 7.4.2 Start Option to be used and Start geometry
- 7.4.3 a. Radio procedures for announcing the start
- 7.4.3 b. Altitude procedures for the starts
- 7.6.1a Instructions pertaining to real outlandings
- 7.6.3 Provision of and requirements for aero tow retrieves
- 7.7.1 Finish Option to be used and Finish Geometry
- 7.7.1 a. Minimum height for the finish line or
- 7.7.1 b. Minimum altitude for the finish ring
- 7.7.3 a. Finishing procedures
- 7.8.1 Landing procedures
- 7.9 Handling of flight documentation

H SCORING

- 8.1.1 Awarding of Team Cup
- 8.2.4 Use of Handicaps in the 20 metre Multi-seat Class

I PROTESTS

- 9.2.3 The amount of the protest fee

J PRIZEGIVING

- 10.2.1 Requirements for flags, discs and tapes

CONFIGURATION CHECKS FOR THE PW5

One of the objectives of the World Class and the World Class glider is to give equal chances to the pilots participating in a competition.

The World Class glider is actually (January 2002) the PW-5, designed and manufactured in Poland. It was selected by FAI-IGC on March 1994 after the results of a design & prototype competition taking place at Oerlinghausen, Germany, September/October 1992.

The PW-5 will maintain its status of World Class glider till March 2009, i.e., for 15 years since type certification in March 1994, unless before then one or more of the conditions of the Agreement between FAI and the Warsaw University of Technology (September 1997) is no longer complied with.

As requested by FAI-IGC the PW-5 is fully certificated by the Polish airworthiness authority on the basis of the JAR-22 requirements, category U, cloud flying and limited aerobatics allowed.

The Flight Manual limits are:

Maximum mass:	300 kg
Maximum empty mass:	190 kg
Maximum cockpit load:	110 kg
Minimum pilot + parachute mass:	55 kg

A general description of the aircraft, including a 3-view drawing, is given in the Flight Manual, pages 1.3 and 1.4.

The PW-5 is actually (January 2002) produced by two manufacturers, both in Poland: PZL Swidnik (since 1994) and PZL Bielsko 1 (since 2000). The two versions have a few different features and accessories but, as specified by FAI, the external geometry and the mass of the gliders is the same.

TECHNICAL CHECKS

In order to ensure that competing gliders in the same competition have the same flight performance, two basic checks have to be made:

1. A check of the external geometry, intended to verify that the shape, size, state of the external surface of the gliders are the same so that the airflow over the external surfaces occurs with the same characteristics; and
2. A check of the glider masses, intended to verify that the take -off weight is the same for all gliders.

According to Annex A of the Sporting Code, "Each sailplane shall be made available to the Organizers at least 72 hours before the briefing on the first championship day for an acceptance check in the configuration in which it will be flown. This configuration shall be kept unchanged during the whole competition."

1. **Geometry Checks**

The following geometry checks should be carried out:

Wing Span The nominal value of 13440 mm shall be checked assuming a reasonable tolerance due to thermal effects. The measurement shall be made in compliance with the Sporting Code – Sec.3, para.7.1.3.

Wing Sections High precision templates are available to check the airfoil contour at three different stations along the semi span of each wing.

Wing-Fuselage Fairing A template is available to check the correct size and shape of the fairing at the trailing edge of each wing.

Wheel Fairings Templates are available to check the correct size and shape of the fairings of the front wheel and the rear (main) wheel.

Alteration to Airflow Checks shall be made to verify compliance with the Sporting Code-Sec. 3, para.7.7.5, which states: “Any alteration affecting airflow around the glider is prohibited. This includes, but is not limited to, the use of turbulator devices, fairings, and special surface treatment. The only exceptions are:

- (i) A yaw string,
- (ii) A total energy probe,
- (iii) Adhesive tape to seal gaps between wings, fuselage and tail.

Sealing between moveable control surface and the airframe is not permitted.”

Additional Inspection Verify by visual inspection any abnormality on the external surface and shape of the glider.

2. **Mass Checks**

The following mass checks should be carried out:

Scales Two scales at least shall be available, located at the front and main wheel, respectively, allowing two contemporary measurements the sum of which gives the total mass. The scales shall be adequate in range (up to 350 kg at least) and accuracy (± 1 kg at 300 kg).

Take-Off Mass During the training period, three days at least before the start of the competition, the Director shall fix the glider take-off mass, which shall be identical for all competing gliders. It is likely that the value of this mass has to be 300 kg, i.e. equal to the maximum permitted mass. This is due to the existence of at least one heavy pilot among the competitors, reaching the mass limit without the addition of any ballast (as has occurred in all three World Championships so far, at the present time of January 2002). To attain the specified mass each glider shall incorporate the required amount of fixed ballast to be accommodated under the pilot's seat. Tail ballast is permitted.

Additional Weighing it is strongly recommended that the following additional weighing operations are made and that the results are recorded and made available to the pilot concerned:

- a. Glider empty, i.e., without pilot and parachute but including loose items such as thermos, drinks, tie-down equipment, additional clothing etc.;
- b. Pilot;
- c. Parachute.

CENTRE OF GRAVITY CONTROL

Verify compliance with Sporting Code – Sec.3, para. 7.7.5 d which reads: “Any device capable of altering the centre of gravity location of the glider during flight is prohibited.”

ELECTRICAL DEVICES

According to the Sporting Code – Sec.3, para. 7.7.5 b “Electrical and electronic devices are allowed, including instruments and navigational aids.”

RANDOM CHECKS

During the competition days, when the gliders are on the way from the parking area to the grid, at the choice of an official designated by the Director of the competition, random checks of the glider’s weight are carried on.

Cases of non-compliance with the preset value of the glider weight are reported to the Director.

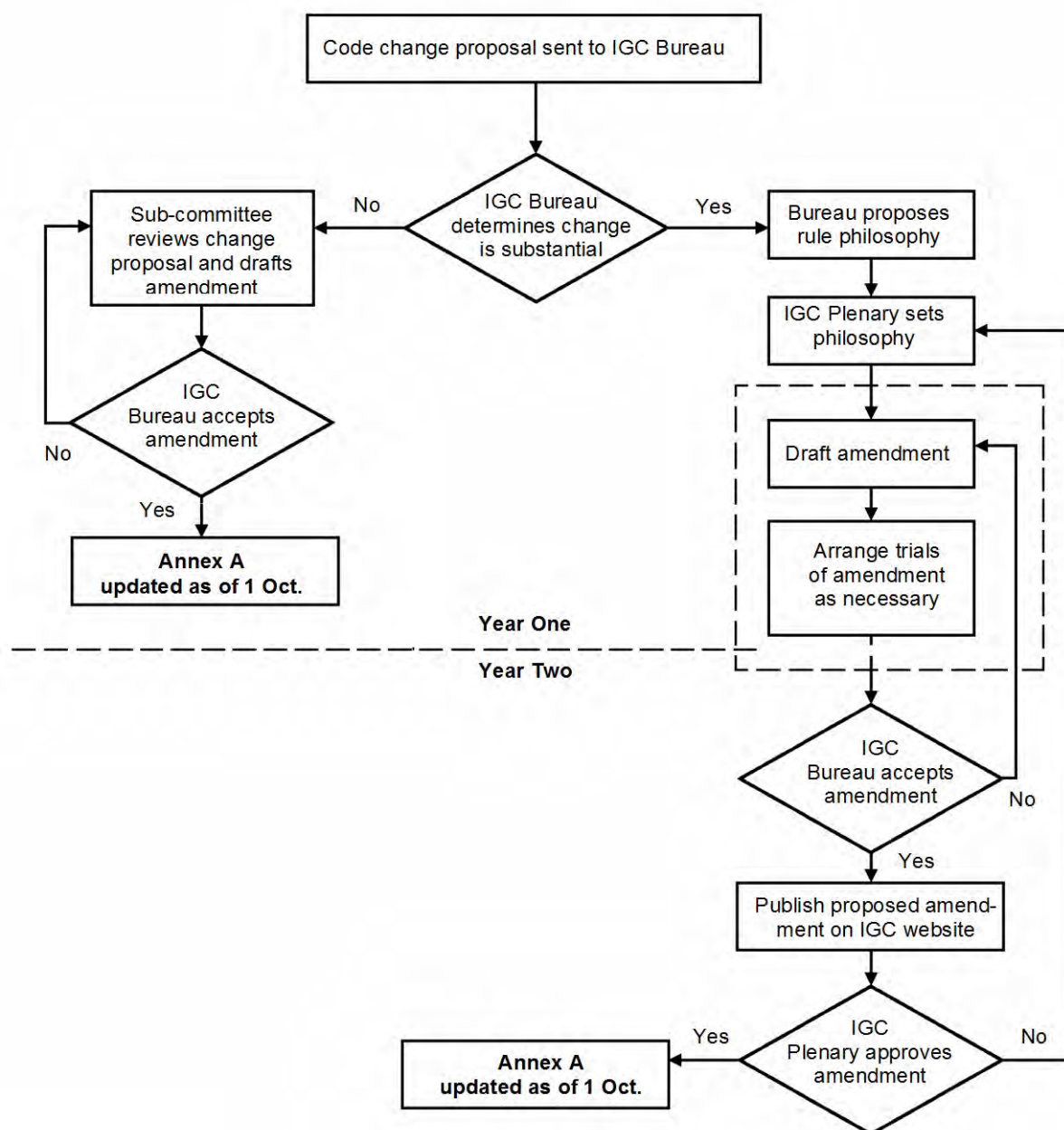
Annex A Review and Change Process

A proposal for an amendment to the Sporting Code or its annexes must be submitted to the IGC Bureau on the **01.October in the year** prior to the next IGC Plenary meeting. A proposal must refer to the paragraphs affected and give reasons for the amendment. It is preferable for the proposed change to be in the format of the Code.

The Bureau will review the proposal and determine if it is “substantial” or otherwise, following input from the specialist sub-committee. The Bureau will instruct the specialist sub-committee to process items that are clarifications of existing rules, or prepare discussion papers on substantial proposals for consideration at the next Plenary meeting. At the Plenary meeting, the philosophy behind any proposed substantial amendment will be considered and confirmed. The specialist sub-committee will then draft an amendment to the Code and with Bureau involvement have it tested as required. The proposed amendment will then be put on the IGC web site prior to the following Plenary meeting, at which time it will be submitted for approval or rejection. See the action flow chart following for details.

A Code clarification becomes effective on the 1st of October following approval by the Bureau. A substantial change become effective on the 1st of October following the IGC meeting at which it is approved, except that if it has flight safety implications it may be approved by the Bureau prior to the IGC meeting.

Annex A Review and Change Process



IGC Handicap Lists

The IGC Handicap Committee is responsible for the evaluation, review and publication of glider handicaps. The IGC Handicap lists consists of:

IGC Club Class Handicap List

IGC 20 metre Multi-seat Class Handicap list

The handicaps for each class are published on the FAI website.

<http://www.fai.org/gliding/system/files/handicaps.pdf>

Effective date for changes to the handicap list is April 1st each year.

General rules for the IGC Club Class:

Only Single Seat Gliders with a handicap index of 1,09 or lower are eligible.

Retrofitting a glider with retractable landing gear increases the Handicap by 0.02.

Retrofitting a glider with winglets increases the Handicap by 0.01.

The pilot is responsible for providing documentation to prove that his glider will be operated within the legal weight limits.

The handicap is based on the performance at a stated glider reference weight, which is based on a typical empty weight plus 110 kg. Where a glider is flown at a higher weight by necessity, the handicap will be increased by 0.005 for each 10 kg or part thereof that the glider exceeds the base handicap weight.

General rules for the IGC 20 metre Multi-seat Class Handicap list:

To be determined.

Pilot Selection Process

1. In the Bid, the Organiser sets the maximum number of entries for the event. Places for World Champions will be included in the maximum number of entries for the event.
2. The IGC Bureau, in conjunction with the organisers, will set a maximum number of entries per each class. Places for World Champions may be in addition of the Annex A maximum of 50 entries per class. These initial class numbers will be made public at the presentation of the Bid to the IGC Plenum.
3. As usual every NAC may enter 2 pilots per class (3 in Juniors' and Women's Championships) but only one entry per class is guaranteed, the 2nd (and 3rd if applicable) entry being subjected to the ranking of the countries. World Champions, having a right of entry, are accepted in addition to the NAC nominated entries.
4. At the closing date for Preliminary Entries the IGC Bureau in conjunction with the Organisers may transfer unused class allocations equally to other classes. NAC's may only transfer their 2nd and 3rd entries (as appropriate when NAC's have been offered a 3rd entry) to other classes if additional places are available.
5. At the closing date for Final Entries, oversubscribed classes are reduced to the maximum class number by removing the pilots of the lowest ranked countries which have entered a 2nd pilot (or 3rd pilot) in accordance with the IGC Country Ranking List effective at the date of closure of Preliminary Entries for the Competition.
6. A country will lose only one pilot across all classes, commencing with the most oversubscribed class, until all countries (with 2 or 3 pilots) have lost one pilot.

Report from the IGC Ranking List Manager for 2010

In 2010 the Ranking List continued to grow with increases in the number of competitions from 83 in 2009 to 124 in 2010 a remarkable increase of 41 contests, the number of pilots in the system increased from 3,956 in 2009 to 4,757 in 2010.

In 2010 we implemented the sanction fee structure approved at the last Plenum, with the sanction fee levied according to the number of entries. This created a lot more administrative work initially but we are confident that the system is now running smoothly and in 2011 the computation should be automatic based on the previous events.

Credit control was a big issue in 2009 and 2010 but some changes to both our system and the procedure in the FAI enabled us to reduce the amount of work required to ensure timely payment of sanction fees.

The facility for NAC's to enter all their contests at a special all inclusive rate was taken up by two countries both of whom intend to repeat the arrangement for 2011. Setting up a secure procedure to accommodate the facility and allowing any organiser within the subscribing country to access the list required a considerable amount of reprogramming but the changes are all accomplished and the procedures seem to be working well.

Juniors Ranking List.

In January 2011 the International Junior Pilot Ranking list went live.

Feminine Pilots Ranking List

In 2011 the Feminine pilots ranking list went live, initially the list is populated with pilots who have flown in the Women's World Championships, as there was no information available in the pilot details on the RL. We have now added the facility for pilots to indicate their Gender in the pilot details.

Computation of competition rating.

In 2011 for a small number of contests there was an error in the calculation of the quality factor, this arose from confusion in the Annex D between valid tasks and valid competition days. These errors have now been corrected and below you will find a proposal for a small change to the Annex D to rectify the problem long term.

Brian Spreckley 16.1.2011
Manager IGC Official Pilots Ranking List

PROPOSAL TO IGC PLENARY 2011

Proposed by The Ranking List Manager

This Proposal accompanies the 2010 Ranking List report.

It is Proposed That:

In rule 5.5 Competition Quality Factor

The text is changed from

Day_factor = number of valid tasks / 4 (limited to 1)

To new text

Day_factor = number of **valid contest days** / 4 (limited to 1)

This Proposal affects:

Annex D rules for IGC Ranking List

Rule 5.5 Competition Quality Factor

Reasons supporting the Proposal:

To eliminate the confusion between a day when a task is flown but with no valid result and a day when a task is flown resulting in a competition day.

Brian Spreckley

Ranking List Manager.

To: Recipients of IGC Agenda

From: Chairman IGC GNSS Flight Recorder Approval Committee (GFAC)

IGC GNSS FLIGHT RECORDER APPROVAL COMMITTEE (GFAC) CHAIRMAN'S REPORT

This report on GFAC activities is dated 10 January 2011 and an update will be given to the IGC Plenum

1. **GNSS Recorder IGC-approvals.** A total of 47 types of Flight Recorders (FRs) from 19 different manufacturers have been approved since the IGC-approval system started in March 1995. This is an increase of two FRs and one new manufacturer since the last report to the Plenum dated 10 January 2010. Table of approvals: http://www.fai.org/gliding/system/files/igc_approved_frs.pdf

1.1 **IGC-approvals in the last year.** In February 2010 the Zander GP940 approval was changed for motor gliders to allow an airborne engine run rather than only a ground run.

In April 2010 for the EWA Models A-D, the list of permitted stand-alone GPS receivers are now in a separate, smaller document as an Annex to the main IGC-approval. This will make additions and deletions of GPS receivers easier to make.

In June 2010 initial approval was issued for the LXNAV LX9000, and an ENL system was approved for the LXN/Flarm Mini Box and Red Box.

In August 2010 initial approval was issued for the LXNAV Nano miniature recorder.

2. **GPS Lat/Long Accuracy.** Results of GFAC accuracy tests are the same as last year. This is an average error of 11.47m for lat/long fixes recorded in IGC files from a sample of over 2000 test points.

3. **Anomalies found during the year.** Many IGC files have been analysed including those from FRs being tested, and those sent to GFAC by a number of organisations for comment and analysis. Advice has been given to a number of NACs, pilots and OOs on FR aspects of claims for badges and records.

4. **ENL figures in the IGC file.** ENL stands for Environmental Noise Level. In an IGC FR designed for Motor Gliders, three ENL figures from 000 to 999 are produced for each fix in the IGC file, using a microphone-based system inside the secure FR case. Typically, where an FR is in the cockpit, two-stroke, four-stroke and Wankel engines driving propellers, produce high ENL numbers (800-999) at high power and moderate ENL (500 or above) at low power.

4.1 **2007 - Quiet Electric-powered Motor Gliders - the 2007 solution.** Tests on motor gliders with electric engines showed that at low engine power, ENL figures as low as 150 were produced, and sometimes as low as 100. Such figures can be confused with soaring such as thermalling with canopy panels open, for which ENL up to 350 has been seen, and occasionally 400. For proof that the engine was not run during the soaring performance, this low-power condition is therefore more critical than the higher ENL values that are shown close to maximum power. The criterion that invalidates a soaring performance in a motor glider is any positive forward thrust, in accordance with SC3 para 4.5.4b, SC3C para 12.1, and para 2.2.1.4 of the General Section of the FAI Sporting Code.

Therefore, in 2007 Annex B to the Sporting Code was amended, requiring for such low-ENL motor

gliders an additional three-number variable to be recorded under the terms of the RPM code in the Technical Specification (TS) document for IGC FRs. The current Annex B references are para 1.4.2.2 for critical ENL cases and para 1.4.2.4 for low-ENL MGs.

The next step was to get manufacturers of FRs and electric motor gliders to recognise that there was a problem, and to produce such a system for GFAC to test.

4.1.1 Early 2010 - Tests on an Electric MG. Last year I reported to the Plenary that a system was being tested that recorded an RPM-related figure for the motor of a Lange Antares 20E motor glider using a sensor outside the FR and connected to it by wire. This would add a three-number group in the IGC file under the RPM code, in addition to the ENL system within the FR case. This extra system was designed to comply with Para 1.4.2.4 of Annex B to the Sporting Code, as mentioned above.

Unfortunately this system did not work, probably because it was complex and attempted to read a signal of exact RPM, rather than a simpler method such as measuring the electrical current taken by the engine (which GFAC agreed was related to RPM). Current can be measured through a sensor clamped round an engine supply cable, without breaking in to the cable itself. The merit of such a system is because any changes to wiring to the engine could have airworthiness implications, and this might also apply to picking off RPM signals to use in an FR. The ANDS chairman consulted OSTIV and caution was advised on any system that needed modification of any engine function.

I am pleased to report that a system has been designed that measures current through a sensor outside the main supply cable, and should be tested by the date of the 2011 Plenary.

4.2 Mid-2010 - GFAC tests on Jet MGs. In mid-2010 GFAC had an opportunity to make tests on a Ventus 2cxaj, the "j" standing for the 23.5 kg thrust Olympus Jet from the AMT company (www.amtjets.com). It was flown at low and high power with several different types of IGC-approved FRs.

To our surprise, ENL values were lower than we had thought. At power for level flight these were as low as 160, less than ENL values for thermalling gliders with cockpit panels open. The reason is probably a combination of high engine RPM and the fact that most jet noise is to the rear of the jet pipe rather than forward into the cockpit. The RPM of the Ventus AMT engine is between 35,000 (idle) and 108,500 (max), much higher than the piston/propeller combinations for which ENL systems were designed.

Due to the compactness of engines such as this, many more similar jet-powered MGs may be produced in the future. Clearly, something had to be done so that the use of such engines, even at low power, can be properly recorded in the IGC file for the flight. At the same time, the electric engine situation needed to be addressed.

The solution was for GFAC to decide on an appropriate FR system that would allow positive recording for all engine types, even when producing small amounts of forward thrust. In developing such a system, manufacturers of FRs and Motor Gliders, other IGC committees and OSTIV were consulted. The resulting system was to be incorporated in the next amendment to the FR Technical Specification. This would then be given publicity, for instance to producers of analysis programs for IGC files, to IGC and its committees and to the world gliding movement generally.

5. November 2010 - Amendment to the FR Technical Specification. The Technical Specification (TS) for IGC GNSS FRs was first issued in October 1997, and has been substantially amended since then. In 2010 the next amendment would be number 12. Amendments to the TS are the responsibility of the IGC ANDS and GFA Committees and do not have to follow the dates of the Sporting Code amendment cycle. In the next amendment, to address the issue of low-ENL engines, after discussion of various alternatives, it was decided to make the extra RPM-related system more versatile in two ways:

5.1 The new MOP code. A new three-letter code "MOP" has been created (MOP = Means of Propulsion), to apply to any system with a sensor attached to the FR by wire, recording any engine-related variable that an FR manufacturer puts forward for IGC-approval. Approval as usual to be the responsibility of GFAC.

The sensor could record fuel flow, electrical generator output, RPM (if a signal is available), electrical current to the engine (for electric engines), acoustic noise under or near the propeller of an electric engine

or near the jet pipe of a jet. Or any other variable that GFAC agrees will respond to engine power whenever forward thrust is generated, the FR system resulting in high enough three-number MOP values in the IGC file for the flight even at these low thrust levels.

A fundamental part of this system, continuing the 2007 concept of recording RPM, is that the three MOP numbers are in addition to those for ENL. This is so that ENL numbers can be compared with those for MOP in the same IGC file. This is a significant "double check" on the integrity of the MOP system which, being remote from the FR and connected by wire, is inherently less secure than the ENL system that is all inside the FR case that is protected by microswitch and public/private key codes. However, the TS requires methods to be incorporated that will detect any discontinuity of the MOP wire or interference with the wire or sensor, and there are a number of ways of doing this, the detail of which should remain confidential.

5.2 MOP Sensor Description. Because the type of sensor may be one of several, in such recorders an extra line must be added to the header record of each IGC file with a short description of the type of sensor used.

6. December 2010 - Second Edition of the FR Technical Specification (TS). The above new MOP system was added to the draft Amendment 12. However, it had been realised for several years that after so many amendments, any document tends to be subject to duplications and poor structure. The TS was no exception.

In November 2010, it was decided to make the effort and produce a Second Edition of the Technical Specification (TS2), reducing duplication and transferring detail from the main body to annexes. This took many man-hours of work, involved many different drafts, and not only involved the ANDS and GFA Committees but also the IGC Bureau and the Sporting Code Committee. Suggestions from IGC President Henderson and VP Mozer were incorporated in TS2.

The GFAC email list of FR manufacturers and potential manufacturers was used not only to inform them of what was happening, but also to ask for suggestions. The same with some producers of analysis programs for IGC files, so that the new MOP code can be incorporated in their programs.

The final version of TS2 was published on 20 December 2010. It was announced on the "IGC-discuss" email list and the international newsgroup Recreation Aviation Soaring (r.a.s.). It is published on the IGC web site: www.fai.org/gliding/system/files/tech_spec_gnss.pdf

6.1 Annex B to the Sporting Code. Chapter 1 of SC3B is based on Chapter 1 of the Technical Specification, and vice-versa. A revised Annex B Chapter 1 based on TS2 is an appendix to this document and it is proposed to IGC that it has effect immediately after the 2011 Plenum. This is so that the Chapters 1 in SC3B and TS2 will be based on the same material, otherwise they will differ until 1 October, which could be confusing to FR manufacturers, OOs, pilots and owners of electric and jet MGs, NACs, etc.

6.2 The present position - early January 2011. Three FR manufacturers are designing MOP systems with the sensor connected by wire to the FR. All are designing acoustic-based systems where a microphone is to be placed near the jet pipe of a jet or under the propeller of an electric engine. One other system is based on a clamp around the main electric supply cable to an electric engine, recording current flow.

One particular concern of GFAC is to ensure that systems are in place that minimise the possibility of interference with the wire and sensor both inadvertent and otherwise. Like the internal security systems for the FR case, the exact nature of such systems is confidential. However, as an example, signals generated by the FR can be used to electronically check the characteristics and continuity of the wire and sensor. Any anomaly would lead to a signal that the MOP system is insecure and an appropriate message being placed on the IGC file.

Results from testing MOP systems will be reported to the Plenum.

6.3 Use of Existing FRs positioned near the engine or propeller. There is nothing to prevent an existing IGC-approved FR with ENL recording being positioned near the jet pipe of a jet or near the propeller of an electric engine, and being used to obtain the IGC file with the primary evidence for the claim.

For IGC-approval for use in electric or jet MGs, test results of any such installations should be sent to the GFAC Chairman in the form of IGC files plus a short description of the layout. Engine runs must be made under OO supervision and include power for low but positive forward thrust as well as high power.

A table of of IGC-approved recorders with ENL facilities is on the IGC web pages.

www.fai.org/gliding/system/files/igc_approved_frs.pdf

Sizes and weights are given in the IGC-approval document for each type of recorder. The smallest is the LXNAV Nano, and other relatively small FRs include, in alphabetical order, the Cambridge 20 & 25, EW microRecorder, Garrecht Volkslogger, LXN Colibri & LX20, and SDI PosiGraph.

Ian W Strachan
Chairman IGC GFA Committee
ian@ukiws.demon.co.uk

Appendix: Updated SC3B Chapter 1, based on TS2 Chapter 1

References:

Low-ENL Motor Gliders (electric or jet):

Sporting Code Annex B: www.fai.org/gliding/sporting_code/sc3b

ENL system general: para 1.4.2. Critical ENL cases: para 1.4.2.2. Low ENL Mgs: para 1.4.2.4.

IGC FR Technical Specification, Second Edition: www.fai.org/gliding/gnss/tech_spec_gnss.asp

List of IGC-approved FRs: www.fai.org/gliding/system/files/igc_approved_frs.pdf

IGC-approval documents: www.fai.org/gliding/system/files/igc_approved_frs.pdf These web pages also contain a brief history of the US GPS system and early developments of FRs for gliding. New or revised approvals are also announced on newsgroup r.a.s. and on the IGC-discuss list.

Free programs for IGC-approved FRs: www.fai.org/gliding/gnss/freeware.asp These are for downloading data from a FR to a PC, and checking the IGC file as being valid and the same as that downloaded from the FR. They include the appropriate IGC-XXX.dll file (XXX is the IGC code for the particular manufacturer) that works with the standard IGC Shell program for download and validation functions.

CHAPTER 1

GNSS FLIGHT RECORDERS

IGC-APPROVAL AND OTHER PROCEDURES

1.1 IGC FLIGHT RECORDERS - POLICY AND GENERAL. IGC-approval of a particular type of GNSS Flight Recorder is achieved after Test and Evaluation (T&E) by the IGC GNSS Flight Recorder Approval Committee (GFAC), whose terms of reference are given below. GFAC and its advisors are agents of IGC, FAI Commissions such as IGC are agents of FAI; the legal entity is FAI and Swiss law applies. When a Flight Recorder system is submitted for IGC-approval, GFAC examines it for compliance with IGC rules and procedures for hardware, firmware, software, output data in the standard IGC data file format, and security of the Flight Recorder system both physical and electronic. The full level of IGC-approval indicates that the equipment meets the standards of availability, continuity, integrity, accuracy, and security that are required for the certification of flights for FAI/IGC World Records, all FAI/IGC Badges and Diplomas, Championships and Competitions. Other aspects are matters between customers and manufacturers, including the presentation on cockpit displays, navigational features, and post-flight analysis systems. See 1.1.4 for levels of approval for types of IGC flights for which a Flight Recorder may be used, also 1.1.7 for the position of displays in the cockpit.

1.1.1 FAI Liability. FAI has no liability for the consequences of the use of Flight Recorders covered by this document for purposes other than validation and certification of flights to FAI/IGC procedures. Such other purposes include, but are not limited to, navigation, airspace avoidance, terrain avoidance, traffic alert, proximity-warning and/or anti-collision functions, any other matters concerning flight safety; and uses outside IGC such as by other FAI Airsports.

1.1.2 IGC Flight Recorder Operating Procedures. Operating procedures for each type of Flight Recorder will be specified by GFAC in the IGC-approval document. The IGC-approval process has the objective of making procedures on the day of flight as simple as possible. This is particularly important before flight when the time available for carrying out extra independent checks may be short. Also, after flight it must be quick and easy to download secure flight data to a PC in the IGC flight data format. GFAC will specify procedures that minimise the possibility that either one Flight Recorder could be substituted in the glider by another that was not carried on the flight in question, or that the data in the Flight Recorder that was in the glider could be interfered with without this being detected. This may require either continuous observation of the glider before takeoff and/or after landing, or the physical sealing of the Flight Recorder unit to the glider by an OO at any time or date beforehand, to avoid the need for extra OO observation of the installation before takeoff. Such a seal must be applied and marked in a manner such that there is incontrovertible proof after the flight that it has not been broken. This can be achieved by marking it with the glider registration, the date, time and OO's name, signature, and the OO identification number. Other procedures specific to the type of Flight Recorder concerned may be required, such as stowage of certain modules out of reach of the flight crew, or limitations on the types of flight for which the recorder may be used. Such procedures and limitations will be an integral part of the IGC-approval document for the type of equipment concerned, and will depend on the Flight Recorder design and the results of the evaluation process. (*Amplification of SC3C para 1.7*)

1.1.2.1 IGC Policy on Processing of Claims. The Sporting Code for Gliding states that, when processing evidence, OOs and authorities responsible for validating flight performances should ensure that rules are applied in a reasonable way. Evidence that is initially incomplete can often be corrected after further evidence is taken from independent witnesses or experts. OOs and Officers responsible for validating claims must ensure that rules are met that are fundamental to proving the flight performance itself. However, their goal should be to validate flight performances, not turn them down for bureaucratic reasons or oversights that can be corrected later and included in the overall evidence for a claim. (Wording based on SC3C para 1.2). An example might be if the data in an IGC file is slightly different to that given in the current FR Technical Specification (TS), but the data required by the Sporting Code is present either in the IGC file in a different place (to that given in the current TS), or is available from independent evidence. In such a case, the flight performance should not be rejected for that reason, as long as the electronic Validation check (para 1.1.10.1) on the IGC file that was downloaded from the FR and contains the flight data for the claim, is satisfied.

1.1.3 IGC-Approval Documents for Flight Recorders. The IGC-approval document for each type of Flight Recorder is produced by GFAC on behalf of IGC. Before the approval document is finalised, it will be circulated in successive drafts to GFAC members, other technical experts and consultants, and the manufacturer concerned. When finally issued, the IGC-approval document will give the detailed procedures under which equipment must be checked, installed in the glider, and operated for flights that are to be validated and certificated to FAI/IGC criteria. The definitive version of the IGC-approval document for a particular type of flight recorder is that which is currently available on the IGC GNSS web page.

1.1.3.1 Format of IGC-approval documents. These documents have a standard format which consists of an introduction (including legal disclaimers agreed by FAI on matters such as flight safety and intellectual property); manufacturer details; details on hardware (including the type of GPS receiver and pressure transducer); firmware and software; connections to the Flight Recorder; and a list of Conditions of Approval. There are two annexes. Annex A contains notes and recommendations for pilots and Annex B contains notes and recommendations for Official Observers and bodies validating flight performances such as National Airport Control authorities (NACs). Annex B includes checks that apply to that type and model of Flight Recorder, how to download flight data to a PC, procedures for checking the validity of the IGC file data, and pressure altitude calibrations. Also, for those Flight Recorders fitted with an Environmental Noise Level or a Means-of-Propulsion recording system under the codes ENL and MOP, Annex B contains details of ENL and MOP figures recorded during GFAC testing and to be expected in various phases of flight.

1.1.3.1.1 Checks on individual recorders. It is the responsibility of owners of recorders and pilots using them, to check that the characteristics of the recorder correspond to those in the IGC-approval document. If they do not, the recorder should be returned to the manufacturer or his authorised agent, to be re-set to the characteristics in the IGC-approval. This particularly applies to ENL and MOP figures recorded in IGC files which must be similar to those given in Annex B to the IGC-approval document, and to pressure altitude calibrations which must be to the ICAO International Standard Atmosphere (ISA). For the critical cases in ENL and MOP recording, see 1.4.2..

OOs shall inspect recorder installations before and after flight in accordance with the provisions of Annex B to the IGC-approval document for the type of recorder concerned. Where the FR uses instrument static pressure (rather than "cockpit static"), the tubing and the pressure connection to the FR shall also be checked to ensure that they are out-of-reach of the aircrew in flight so that no unauthorised adjustments to static pressure can be made.

1.1.3.2 IGC-approval document kept with the Flight Recorder. It is recommended that an up-to-date copy of the approval document including its two annexes is kept with each unit of the equipment, so that it can be consulted by pilots and OOs as required. A copy of the current IGC-approval document in either written or electronic form must be included with each recorder sold or updated.

1.1.3.2.1 Valid versions of the IGC-approval and program files. The latest versions of IGC-approvals and the FR Manufacturers DLL files (or the earlier short program files) are posted on the IGC web site, and only these versions are valid for use with IGC/FAI claims. Earlier versions of the IGC-approval and DLL/program files must not be used in the validation of flights to FAI/IGC criteria.

1.1.4 Levels of IGC-approval. The IGC-approval document for individual types of Flight Recorders will specify procedures to be used and any limitations on types of flights for which the approval is valid. Reduced levels of approval apply to types of Flight Recorders that do not meet the requirements for full approval at the time that the approval is given, and will be determined by GFAC. Reduced levels also apply where the security of a type of recorder has either been compromised or is below the requirements of the current Specification, or where other features do not meet the current Specification. The following levels of IGC-approval apply:

1.1.4.1 IGC-approval for all flights. This applies to Flight Recorders that may be used for evidence for all flights up to and including FAI/IGC world records. For new types of recorders, compliance with the current Specification is required. For types with existing IGC-approvals to this level, "Grandfather Rights" (1.1.4.5 below) apply unless there are major differences compared to the current Specification, as assessed by GFAC.

1.1.4.2 IGC-approval for IGC/FAI badge and Diploma flights. This applies to Flight Recorders that may be used for evidence for all IGC/FAI badge and distance Diploma flights, but must not be used for IGC/FAI world record flights. For competition flights, see 1.1.4.6. This level may be used for new recorders that do not meet the current Specification in some areas. For types of recorder that are already IGC-approved, this level may be used for those whose characteristics are now significantly below the current Specification standard, particularly on security or accuracy of data, as assessed by GFAC.

1.1.4.3 IGC-approval for badge flights up to Diamonds. This applies to Flight Recorders that may be used only for evidence for FAI/IGC Silver, Gold and Diamond badge flights, although for competition flights see 1.1.4.6. This level may be used for recording systems that have significantly lower standards of security and other characteristics compared to those for higher levels of approval, as assessed by GFAC.

1.1.4.4 No IGC-approval/non-IGC-approved Recorders. This applies to types of Flight Recorders that have either not been tested and approved by GFAC to IGC standards, or to recorders that were previously IGC-approved but where a major security or other problem has been shown to exist which could compromise the integrity of flight data. It also includes FRs used in other FAI Airports that output in the basic IGC file format where such recorders are not to be submitted for IGC-approval.

1.1.4.5 **Grandfather rights and approval levels.** The term "Grandfather Rights" is used for a situation where the conditions of an original IGC-approval are continued with time, even though the provisions of the IGC Specification or Sporting Code have changed. That is, the recorder would be subject to additional limitations or would not be approved at its existing approval level, if it were submitted for IGC approval as a new model. Continuity of the original approval is so that owners and manufacturers are not constantly required to carry out updates as the Specification or Sporting Code changes with time, unless a major difference exists in the type of recorder compared to the current Specification or Sporting Code. A similar policy is adopted in civil aviation by other aviation organisations such as the FAA and JAA with regard to already-certificated designs. However, GFAC reserves the right to change the conditions of an approval document where it considers that the current Specification or Sporting Code is sufficiently different to those under which the original approval was issued.

1.1.4.6 **Competitions.** The above sub paras apply to record, badge and distance diploma flights to be validated to FAI/IGC rules and procedures. For IGC competition flights, the types of recorders that may be accepted are (a) at the discretion of the competition organisers and (b) subject to any higher level rules and procedures that may apply to the organisers. For instance, Regional or National competition rules or Sporting Code Annex A procedures for World and other Championships that use Annex A rules.

1.1.5 **Changes of approval level.** If GFAC proposes to lower the approval level of a type of IGC-approved recorder, this will be discussed in confidence, first with the IGC ANDS committee and then with the manufacturer (approval levels, para 1.1.4). A recommendation will be made to the IGC Bureau at an appropriate stage. For further procedures, see Appendix A.

1.1.6 **World Records.** Evidence for the verification of an IGC World Record must be from a Flight Recorder that is IGC-approved for World Record flights (SC3 para 3.0.3). See 1.1.4 on approval levels.

1.1.7 **Cockpit displays.** IGC is concerned by the potential risk of collision between gliders, due to over-concentration on cockpit displays, where the pilot would be better advised to be visually scanning outside the cockpit. Displays and instruments that need regular checking should not be mounted in instrument panels in positions away from external view, but should be in prominent positions close to the view of the outside world. Although IGC cannot control the layout of instrument panels, it can draw attention to the potential dangers. Particularly in single-seat gliders and other FAI aircraft, the position of displays connected to a Flight Recorder should not be remote from sight lines used for pilot lookout and scan for other aircraft. Displays should not be positioned so as to obstruct potential sight lines that might be needed for lookout.

1.1.8 **Antenna Positioning.** If the GNSS antenna is accessible to the crew in flight, no attempt must be made to inject any data that would alter that from the GNSS system concerned. Any abuse of this may lead to a future IGC requirement to place the antenna out of reach of the flight crew.

1.1.9 **Sealing of data ports and plugs.** Wherever possible, IGC-approval will not involve sealing of ports and plugs before flight, but no attempt must be made by users to pass unauthorised data into the Flight Recorder. Any abuse of this may lead to a requirement for sealing.

1.1.10 **IGC Standard of Security for the Flight Recorder and the IGC Flight Data File.** For IGC-approval to be given, the type of Flight Recorder must be protected by both physical and electronic security. A manufacturer's physical seal must be fitted to the recorder case in such a way that it will be broken if the case is opened. Also, a system must be incorporated that makes the internal electronic security system inoperative if the recorder case is opened or otherwise becomes insecure. Flights made after any such event must continue to produce IGC files, but such files must be clearly marked as insecure and must fail the IGC Validate check of the IGC file (see 1.1.10.1 below). Re-set of a recorder to a secure state must only be through the manufacturer or his authorised agent, and the knowledge of confidential details that are part of any re-set procedure (such as private keys) must be restricted to the absolute minimum number of people.

1.1.10.1 **Electronic Validation of IGC Flight Data Files.** The IGC electronic Validation system checks the security and validity of data in an IGC file, and can be used at any time to check a file. To use the IGC Shell program, the manufacturer's IGC-XXX.DLL file must be in the IGC Shell directory (XXX = manufacturer identification letters). Having executed IGC-Shell.exe, select the FR manufacturer in the box at the top of the display, press the display's Validate button, highlight the IGC file to be checked and click "Open". The result of the validation check will then be shown in a box in the middle of the display. Older recorders for which the manufacturer has not provided a DLL file for the IGC Shell program have a VALI-XXX.EXE program file instead. The IGC Shell program, DLL and VALI files are available at:
<http://www.fai.org/gliding/gnss/freeware.asp>

If an IGC file passes the IGC electronic validation check, it shows (1) that the IGC file has originated correctly from a serviceable FR that has not been opened or been modified in an unauthorised way, and (2) that the flight data in the IGC file is identical to that which was originally downloaded immediately after flight. The IGC validation program will reject

an IGC file if only one character in the flight data is not the same as originally downloaded. This can be checked by copying an IGC file that passes the Validation check, and, on the copied file, using a text editor to change one character (such as one figure in a Lat/long, ENL or other flight data). The resulting IGC file should fail the IGC validation check. Then, restore the original character and the IGC Validation program should once again pass the file.

1.1.11 Proof of presence of the Flight Recorder in the aircraft. There must be incontrovertible evidence that the particular Flight Recorder was present and recording in the particular aircraft for the flight concerned. The procedures given in the IGC-approval document shall ensure this as far as possible. This is particularly important because, unlike other elements in the verification process, a FR and its IGC file contain virtually all the evidence for the flight. Proof of presence is particularly important with small, lightweight types of FR that can easily be transferred from one aircraft to another. Two methods are employed: (1) OO inspection of the FR installation, and (2) independent evidence of takeoff, landing and other evidence for the claimed flight (independent of the FR and its IGC file). These two methods are amplified below:

1.1.11.1 OO inspection and/or sealing to the glider. If an OO is not present to witness and to check the Flight Recorder installation at takeoff or landing or immediately before and after these times, the FR that is to be used for flight validation must be sealed to the glider structure by an OO. This may be carried out at any time or date before flight as long as the sealing is timed, dated and with the OO's identification clearly marked so that the OO can identify it later if necessary.

1.1.11.2 Check of takeoff and landing, independent of the Flight Recorder data. The times and points of takeoff and landing, shall be recorded either by an OO, other reliable witnesses, or by other means such as an Air Traffic Control or official Club log of takeoffs and landings. This shall be compared to the Flight Recorder takeoff and landing data (SC3 para 11.3). This is intended as a simple independent check of these aspects of the FR data. Following this, the rest of the data may be accepted as valid evidence for the claim, subject to (1) any anomalies being satisfactorily explained, (2) compatibility of the data with independently-known conditions for the flight and (3) the IGC file for the claim passing the IGC Electronic Validate check (see 1.1.10.1 above). Known conditions that can be independently checked include: (1) Wind observations at relevant altitudes (including those recorded officially by local meteorological offices and airfields) compared to thermal and other drift from the IGC file data. (2) conditions experienced by other aircraft and gliders in the same area and at similar time, including those available on other IGC files for comparison, and (3) direct observation of the aircraft by other pilots, witnesses, etc.

1.1.12 Anomalies in evidence. Any anomalies in evidence for a claim under IGC rules from an IGC-approved GNSS Flight Recorder should be referred to the GFAC Chairman for further investigation and to obtain an opinion from GFAC and its technical experts on whether the flight data can be accepted for an IGC claim. This should be done as soon as an anomaly is discovered, by the OO concerned or by the body that will validate the flight (such as the NAC) so that other supporting evidence is not lost due to the passage of time. It is important that the recorder is kept in its original state and is not re-set or modified until the investigation is completed.

1.2 IGC GNSS FLIGHT RECORDER APPROVAL COMMITTEE (GFAC). A committee of at least five persons shall be appointed by IGC to test, evaluate, and approve individual types of GNSS Flight Recorders in accordance with para 1.1. GFAC members may delegate specialist work to other experts but are responsible for co-ordinating the work and for producing final recommendations. The detail of the work and any opinions expressed within GFAC discussion are confidential to GFAC and any other experts and IGC officials who may be involved.

1.2.1 Appointment of GFAC Members. GFAC members will be appointed by IGC for an agreed period, and members will be eligible for re-appointment. Members will select the GFAC chairman from amongst their number.

1.2.2 Working Language. The English language shall be used for communications to and from GFAC, and within GFAC.

1.3 NOTIFICATION BY MANUFACTURERS. Manufacturers who may apply for IGC-approval for their equipment should make contact with the GFAC Chairman as early as practicable during the design process. In the manufacturer's own interest, this should be before any design-fix is made, and before any commitment to large-scale purchase of specialised components. This is because initial discussion with GFAC on the intended design may reveal that changes have to be made before IGC-approval can be considered. The GFAC Chairman will provide the applicant with the current procedures for the approval process, such as the application form and documentation requirements.

1.3.1 **Correspondence with GFAC.** Manufacturers applying for IGC-approval must correspond with GFAC through its chairman who will inform other members and technical advisors, and co-ordinate any responses to the manufacturer. In cases where specialist matters are being discussed, the Chairman may authorise direct correspondence with an appropriate specialist GFAC advisor (such as on the detail of GNSS systems, electronic security and recording technology), but the GFAC Chairman must be copied with all correspondence so that he is aware of progress and of the issues involved.

1.3.2 **Submission of a new model of IGC Flight Recorder.** Details of the intended design should be sent to the GFAC Chairman as soon as available. These should include a brief specification, drawings, draft manual (if it exists at this stage), commonality with any existing models, etc. Manufacturers should not wait until these documents are final, drafts should be sent as soon as they are available. The Chairman will circulate such details to GFAC members and appropriate technical advisors and will co-ordinate comments that will be sent to the manufacturer. For communication, email is recommended with attached files in common formats such as MS Word, Excel etc. For diagrams and pictures, use a format such as JPEG, compressed to not more than 200kB per graphic unless requested otherwise. Details sent by the manufacturer will be treated as confidential to GFAC and its advisors.

1.3.2.1. **IGC flight data files.** As soon as IGC-format files are available from early Flight Recorder hardware, email copies to the GFAC chairman so that the exact format can be checked for compliance with the IGC standard.

1.3.2.2. **When recorder hardware is available.** Recorders should not be sent until GFAC comments have been made on the specification of the type of FR concerned, and IGC files have been produced and sent. When a complete or beta test version is available, and before the fix-of-design stage is reached, notify the GFAC Chairman. When the Chairman requests, send an example of the appropriate equipment for initial evaluation and feedback. The Chairman's evaluation team will test the hardware and report to GFAC members, relevant technical experts and to the Flight Recorder manufacturer.

1.3.2.3 **Fee to FAI.** When hardware is sent, the Flight Recorder manufacturer must apply to FAI on the forms provided and pay the appropriate fee to FAI, unless this has been done earlier. See also para 1.3.5.

1.3.2.4 **Sending Further Hardware.** All individual GFAC members have the right to ask for hardware for testing themselves. Therefore, after appropriate correspondence between the Chairman and the Flight Recorder manufacturer, and after any necessary changes have been made to the prototype equipment already evaluated, the chairman will notify the manufacturer of those GFAC members who wish to receive equipment for testing. Further detail, para 1.4.

1.3.3 **Re-approval after changes to a recorder.** For re-approval or continued- approval of a type of Flight Recorder after changes have been made to its design, the provisions of 1.3.2 that are relevant to the changes, apply.

1.3.4 **Documentation.** The recorder manufacturer or applicant for IGC-approval shall provide information to GFAC on how the particular model of Flight Recorder is intended to meet the IGC Specification.

1.3.4.1 **Security Protection.** A detailed description of security protection must be provided, including the design features that prevent deliberate or inadvertent misuse or production of false data. GFAC members and their advisors will keep such information confidential.

1.3.4.2 **Pressure Altitude Calibration.** The pressure altitude recording system in the Flight Recorder must be calibrated to the ICAO ISA using IGC/FAI procedures for barograph calibration. A calibration table and the IGC file for the calibration from which the figures in the table were obtained, must be forwarded with any hardware that is sent. For more detail on the accuracy of calibrations, see Chapter 2, para 2.6.

1.3.5 **Fees and expenses for IGC-approval.** The appropriate fee must be deposited by the applicant in the FAI account (for the IGC Sub-account) when hardware is sent to the GFAC Chairman for evaluation. Expenses such as customs duties and national taxes for postage of recorder hardware must be paid by the applicant and not be an expense on GFAC members, IGC or FAI. If the receipt of payment is delayed, IGC-approval will not be given until the fee is received and all expenses attributable to the manufacturer have been paid. The fee is adjusted by IGC from time to time and details are available from the Chairmen of the IGC ANDS and GFA Committees. At the time of writing (year 2011) the fee is 1000 Euros (€) for an application for testing a new type of GNSS Flight Recorder for IGC-approval. For changes or modifications to an existing IGC-approved design, the fee depends on the complexity of the required evaluation as determined by GFAC, and may be the same or less. The current scale of fees is on the application form available from the GFAC Chairman.

1.4 TEST AND EVALUATION FOR IGC-APPROVAL. GFAC will complete Test and Evaluation (T&E) as soon as practicable on receipt of all of the appropriate material, normally within 120 days, unless there are unforeseen difficulties. The testing carried out by GFAC will be of a non-destructive nature but GFAC, IGC or FAI is not liable for any damage to, or loss of, any equipment. A sample test and evaluation schedule is at Appendix 2 of the IGC FR Technical Specification. The evaluation period starts when all members of GFAC who have expressed a wish to test the hardware themselves, have received all of the required equipment and documentation in good order and ready to test. The GFAC Chairman will notify the manufacturer of the contact details of the GFAC persons to whom hardware should be sent. If the Flight Recorder manufacturer is not able to send equipment to all persons at the same time, equipment will be sent from person to person. In this case, the target evaluation period does not apply although the evaluation will be completed as soon as practicable. Any excess expenses incurred by individuals (such as postal, excise and tax), shall be paid by the Flight Recorder manufacturer into the FAI account on request so that individuals can be re-imbursed and do not have to pay these expenses themselves.

1.4.1 Laboratory Testing. GFAC may decide that a report on the Flight Recorder (or a particular aspect of the FR and/or its peripherals) is needed from a recognised independent testing laboratory. In this case, the applicant will be responsible for the expense of this report in addition to the application fee. The applicant shall be given the opportunity to withdraw the application before incurring this expense. Such requirements may arise if test or evaluation is required that is outside the expertise or facilities available to GFAC members and their advisers.

1.4.2 ENL System - General. The IGC Environmental Noise Level (ENL) system is designed to differentiate between any engine running that generates forward thrust, and any flight condition encountered in normal soaring flight without the use of engine. Pilots and OOs should note that the critical engine-on case with all motor gliders is not when the engine is run at high power. Also, the critical engine-off case is not a quiet glide with a well-sealed cockpit. These cases are covered below, and are particularly important with low-noise engines such as those using electric power, and low-ENL engines such as jets, see 1.4.2.4. Pilots flying such motor gliders should ensure that engine-recording systems have been provided in accordance with Sporting Code requirements so that their flights can be validated to IGC standards.

1.4.2.1 High Engine Power. A combination of engine and propeller noise at high power are expected to give ENL figures over 800 out of 999, the maximum ENL number in the IGC file. Most two-stroke systems produce ENL values over 900 and some give the maximum of 999. Four-stroke and Wankel (rotary) engines give lower figures but normally enough to differentiate between power-on and power-off. Some electric and jet engines at high power have also been shown to give moderate ENL values; however, high power is not the critical case in terms of differentiating between power-on and power-off flight, see below.

1.4.2.2 Critical ENL Cases

1.4.2.2.1 Power - on. The critical power-on case that is used for testing ENL is not full power, it is when any positive forward thrust is generated by the engine (SC3 para 4.5.4b, SC3C para 12.1 and FAI GS 2.2.1.4). Under such conditions, recorded ENL must be high enough to differentiate from the Power-Off cases below; if it is not (such as with electric and small jet engines), an extra system operating under the MOP code must be fitted (see 1.4.2.4, also chapter 5 of the IGC FR Technical Specification).

1.4.2.2.2 Power - off. The critical ENL power-off case is not a quiet, well-sealed cockpit. It is a noisy cockpit, typically thermalling with air vents and cockpit panels open. This can produce ENL figures up to 300, more if sideslip is present and 400 has been seen. Another high-noise case is high speed flight with the cockpit panel(s) open, but this is not as realistic as thermalling with panels open because in the latter case the glider will be climbing and could be more easily be mistaken for use of engine.

1.4.2.3 ENL numbers. The three ENL numbers as recorded in IGC files must therefore differentiate between the "quiet engine" and the "noisy cockpit" cases. This is done by carefully selecting the frequency and gain at which the ENL system is most sensitive. The ENL system is then tested by GFAC in a range of motor gliders, gliders and powered aircraft. Experience has shown that peak sensitivity between about 70 and 300Hz with a typical "bell curve" (the statistical "normal distribution") either side of the peak frequency, gives a good ENL response to engine and propeller noise and less response to other cockpit noises.

1.4.2.4 Low-ENL Motor Gliders. Where an engine system produces low ENL values that make it difficult to differentiate between power-on and power-off flight (as assessed by GFAC using the criteria in 1.4.2), an additional system shall be provided in the motor glider concerned. This system must produce a signal that is shown in the IGC file under the three-letter code "MOP" (see Chapter 5 of the IGC FR Technical Specification), as an indication of forward thrust generated by the engine system. This applies to quiet engines such as those with electrical power, and others such as jets for which the frequency response or direction of noise does not register highly enough on ENL systems in cockpit-mounted recorders. This will be subject to GFAC evaluation and decision on the type of motor glider concerned.

1.5 **IGC-APPROVAL.** GFAC shall either approve, conditionally approve, or require modifications to the applicant's unit before IGC-approval to the appropriate level can be given (see 1.1.4 for levels). Drafts of approval documents will be circulated to GFAC members and associated experts, and to the Flight Recorder Manufacturer concerned. The final version is the responsibility of GFAC, which has the status of an agent of IGC and FAI (see para 1.1).

1.5.1 **Limitations before IGC-approval.** If GFAC decides that IGC-approval cannot be given to the appropriate level without changes being made (see 1.1.4 for IGC-approval levels), GFAC will inform the manufacturer of what is required in order to gain IGC-approval. This may involve an approval with limitations, such as an approval level other than "all flights" or an approval without an ENL system. If the manufacturer notifies GFAC within one month that the approval process should continue, the manufacturer will be expected to resubmit a modified Flight Recorder for further review by GFAC within the next six months. GFAC will aim to complete this review within three months, subject to not meeting any unforeseen difficulties. If this procedure is followed, no extra fee will be payable but the initial fee will continue to be held. An example might be where a motor glider Means-of-Propulsion (MoP) sensor system either was not included, or was assessed by GFAC as not being adequate. In this case an IGC-approval might be issued without the MoP sensor system, pending the development of a system which satisfies the IGC Specification, which would then be added to the Approval by amendment.

1.6 **APPLICANT'S AGREEMENT.** When an IGC-approval is issued, the applicant agrees to the following conditions:

1.6.1 **Changes to an IGC-approved Flight Recorder.** Notification of any intended change to hardware, firmware or software must be made by the manufacturer or applicant to the Chairman of GFAC so that a decision can be made on any further testing which may be required. This includes changes of any sort, large or small.

1.6.2 **Action on Changes.** GFAC may decide that a formal evaluation of such changed features is required, or, if the changes are extensive, that another full approval process is needed. This shall require a fee of up to that for a new type of FR.

1.6.3 **Changes in IGC-approvals.** IGC may remove or alter an existing IGC-approval document at any time.

1.6.4. **Manufacturer's details.** An IGC-approval is for the named product or products manufactured by (or under the control of) the Organisation whose details are given in the approval document in the paragraph headed "Manufacturer". Any changes to these details shall be sent to GFAC without delay, so that the approval document can be updated.

1.6.4.1 **Transfer to another Organisation.** An IGC-approval will only be transferred to another Organisation after consultation by GFAC with the previous and future Organisations, followed by amendment of the approval document.

1.6.4.2 **Significant changes.** If significant changes have been made in the Organisation listed in the IGC-approval document under "Manufacturer", FAI reserves the right to require a new IGC-approval process for the types of flight recorder concerned. In this context, the approval process will require the signature or re-signature of an approval application and GFAC may wish to test recorder equipment produced by the changed Organisation. What changes are considered significant will be as assessed by GFAC and include transfer of manufacturing responsibility to a different Organisation, acquisition of a name by another Organisation, or a change of structure or of key personnel within the same Organisation.

1.6.4.3 **Cease of Manufacture and/or Support.** Where a manufacturer ceases to make a particular type of recorder, GFAC shall be informed. The manufacturer shall state whether support for the type will continue such as updates and/or repairs to existing recorders.

1.6.4.3.1 **Pilot aspects.** Pilots should be aware that if they are using a recorder for which there is no manufacturer support, in the event of anomalies in the electronic data (IGC file) without manufacturer support to reduce any anomalies in IGC files, it may not be possible to validate such flights.

1.6.4.4 **Exclusions.** FAI, and their agents IGC and GFAC have no responsibility for, matters related to: (1) Intellectual Property (IP) and Intellectual Property Rights (IPR) or, (2) the relations of the Organisation with any others except with FAI and its agents or as they affect FAI, its agents and the IGC approval and others issued by IGC Air Sport Commissions.

1.7 **USE OF IGC FLIGHT RECORDERS WITHIN NATIONS.** A GNSS Flight Recorder operated in accordance with its IGC-approval document shall be used for all flights that require validation to FAI/IGC criteria including World Records (SC3, para 3.0.3) and World Championships (SC3 Annex A). An IGC-approved Flight Recorder must also be used for evidence for FAI/IGC Badge and Diploma Flights except that, for Silver and Gold badge flights only, evidence from a Position Recorder may be used under special Sporting Code rules (see the Glossary under "Position Recorder" for definition and SC3 references). For the different levels of IGC-approval from world records to badges, see para 1.1.4. IGC-approved FRs may

also be used by NACs for flights under their jurisdiction, where FAI/IGC standards are specified such as for national and regional records, and competitions. Where flight validation is not required to FAI/IGC criteria, the choice of criteria is at the discretion of those responsible for validating the flight.

1.7.1 **IGC File Format.** For the format of the IGC Flight Data file, see Chapter 3 and Appendix A. These references give the normal sequence of data in the IGC file and the detail on how it is to be shown. In the case of older types of recorder with Grandfather Rights (para 1.1.3.4.5), there may be some differences compared to the current IGC file format, but for a performance to be validated to IGC standards, in all cases the file must pass the IGC electronic Validation check (para 1.1.10.1).

1.7.2 **Non-IGC FRs.** Where flight validation is not required to FAI/IGC standards, the choice of criteria is at the discretion of those responsible for validating the flight, such as competition officials or, for non-IGC FRs, other FAI Air Sport Commissions.

1.8 **NOTIFICATION AND ISSUE OF IGC-APPROVAL DOCUMENTS AND FILES.** Notification of issue of a new or amended IGC-approval document will be posted on the Internet newsgroup rec.aviation.soaring (r.a.s.) and also on the FAI IGC-discuss list. The complete IGC-approval document will be posted on the web site www.fai.org/gliding/IGC_approved_frs. In addition, the FR Manufacturers DLL file (or, for older types of recorder, the short program files) for downloading IGC files, and for validating the integrity of such files, will also be posted for free access on www.fai.org/gliding/gnss/freeware.asp.

1.9 **PRODUCTION STANDARDS.** IGC reserves the right to inspect and test examples of products covered by IGC-approvals, for the purpose of checking compliance with the standards and conditions of their approval.

1.9.1 **Testing production equipment.** Such testing will be carried out by GFAC and may be at any time and without prior notice. GFAC may obtain recorder units under its own arrangements such as from owners or sales outlets, but, if requested by GFAC, the Organisation listed in the IGC-approval document under "Manufacturer" shall supply one set of hardware required for such testing.

1.9.2 **Results of testing.** If any problems are found or questions are raised, GFAC will correspond with the manufacturer. If this cannot be done to the satisfaction of GFAC, the terms of the IGC-approval may be altered under the authority of para 1.6.3 above.

1.10 **PROBLEMS OR QUESTIONS IN USE.** If any problems or questions arise during use of IGC-approved Flight Recorders, the GFAC Chairman should be notified in the first instance. See also para 1.1.12.

Appendix A: Changes of IGC-approval Level

APPENDIX A

CHANGES OF IGC-APPROVAL LEVEL

A1 Changes of approval level. If GFAC proposes to lower the approval level of a type of IGC-approved recorder, this will be discussed in confidence, first with the IGC ANDS committee and then with the manufacturer (for approval levels, see para 1.1.4 in the main body of this document). The IGC Bureau may also be informed if appropriate at this early stage. Such lowering of level may apply to a particular type of recorder or to a specific modification state or a hardware and/or firmware version of the type. As much notice as possible will be given so that the manufacturer can be given the opportunity of offering an upgrade that will retain the existing approval level. After these discussions, if GFAC still decides to recommend a lowering of the approval level it will then make a detailed recommendation to the IGC Bureau. The Bureau may decide to make a public domain announcement asking for comments. The Bureau will then assess all of the evidence and make a decision. If they accept the GFAC recommendation to lower the approval level, the details will be announced immediately but the next IGC Plenary meeting will be asked for confirmation as part of the normal procedure for confirmation of Bureau decisions that were made between Plenaries. Announcements will be made on the FAI IGC discussion group (igc-discuss@fai.org) and on the international soaring newsgroup (rec.aviation.soothing) but will not include confidential or proprietary information.

A2 Data integrity factors. Factors that may lead to a lowering of approval level, particularly from "all flights" to a lower level, include the following. Evidence that flight data generated from an IGC-approved recorder has been or can be manipulated, altered or falsified. For instance, if it can be shown that the secure parts of an IGC flight data file can be changed and it still passes the electronic VALIDATION check. Also, evidence that the security function or functions have been compromised, or if IGC experts in data security assess or demonstrate that security could relatively easily be compromised by commonly-available equipment and methods. This includes a situation where it can be shown that the security microswitch can easily be by-passed. In these cases, the lowering of approval level will take effect at a date agreed between GFAC and the Bureau. In serious cases such as where there is a risk that compromised data could be submitted for flight claims from other recorders of the same type, this could be the date of the public announcement of the Bureau decision.

A3 Other factors. If the approval level is to be lowered for reasons other than those given above, the date of implementation will be decided by the Bureau and will not normally be before 12 months after the date of the public announcement of the Bureau decision.

A4 Appeal against a lowering of approval level. If it is decided to lower the approval level of a type or version of a recorder, the manufacturer of the recorder or any entity with an interest may appeal to the IGC Bureau to have the decision reviewed. The organisation or individual making the appeal must notify the IGC President of an intention to appeal within one calendar month of the public announcement of the lowering of the approval level. Notification by email or fax is acceptable and will be acknowledged using the same medium. Pending the appeal, the decision and its implementation timescale will stand. In submitting the appeal, the organisation or individual making the appeal agrees to accept the result, which is at the sole discretion of FAI as the legal entity and its agent IGC, and also agrees not to institute proceedings against the FAI or its agent IGC or against any person who was involved on behalf of FAI or IGC.

A4.1 Procedure and evidence. The Bureau will then appoint a tribunal of either three or five persons, one of whom will be nominated as Tribunal President. These persons must have an understanding of the technical area concerned but must have no direct commercial or strong personal interest in the result. Evidence shall be given in the English language and be sent by email to the Tribunal President. Tribunal members will correspond with each other by email. Evidence may include proprietary or confidential information that must not be divulged to the Public Domain. Such evidence must be kept confidential to the Tribunal members and parties authorised by the Tribunal to see it such as the manufacturer, the appellant (if different), the IGC GFA and ANDS committees and authorised technical experts used by IGC. Evidence should be submitted by email in commonly-used formats such as MS Word for text and JPEG for pictures and diagrams. GFAC, and if appropriate the ANDS committee, will present evidence to the tribunal in favour of the change of approval level; evidence from the organisation or individual making the appeal is covered in 1.4.2 below. Within 3 calendar months of receipt of appeal documentation from the appellant, unless exceptional circumstances prevail, the tribunal shall reach a decision and notify the IGC President of their findings and recommendations. These may include proprietary and confidential information. The President will pass these on to the Bureau and to the GFA and ANDS committees. An edited summary without any proprietary or confidential information and suitable for the Public Domain will be prepared and announced as soon as it is agreed by the Bureau and the manufacturer, the organisation or individual making the appeal (if not the manufacturer), and the GFA and ANDS committees have been given time to comment.

A4.2 Appeal documentation and financial deposit. Appeal documentation from the organisation or individual making the appeal must be received by the Tribunal President within three calendar months of the date that the change in approval level was announced in the public domain. The appeal financial deposit must be received by FAI within the same three calendar month period. The amount of deposit will normally be that specified for appeals under the FAI Sporting Code General Section (GS Chapter 9) unless decided otherwise by the IGC Bureau. The deposit is payable in Swiss Francs (ChF) and the amount can be obtained on request to the IGC President or the Chairmen of the GFA or ANDS committees. The deposit must be lodged with the FAI account in Zurich and banker's drafts must be marked "IGC account for IGC GNSS Recorder appeal" so that FAI and the IGC Treasurer will know what it is for. Bank and other transfer charges must be paid by the applicant so that the full deposit is received in the FAI account without any deductions for transfer or other bank charges by either the sending or receiving bank. The deposit is not returnable unless the case of the organisation or individual making the appeal is accepted without reservation, although a partial refund may be made if recommended by the Tribunal.

USA Position on Detection of Means of Propulsion

Soaring Society of America

3 March 2011

Summary

Following the publication of the Tech Spec for Flight Recorders, USA has formed the opinion that an important question has been skipped. The purpose of this position paper is to raise that question. This is not a proposal or a recommendation, and no action is being requested of the Plenary.

Background

On 20 December 2010, the FAI publication *Technical Specification for GNSS Flight Recorders to IGC Standards, Second Edition* (TS2) became effective. This edition features a major editorial reorganization and an elaboration of methods for detecting means of propulsion (MoP). The document specifies new “MOP-enhanced” flight recorder systems that will enable the detection of powerplant use in cases in which extant flight recorders have been shown to fail.

In the material accompanying TS2, and in the document itself, GFAC have made these statements:

1. So far, in tests by the IGC GNSS Flight Recorder Approval Committee (GFAC) no motor glider with an electric or jet engine has produced high enough ENL values on the primary IGC file used for a claim with the recorder mounted in the cockpit, to differentiate between low engine power and other conditions of climbing in lift without the engine.
2. For types of MoP where GFAC assesses the ENL values as being too low to differentiate between engine-on flight and some conditions in normal soaring flight, an additional sensor system shall be required that operates under the Three-Letter Code MOP.
3. ...in the GFAC report for the Agenda of the IGC Plenary in March 2011, a revised Chapter 1 for SC3B will be proposed that includes references to the MOP code and to non-IGC FRs, amongst other things from the Tech Spec.

The important question that has been skipped

It is clear, thanks to testing by GFAC, that certain combinations of airframe, powerplant, and FR installation result in flight logs that fail to provide satisfactory evidence of MoP use. Also thanks to GFAC, a solution has been presented in the specification of MOP-enhanced flight recorders.

All that remains is to determine the situations in which use of such flight recorders is required.

The important question that has been skipped is this:

Should the proper functioning of MoP detection in motorgliders be controlled centrally (by IGC) or in the field (by Official Observers)?

USA's position

It is the USA's position that the determination of acceptable installations of Flight Recorders, including proper sensing of MoP, should be made by Official Observers. In support of this position, we offer the following statements:

1. IGC already require that the acceptability and installation of a FR be under the control of the Official Observer. Adding a requirement that the OO assert that the FR, as installed, provides valid evidence of powerplant use is merely an extension of – not a departure from – existing duties.
2. The conjecture that jet-powered and electric-powered motorgliders, as a class, have a problem, and that piston-powered motorgliders do not have that problem, is not conclusively supported by the evidence. Rules based on that conjecture would be unfair.
3. While it is true that certain combinations of airframe, powerplant and FR installation have proven to be unsatisfactory, it does not follow that other combinations would also fail. Comprehensive flight-testing in USA and elsewhere have produced reliable ENL data using quiet motorgliders and current flight recorders.
4. Because the quality of ENL data depends on the particular airframe, powerplant, and FR installation (all three), every proposed combination should be tested. The testing of all combinations by GFAC, or any central authority, is infeasible.
5. Central control of the rules regarding required MOP installations is likely to involve the maintenance of a list of gliders. The effective date, completeness, errors, and differences of opinion regarding the list must be handled. Our experience with the Handicap List has demonstrated how difficult this can be.
6. We already have a precedent for acceptability testing in the field: Annex A requires a demonstration of MoP detection before flight logs will be accepted. This precedent should be extended into SC3 and SC3B, providing the same guidance to Observers that we have already been providing to contest officials.

Conclusion

USA welcomes the introduction of MOP-enhanced flight recorders and foresees situations in which they will be necessary. The determination of whether a particular combination of airframe/powerplant/FR provides acceptable MoP detection should be the responsibility of the Official Observers, as it is already for Competition Organizers.

To: Recipients of IGC Agenda
From: Chairman IGC GNSS Flight Recorder Approval Committee (GFAC)

**Report to the IGC Plenum on the
FAI Commission on Airspace and Navigation Systems (CANS)**

by Ian Strachan, IGC Representative to CANS, and CANS Secretary

1. **2010 CANS meeting - Frankfurt.** The 2010 CANS Plenary meeting was held on 1-2 February at the Landessportbund-Hessen (LSBH) Sport and Conference Centre in Frankfurt. This is a location close to the international hub airport and offers low-cost accommodation. Nations represented were Australia, Czech Republic, Denmark, Finland, Germany, Norway, Slovakia, Sweden, UK and USA. Commissions represented were Ballooning, Gliding and Parachuting. This was the most productive meeting yet of this relatively new FAI Technical Commission and covered a substantial amount of information that is useful for air sports. The minutes are available at: www.fai.org/system/files/cans_minutes_2010.pdf and some matters are summarised below.

2. **National and Commission matters.** The main positions and interests of the nation or organisation present were given. Some points included the following:

2.1 **Australia.** ADS-B was operational above FL 290, and the Australian Civil Aviation Safety Authority (CASA) is carrying out a trial at lower levels. The Australian AOPA position was that ADS-B is the answer to many safety concerns.

2.2 **Czech Republic.** A large volume of previously military airspace in the East had been freed of restrictions. The EU Schengen agreements (removal of border controls), had been used to reduce restrictive rules for sport aircraft crossing into Austria, Germany, Poland and Slovakia. A 200 x 50 km mountain soaring area had been established up to FL 190, and when this was active, other aircraft were excluded.

2.3 **Europe Airports (EAS).** In Europe there was much Class E airspace, which under ICAO procedures was not subject to ATC clearance for flights. However, airlines often wanted more Class C which requires ATC clearance. EAS had contributed to a resolution of the European parliament that required the European Aviation Safety Authority (EASA) to concentrate on its core responsibilities, mainly to Commercial Air Transport, and not to interfere with light GA and sport aviation operating outside controlled airspace. It was said that the European Gliding Union (EGU) was the most active of EAS associations. Much valuable information was on the EAS web site: www.europe-airports.fai.org See also www.egu-info.org.

2.4 **Denmark.** Preserving airspace for sport aviation was a continuous fight. A report had been made to the FAI Environmental Commission on restrictions due to birds and other wild life. The question was "who owns the airspace", is it Commercial Air Traffic or all of us?

2.5 **Finland.** Controlled airspace round Helsinki had been expanded and maintaining free airspace was said to be "a continuous struggle". An airspace re-design was to take place, first upper and then lower. There was also a large area devoted to Unmanned Air Vehicles (UAV).

- 2.6 France. Information from the French CAA indicates that we may be able to continue to fly with Mode A-C transponders, Mode S only being mandatory in particular airspace such as the Paris area.
- 2.6 Germany. No change in airspace was reported since the last meeting. The only transponders to be used in the future were Mode S. Microlights were not part of the Deutsche Aero Club (DAeC) structure, different to many nations. It was also said that there were restrictions in bird areas.
- 2.7 Netherlands. It was reported that two pilots in The Netherlands had been fined for flying near a nature conservation area, despite a lack of clarity of the margins required.
- 2.8 Norway. Smaller airports were being used by low-cost airlines, with applications for more Controlled Airspace.
- 2.9 Russia. The Russian delegates had been prevented from attending due to visa difficulties, but emailed a report which is an annex to the CANS minutes. This was critical of rigid airspace clearance and utilization procedures which limited the development of general and sporting aviation. They appealed to FAI to write to the Russian Authorities with a view to opening up non-controlled airspace for other aviation activities such as events covered by FAI Air Sport Commissions.
- 2.10 Sweden. Some airports used by GA are threatened by environmental constraints, and some have been shut down.
- 2.11 UK. There was a trend to remove the current "differences" from ICAO procedures, which was not advantageous to sport aviation. The UK CAA had a policy emphasising "the consumer", that is, the airline passenger. This did not take into account the 15% of flights in Controlled Airspace by GA, which was also a "consumer" of CAA facilities.
- 2.12 USA. Preserving free airspace was said to be a continuing battle and transponders were said to be needed near certain airports. Many gliders in the Reno and other areas had been fitted, because a collision had occurred in August 2006 between a glider and a business jet east of Reno. It was said that there were some 5000 gliders in the USA. A Memorandum of Agreement (MOA) had been signed in November 2009 between the US Federal Aviation Administration (FAA) and the Soaring Society of America (SSA) for the development of a phased plan for demonstrating ADS-B. Battery-powered ADS-B transceivers would be used in gliders. This showed considerable progress in relations between the national aviation Authority and a Sporting Association, particularly in the development of low-cost and low power-drain aircraft devices. The MOA can be seen at Annex G to the CANS minutes.
- 2.13 Commissions - IPC. It was reported that three Netherlands parachute clubs near Amsterdam had closed because of air traffic issues, and this should be noted by other airports in case they were affected later.
- 2.14 Commissions - Gliding. More gliders had been fitted with the Flarm proximity warning system and some nations had made it mandatory for large gliding competitions. Flarm was now available as an integral part of some IGC-approved GNSS Flight Recorders, of which there were now 45 different types from 18 manufacturers. A lower standard of recorder had been introduced under the name "IGC Position Recorder" for Silver and Gold badge flights only.
See: www.fai.org/gliding/system/files/igc_approved_frs.pdf
and www.fai.org/gliding/position_recorders

3. Other bodies.

3.1 EUROCAE and Eurocontrol. The European Organisation for Civil Aviation Equipment (www.eurocae.eu) was said to be preparing protocols for the introduction of ADS-B. Eurocontrol was also preparing for ADS-B and a date of 2015 for initial use had been mentioned. A Eurocontrol paper had been seen that considered arrangements for the large numbers of light GA and sport aircraft. In particular, the use of a simplified version of the US design of Universal Access Transponder (UAT) was being considered for "GA in VMC", which could be useful to sport aircraft where electronic identification was required by the ATM authorities, as long as such equipment was low-cost.

3.2 FAI - Statistics. FAI statistics from member nations were not accurate enough. The general scale of numbers of "Air Sport Persons" in an FAI nation should be easily identifiable. So should the numbers of air vehicles, because many would be officially registered. Vladimir Foltin mentioned CANSO, the Civil Air Navigation Services Organisation (www.canso.org), as a possible source of some statistics.

3.3 International Committee on GNSS (ICG). Sponsored by the United Nations Office for Outer Space Affairs (UNOOSA), this group looks to achieve compatibility, interchangeability and interoperability between the growing number of space-based navigation systems. Bernald Smith has attended several meetings as an invitee of the US State Department. At the last meeting in Sydney, Australia he presented a paper outlining why the ICG effort is very important to sporting aviation. In addition, the US concept of the Universal Access Transceiver, an ADS-B device working at 978MHz, was discussed.

3.4 RTCA. Bernald Smith's report on the US RTCA to the FAI General Conference is at Annex A to the CANS minutes. It was said that RTCA had a good liaison with its European equivalent EUROCAE.

3.5 Other organisations. These included the American Institute of Aeronautics and Astronautics (AIAA), the Royal Aeronautical Society (London) and the Society of Automotive Engineers (SAE) www.sae.org. Ian Strachan is a committee member of the RAeS and a member of a working group that includes the AIAA, the US FAA and NTSB, EASA and other national regulatory bodies. Bernald Smith is an ex AIAA board member.

4. Aircraft user bodies.

4.1 Europe Airports (EAS). There was a Memorandum of Agreement between EAS and FAI which ensured that they did not interfere with each other.

4.2 IAOPA and regional AOPAs. The International Council of Aircraft Owner and Pilot Associations (www.iaopa.org) and regional AOPAs were discussed. It was said that AOPAs often knew little about sport aviation but were powerful lobbying bodies. In one nation the local AOPA had attended meetings with the Regulatory Authority and tried to represent Sport Aviation as well as their own interests, and this situation had to be changed after representations by the Aero Club.

5. Navigation and Avionics.

5.1 ADS-B. Bernald Smith briefed on progress in implementing the GPS-based Automatic Dependent Surveillance - Broadcast system (ADS-B). It was now operational in the USA in Alaska, Arizona and Florida, and would shortly be in the Gulf of Mexico and the Louisville and Philadelphia areas. Full mandatory implementation in controlled airspace in North America was originally 2020 but could now be 2018. ADS-B was operational in Australia, and in parts of China.

5.1.1. 1090ES and UAT systems. Bernald said that the 1090ES system, originally developed at 1090MHz for transponders, could have interference limitations when used in high density traffic airspace. Mitigation work-arounds were already being discussed. He predicted that the more advanced Universal Access Transponder (UAT) design would supersede it.

5.1.2 Paper on ADS-B Systems. Bernald presented a paper on ADS-B (Annex F to the CANS minutes) that he had recently given to the Sailplane Development Panel of OSTIV. This covered 1090ES, Flarm, the Universal Access Transponder (UAT), VDL4, and FAA studies on equipment for aircraft without electrical generation such as gliders.

5.1.3 Sweden. VHF Data Link 4 (VDL-4) ground stations are at 12 locations in Sweden, and some flying clubs and flight schools use the VDL-4 system to track their aircraft.

5.2 Radio Frequency Separation. There was a trend by Regulatory Authorities to require 8.33 KHz separation of radio frequencies. This involved a change from existing aircraft radios. This situation should be watched so that sport aviators were not presented with large costs for new radios. A problem for us is that when one area goes to 8.33KHz spacing, all the radios used in that area need to be changed so that interference is avoided from older radios with 25KHz spacing.

6. Global Navigation Satellite Systems (GNSS).

6.1 GPS. The US GPS system was said to have 31 satellites in orbit, of which 24 are on-line at all times.

6.2 GLONASS. The Russian GLObal NAVigation Satellite System (GLONASS) has 18 satellites. Some notes from the Russian Aviation Federation on GLONASS are at Annex H to the CANS minutes.

6.3 Beidou/Compass. The Chinese Beidou/Compass system currently has four geostationary satellites and is essentially an area enhancement system like WAAS for North America and EGNOS for Europe (*Beidou 2 is planned to have a full constellation of some 30 satellites, the majority in oblique orbit for primary fix data*).

6.4 Galileo. Funding and a schedule for the European Galileo system (<http://ec.europa.eu/transport/galileo>) has finally been agreed (*On 7 January 2010 a contract was announced with OHB System AB for the first 14 Galileo satellites, to be in orbit by mid 2014. Further contracts will follow for more satellites*).

7. **Status of Commission Representatives.** Commission representatives on FAI Technical Commissions only have Observer status, compared to National delegates who have full status and voting rights. There are over 80 nations in FAI and only 10 Air Sport Commissions (ASCs). This situation is clearly unfair, aside from being somewhat of an insult to the ASCs which are a key part of FAI. For the last two years proposals have been made to correct this, but have not been taken forward. IGC should now do so, see Annex A to this report.

8. **The next CANS meeting.**

8.1 **Dublin.** CANS wanted to have the next plenary on the day before the FAI General Conference and at the same location. The idea was to include delegates from nations that had previously not contributed to CANS, particularly from the middle and far east, who would already be at Dublin for the FAI conference. However, this was turned down by FAI management.

8.2 **Frankfurt.** After the rejection of the Dublin proposal, the CANS bureau agreed that the next CANS plenary would be held at LBSH in Frankfurt from 28-29 March 2011. This was announced by the CANS President in his address to the FAI General Conference in Dublin, confirmed by emails to FAI nations and Commissions by the CANS secretary, and included on the FAI web pages. Arrangements were made with LSBH which is not only a low-cost place to stay but only two metro stations from the international hub airport.

8.3 **Lausanne.** In late December 2011, FAI management changed the venue from Frankfurt to Lausanne. The meeting was to be held in the conference hotel, the Aulac. The CANS secretary issued emails to this effect, together with maps and instructions on how to get to the Aulac from Geneva airport.

8.3.1 **Change of Lausanne venue.** In mid January, FAI management changed the CANS meeting venue from the Aulac to the Maison du Sport International (MSI), some 2km from the Aulac. For Commissions such as IGC, such a change may be of little consequence because most delegates arrive on the day before. But in the case of a small commission such as CANS, European delegates generally travel on the day of the meeting which for this reason does not start until 14:00. Similarly on day 2, the CANS meeting ends not later than 15:00 so that some delegates can travel back on the same day. This arrangement has worked well for Frankfurt but may not do so for Lausanne, particularly when the meeting is at MSI rather than the Aulac.

Ian Strachan
IGC CANS Representative
ian@ukiws.demon.co.uk

Annexes: A . Proposed change to FAI By-Law 5.3.9



**International Gliding Commission
of the
Fédération Aéronautique Internationale**

From: President, IGC

Appropriate date 2011

To: FAI Statutes Committee
FAI Secretary General

Copy: FAI Executive Board

FAI Technical Commissions – Status of Commission Representatives

Dear friends,

The status of Air Sport Commission representatives on FAI Technical Commissions has been raised at the last three IGC Plenaries. It is now time to propose a change of FAI By-Laws to the FAI General Conference.

The existing FAI ByLaw 5.3.9 says that Air Sport Commission representatives "may speak, but have no vote at such meetings". This effectively reduces them to Observer status, a position that we simply do not understand when the Air Sport Commissions have important roles to play across all FAI activities. In addition, it makes Commission nominees ineligible to stand for Bureau positions on Technical Commissions, which are therefore occupied exclusively by National delegates. This is particularly anomalous when there are over 80 Nations in FAI and only 10 Air Sport Commissions. The position of ASC nominees on the General Sporting Commission (CASI) is much more reasonable.

The IGC position is that all nominees to FAI Technical Commissions should have equal status whether nominated by a Nation or an Air Sport Commission.

At annex is a proposal for a change to ByLaw 5.3.9. This should be placed on the agenda of General Conference and meanwhile brought to the attention the Statutes Committee so that they can consider it at their next meeting.

Yours sincerely,

Bob Henderson, IGC President.

Annex: Proposal for ByLaw 5.3.9

For the FAI General Conference Agenda

**IGC proposal to FAI to give equal status to
National and Air Sport Commission nominees
to FAI Technical Commissions**

Background: There are over 80 Nations in FAI but only 10 Air Sport Commissions (ASCs). The Air Sport Commissions, formed of National delegates, have a vital role to play in all FAI activities.

In this context it is not understood why ASCs essentially only have Observer status on FAI Technical Commissions (ByLaw 5.3.9). Their nominees have no vote and are not eligible to stand as Bureau members.

It is therefore proposed that ASC and National nominees to FAI Technical Commissions should have equal status to those nominated by Nations. A small change to ByLaw 5.3.9 is proposed below. It is noted that in the FAI General Sporting Commission (CASI), ASC nominees have equal status to those nominated by Nations and this should also be the case in FAI Technical Commissions.

Existing Bylaw 5.3.9. Each Air Sport Commission may nominate a representative to attend meetings and to receive papers of each of the Technical Commissions. Such representatives may speak, but have no vote at such meetings.

Proposed change to: 5.3.9. An Air Sport Commission may nominate a delegate to a Technical Commission. Such delegates shall have the same status and voting powers as National delegates.

TO: IGC Delegates

05Jan11

SUBJ: Jan11 IGC Meeting ANDS report

FROM: IGC ANDS Committee

Angel Casado, Bruno Ramseyer, members

Bernald S. Smith, Chairman

FAI & SSA RTCA representative

SSF/SSA EGU co-representative

NAA FAI Commission on Airspace and Navigation Systems delegate

OSTIV TSP member

UNOOSA's ICG ad hoc observer

SUBJ: Jan11 EnvCom report

FROM: Bernald S. Smith

IGC and NAA FAI EnvCom delegate, FAI EnvCom VP

Acronyms in Appendix I

ACTION ITEM - Current GFAC members and the expiry dates of their 3-year terms of office are Ian Strachan (UK-IGC meeting of 2011), Angel Casado (Spain-IGC meeting of 2011), Tim Shirley (Australia-IGC meeting of 2012) and Marc Ramseyer (USA-IGC meeting of 2013). Nominations by ANDS will be presented at your meeting for your consideration for election to fill the expiring terms and filling an open term.

ACTION ITEM - Proposed SC3 Rule (see separate agenda item):

Documentation/verification for glider flight altitude height achieved and gain made for claims of flight made above 50,000' msl must utilize a GNSS-derived altitude from an IGC GFAC-approved FR. See Appendix II for details.

Personal discussions of varying length by Smith on this matter have ensued with Ian Strachan, Bruno Ramseyer, JCWeber (CIA President), a CIA official from Sweden, who is deeply conversant with high altitude balloon flight verification, an NAA (USA NAC) official expert advisor of superior intellect on such matters, and IGC President Bob Henderson. After all of the above and development of what you read in Appendix II, a very recent in depth discussion was held with the pilot responsible for the current glider altitude record as part of the Perlan project. Subsequently, some discussion has taken place with SC expert Ross MacIntyre.

RTCA - Smith's involvement continues with SC-186 (ADS-B), SC159 (GPS) and to a much lesser extent with other SCs. RTCA meetings conducted with WebEx/telcon relieve much travel time/personal expense. It should be noted that many RTCA meetings, especially 186 & 159, include intensive EUROCAE participation. ION and CGSIC meetings also are on his list of things to do because of their pertinence to GNSS.

The current GPS constellation consists of 32 Block II/IIA/IIR/IIR-M satellites. Work continues on SVN49's problem with interference from its L5 frequency system. Other GNSS constellations are in varying degrees of progress towards full operational capability, with GLONASS being the most advanced.

FLIGHT RECORDERS - Ian Strachan, IGC's GFAC Chairman, will report on this subject. A complete updated rewrite/reorganization of the SC3 Annex has been accomplished. Recent extensive discussion re ENL/MOP matters continues.

FAA/SSA MOU - Mitre work on the FAA/SSA MOU (VFR ADS-B) continues but was slowed by difficulties obtaining proper equipment. The SSA committee of Steve Northcraft (Chairman), Hal Becker and Smith, along with SSA Chairman Umphres and occasionally an AOPA person, continue to have monthly telcons with Mitre's Rob Strain who is managing the program for FAA; a very short oral report re the latest may be given at your meeting if such is deemed appropriate.

As a reminder, the MOU establishes a collaborative effort to develop a phased plan to provide the soaring community with low-cost, lightweight, portable Automatic Dependent Surveillance - Broadcast (ADS-B) avionics equipment that may be used by the soaring community and others to reduce collision risk in visual meteorological conditions.

OSTIV at Philadelphia - Strain is one of the OSTIV track speakers at PHL11, the 26-29Jan11 SSA Conference in Philadelphia, PA at the Sheraton Society Hill Hotel (not Convention because no displays/booths) reporting on MOU flight testing to date. One of the MOU test pilots is SSF Chairman Rich Carlson. Other SSA Conference OSTIV track speakers include the FAA's Don Walker, reporting on ADS-B Equipment for Non-Rule Airspace, Loek Boermans reporting on Design of a Sailplane Wing Airfoil for Boundary Layer Suction, Helmut Fendt reporting on Safety Pays which I believe you will hear at your upcoming meeting, Helge Hald reporting on Basic Training and Evaluation Methods, Michael Kristensen reporting on FAST TRACK-Simulators and Dedicated Instructors, and Ian Oldaker reporting on Improve Your Instructing with Basic Laws and presenting a paper from Alfred Ultsch on FLYTOP Club Safety Training. Altogether the OSTIV track will hear from 20 speakers.

OSTIV nite at PHL, a reception, dinner and presentation, will hear from Danny Howell talking about The Development and Flights of the LightHawk in which he will discuss the status and performance of the LightHawk sailplane. He will talk about the difficult design challenges and manufacturing advances required to produce a glider which has a one ft/sec sink rate, capable of exploiting microlift, a very weak atmospheric lift condition, mostly unusable for conventional sailplanes. (The category of Microlift Glider was adopted for inclusion in the FAI Gliding Sporting Code in October 2004.)

UNOOSA - Smith continues to attend the UNOOSA's ICG meetings, the one last Fall being five days in Turin, Italy. Recall he attends as a US State Department invitee observer connected with CGSIC. Issues deal with the proliferating number of satellite positioning systems. As a result of such attendance, he determined that FAI should be encouraged (SSA does not, and IGC may not, qualify) to become an official affiliate/observer. He presented a proposal to IGC's President Bob Henderson (an FAI ExBd member), who supported it, and presented it to the FAI ExBd. They approved it, recommending that Smith be the FAI representative thereto, and directed the FAI office to proceed with an application. Pending approvals up the line of bureaucracy, a final decision cannot be made until the ICG meeting next Fall in Japan. What's the importance of ICG? Smith has considered presenting a paper titled: GPS: DOOMED. ICG's purpose is to assure that doesn't happen. But he hastens to assure you, the US has taken steps on its own to protect GPS frequency broadcasts from other systems' same-frequency potential interference.

EGU - Representing SSF/SSA's Associate membership therein, Smith plans to attend the next EGU meeting near Madrid, Spain 26/27Feb11, coming from there directly to Lausanne for the IGC meeting 02-05Mar11. The earlier dates than plenary are to make a short presentation* to your Bureau, for which permission was granted by President Henderson.

*Among other things, it will cover the proposal in the Sporting Code for glider flight records above 50,000ft.

The next FAI CANS meeting is 28/29Mar10, currently planned in Lausanne, which Smith plans to attend as the NAA (USA's NAC) delegate thereto.

FAI Environmental Commission - As previously reported, its President Michael Goth died in a glider accident last year, so Smith and the other VP (Norway's Kare Liasjo) have been acting in his stead, including being included on the FAI Commission Presidents email list (so they know all the background secrets!). Smith represented the EnvCom at the FAI's Dublin General Conference and also prepared the agenda for the forthcoming EnvCom meeting, 22Jan11 in Lausanne. At your meeting, he will circulate, or give orally, a very short report to you on that.

Thank you very much for the opportunity to serve where I can meet so many interesting people, and enjoy it as much as I do.

s/Bernald

- end of report -

Appendix I

ACRONYMS & DEFINITIONS

(a short list)

ADS-B - Automatic Dependent Surveillance - Broadcast
ANDS - Air Traffic, Navigation and Display Systems
AOPA - Aircraft Owners and Pilots Association
CANS - Commission on Airspace and Navigation Systems
CIA - FAI's Ballooning Commission
CGSIC - Civil GNSS Service Interface Committee
EGU - European Gliding Union
ENL - Engine Noise Level
EnvCom - FAI's Environmental Commission
FAI - Federation Aeronautique Internationale
GFAC - GNSS Flight Recorder Approval Committee
GNSS - Global Navigation Satellite System
GPS - Global Positioning System (USA)
ICG - International Committee on GNSS (United Nations)
IGC - International Gliding Commission
ION - Institute of Navigation
MOP - Means of Propulsion
MOU - Memorandum of Understanding
NAA - National Aeronautic Association
NAC - National Airport Control
OSTIV - Organization Scientifique et Technique Internationale
du Val a Voile
PHL - Philadelphia
RTCA - no separate meaning, a private non-profit
corporation addressing aviation requirements and
technical concepts to advance the art and science
of aviation and aviation electronic systems for
the benefit of the public, with nearly 300
volunteer organizations, more than 25% of which
are non-US, from the entire worldwide aviation
community, functioning as a Federal Advisory
Committee, to develop consensus-based recommendations on
contemporary aviation issues, whose documents are most
often used as the basis of government-issued TSOs
SC - Special Committee or Sporting Code
SSF - Soaring Safety Foundation
TSP - OSTIV's Training & Safety Panel
UNOOSA - United Nations Office for Outer Space Affairs

Appendix II (taken from a report submitted by Smith to ANDS, GFAC and others)
Here's another long one - about 7 pages including the background communications
to which I refer.

Concurrence is sought with a proposal for an FAI SC change to require GPS for glider altitude measurement above 50,000ft. What follows is the gist of discussions.

A - I recognize that SBAS reduces GPS tropospheric delay error, and that such error varies over time, but I aver we know reasonably well what that max error is, disregarding periods of intense sunspot activity.

B - SBAS is not now available worldwide; granted it may well be sometime in the future, but flights are being prepared now for areas of non-SBAS coverage.

Granted, a ground FR in the hands of the OO at takeoff could establish corrections for iono error, but the flight could well proceed beyond the range of that ground unit's corrections' acceptability.

C - I accept statements of other error sources, but I aver they are manageably capable of being accounted for.

D - There is a need to address the issue of flight verification instrument calibration.

Trying to put my simple mind to this issue of IGC's potential interest in revising the altitude claim issue for the, at present one glider pilot attempting a glider record altitude flight above 50K feet, and to keep it an honest recognition of achievement, I come up with something like the following, for which I further apologize for it being in feet; that will be changed to metric, as discussed later below:

Proposed Rule for IGC Glider Flight Altitude Height Achieved and Gain Made for Claims of Flight Made Above 50,000'msl:

1 - claims must utilize a GPS IGC GFAC-approved FR containing a baro transducer for documentation (That will be modified in the future whenever any other GNSS becomes fully operational worldwide, e.g. GLONASS which is closest to such achievement. For now, I'm sorry, but we must limit it to GPS.)

2 - the claim shall be GPS-derived geodetic altitude, not baro msl, utilizing a geodetic datum within x ft of ITRF.

3 - The claim shall be reduced from the documentation evidence by y ft.

4 - The resulting reduced claim difference from an existing record shall exceed the existing record by z%.

5 - The first claim utilizing GPS must exceed the existing baro claim by w ft.

6 - No other documentation, e.g. baro-derived, is acceptable.

7 - Claims are not acceptable for flights made within v hours of periods of intense sunspot solar flux radiation. Documentation must include suitable evidence that there was no such activity within that time period.

8 - The FR must be calibrated within the existing FAI SC rule requirements for:

~ GPS altitude up to 95000ft msl*

~ baro altitude up to 50000ft msl

~ GPS/baro altitude comparison up to t ft*

* are there calibration requirements for GPS besides GFAC?

So, if the above is acceptable, what are the values of tuvwxyz and the meaning of intense?

A - with a proper defining of intense, v may not be necessary, otherwise, it shall be 96.

B - intense shall mean solar flux exceeding the high of the previous u hours.

C - u shall be 24.

D - v see A

E - w shall be 3%

F - x shall be 10ft (no problem for GPS and GALILEO)

G - y shall be 1000ft

H - z shall be 2% (or maybe just 1%)

I - t gives me trouble; maybe it's best to say calibration for both GPS and baro up to, say, 40000'. I'm thinking of calibration lab accessibility. GPS calibration is by simulator, in my experience with RTCA. So, how to compare. Dare I suggest the baro is included only to prolong the old ways?

Some of those may seem/be excessive, especially:

- the y value, based on discussions with others, could be 500ft.
- the need for any u or v value, based on FR experience since implementation of use during solar flare activity (the cycle being 11 years and of small impact during daylight hours in the latitudes flown by most gliders), but attempting world altitude records may enter areas of solar flux GPS signal deterioration and see further discussion of flight hours.

Is this whole thing too bureaucratic? Where did my numbers come from? A conservative look at documentation, experience and wide-eyed gut feelings.

Not being fully conversant with the 1yr/2yr IGC SC rule change cycle, if we've run out of time (my fault) for getting all the detail of this completed in time to meet the deadline, I would like to ask for a vote at the forthcoming IGC meeting, proposing acceptance of this GPS requirement for flight above 50K'. The ensuing subsequent year until the 2012 IGC meeting would be used for metrification while 'fine-tuning' of numbers, etc. It would then be proposed to the 2012 plenary to fully accept the final draft of all the above, with implementation being immediate, not waiting until Oct12. I had originally thought to seek final approval at the forthcoming meeting, with Bureau oversight approval for necessary changes for sooner implementation, but we have time.

Issues that need to be addressed within the proposal include the following, coupled with my recommendation:

- active 3-axis flight control dampers vs passive: active permitted

- aerodynamic flight controls vs thrust reactors: FC reactors disallowed
- auto pilot: permitted
- human occupied and controlled: required
- state acceptance: we have no control without a change; as I understand it, the issue is a requirement for national record before acceptance as an international record such that a state could refuse to acknowledge a state record, thus precluding a world record
- records: per above; national vs international
- all this just for one pilot: yes, among other things, the worldwide publicity would be very nice, but of course that works both ways if there's an accident. I wondered about requiring anybody else trying it to have the same training the current pilot does, a NASA and USAF test pilot as well as a longtime glider pilot, with both an F104 time to climb to 84K' record of just over 3 minutes, who also holds a glider altitude record made some 40+ years later for a flight above 50K ft.
- nite flt: permitted
- MOP: permitted? (none in current aircraft under construction)
- pressurization: required
- GPS engine specs: altitude/temperature range certified; temp log req'd?

FR - Flight Recorder
 GFAC - GPS Flight Recorder Approval Committee
 GNSS - Global Navigation Satellite System
 ITRF - International Terrain Reference Frame
 MOP - Means of Propulsion
 NASA - National Aeronautics and Space Administration
 SBAS - Space Based Augmentation System
 SC - Sporting Code
 USAF - United States Air Force

Bernald
 Bernald S. Smith
 FAI IGC ANDS Committee Chairman

Below is a summary of discussion as noted previously:

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Gents, This is to bring us three together.

Brian Utley is a former Director and President of SSA, a retired (I think) industry executive who probably knows more about computers than anybody really should, a versatile person when it comes to getting things done and NAA consultant for, among other things, hi-alt including use of GPS.

Hans Akerstedt is a retired SAS Captain, experienced and excellent balloon pilot and expert for CIA on flight verification, especially hi-alt.

Among other things, Bernald Smith is the one who started FAI, via IGC, down the path of utilizing GPS instead of baros and cameras for flight verification.

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From Brian Utley:

We at the NAA have been concerned about the problem of determining geometric altitude accurately at all altitudes including the stratosphere. Additionally I am involved with the Stratos project on the topic of geometric altitude verification at 120,000 ft and more. I can share with you the direction I am taking on this topic which may have some value for the Perlan project.

To this point in time the IGC has depended upon barometric altitude corrected for altimeter setting and instrument calibration. In my article in Soaring Magazine of February this year I discussed the significant deviation from geometric altitude that occurs. This analysis used radiosonde data from various locations and at different times of the year corrected for altimeter setting. Deviations of hundreds of feet are not uncommon and can be below and above the actual geometric altitude depending upon atmospheric temperature distribution. I have also evaluated many flight logs against radiosonde data and GPS derived altitude data. The common view has been that GPS altitude data is unreliable because of the inherent error factor which I will discuss later in this message. However my findings are that the error caused by using barometric pressure is invisible but larger than the GPS error. The larger the barometric error the better the GPS rendition of altitude looks. One of the problems with GPS altitude is that the measurement has a low repeatability factor. By this I mean that in a given flight log there will be differences in result from sample to sample. Some very small, some larger. I will discuss this later. Notwithstanding this, undulation in the altitude rendered is less and even substantially less than the barometric measurement.

I recently evaluated the flight logs from a High Altitude, Long Endurance UAV. The flight lasted 14 days and the maximum altitude was over 77,000'. The primary measurement was by GPS with an OAT log. The flight data was evaluated against radiosonde data from weather sounding stations within 300 miles. The GPS engine was WAAS enabled and the nearest WAAS reporting station was also within 300 miles. Reviewing all sources allowed one to conclude that the claimed GPS reported altitude could be supported.

Regarding the usage of GPS altitude measurement above 60,000 ft., the DOD rule is that the device must not be capable of BOTH altitude measurement above 60,000 ft AND speed in excess of 1,000 km/hr. The device being used for the Stratos project is the Garmin 15X-W and is expected to perform up to the desired altitudes. I have the first prototype and will be testing it shortly. (The DOD requirement does not apply to some non-USA manufactured GPS engines;

there are at least some such available, but this poses no problem because flight at speeds above 1000kph in a glider for the near future are highly unlikely! - Bernald)

Now to GPS usage for altitude measurement. The NAA has used two Novatel DL-4 precision receivers for several years for measuring high performance World Record General Aviation attempts. (Developed for NAA in Canada with a grant from ION under the leadership of one of my ION colleagues for use in supersonic flight - Bernald). The most challenging of these is the 3 km speed record due to the need to establish start and finish times to extremely close tolerances. These devices sample at up to 20Hz and by using one as a ground reference station it is possible to achieve centimeter level accuracy using post flight processing.

Now a word about sources of error in GPS measurements. Note the following:

1. Orbital variation (ephemeris variation)
2. Clock synchronization between satellites and ground receiver
3. Satellite constellation configuration
4. Ionospheric distortion
5. Stratospheric distortion
6. Multi-path distortion

WAAS ground stations can resolve some of these errors and reduce vertical errors to less than 7 meters thereby qualifying GPS approaches for basic instrument conditions. The key is that the ground station, having absolute position knowledge can provide correction factors for users within the neighborhood of the ground station. The quality of the correction factor is reduced as the radius from the WAAS station is increased due to differences in the visible satellite constellation and the change in signal path through the atmosphere.

For local (up to 50 km) enhancement I have used one GPS receiver on the ground as a base station and a second station removed from the base by some distance. The base station record for several hours and the data log is processed to create a virtual position by averaging all the records. A correction table is created by time and then applied to the output of the second receiver. Results of this process yield 3 sigma results that are comparable or even better than WAAS results.

I have tried to encapsulate some of my experiences here, I trust it doesn't come across as too pedantic but I wanted to create a basis for discussion.

Regards,
Brian Utley
NAA Contest and Records Board

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From Hans Åkerstedt

Altitude measurements is a an interesting subject and I could write a long essay about how we have treated it in the CIA. With me it all started when I wrote my examination thesis at the Royal Technological University in Stockholm 1968. I happened to stumble over a Chinese report from 1955 about converting barometric to geometrical altitude.

For us one problem has been that altitude records have always been based on geometrical altitude. Pressure altitude would probably have been more appropriate as the balloon performance is probably more related to pressure altitude or density altitude than geometrical altitude.

It is sometimes a problem for pilots (and NACs) but we have a good tool if we have a good radiosonde table. In fact just compensating for deviations from ISA at low altitude gives a good result.

Our rules state that the geometrical altitude has to be calculated with an accuracy of 1% and a new record has to be 3% better than the old one. Up to about 10 000 m a barometrical altitude can be converted to geometrical within these limits but then we need altimeter/barograph calibration and radiosonde data. GPS altitude is already geometrical but has to be corrected for difference WGS84 - MSL. This can easily be calculated on line:

<http://earth-info.nga.mil/GandG/wgs84/gravitymod/egm96/intpt.html>><http://earth-info.nga.mil/GandG/wgs84/gravitymod/egm96/intpt.html>

or

<http://sps.unavco.org/geoid/>><http://sps.unavco.org/geoid/>

In very general terms the correction is about -50m on the northern hemisphere and +50m south of the equator. But with a curious anomaly in the Indian Ocean of about 200m.

A few years ago I had a case with an Indian altitude attempt about 20 000 m. It was recorded with 4 different instruments.

- 1: A Volkslogger barograph. According to manufacturer not usable over 18 000m
- 2: An Indian barograph. Not calibrated
3. An indian GPS. No information received.
- 4: A Garmin 276. This info was used but gave the lowest result of all four.

GPS altitude is said to be accurate to about 3 time the horizontal accuracy. Many believe that the horizontal accuracy is 5-10 meters but that varies from

manufacturer to manufacturer. For Garmin The EPE shown in the display is 50% probable error. For other manufacturer it may be 33%. For records we want the 95% probability and that is about 2.3 times the 50% error.

So the Garmin EPE suddenly converts to about 25 m error horizontally.

The altitude accuracy is said to be about 3 times the horizontal error. One reason is that for a good horizontal fix there are satellites all around the horizon but for altitude fixes there are very few satellites below the balloon altitude. Makes sense.

Barometrical altitude accuracy is dependent and proportional to the altitude and has to be converted to geometrical altitude taking into account the actual atmospherical data. GPS altitude accuracy is about +/- 75 m regardless of altitude and has only to be corrected for the local difference between GPS altitude (WGS84) and MSL.

Hans Akerstedt Retired Captain SAS

CIA delegate Sweden 1974-

FAI Astronautical Record alt Delegate 2010-

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Hans, I write you as the ballooning expert on high altitude flight verification on the advice of Mr. Weber, responding to me querying him about what you folks were doing about using GPS rather than baro for higher altitudes. I have thus found that we in gliding are not the only ones so interested and that indeed the USA's NAA is also looking into it. I would be most interested in what you have done so far and will of course share with you where we're going as well as what goes with NAA, whose man on the task to determine how GPS can be used at high altitude is a longtime friend of mine.

Bernald

Bernald S. Smith

IGC Airspace, Navigation & Display Systems (ANDS) Committee Chairman,
USA Delegate to FAI's Commission on Airspace and Navigation Systems (CANS),
Captain, UAL (retired),
Commander USN (retired)

Country Development working group

Annual report 2010-2011

Progress in establishing the Country Development website has been halted due to changes in the FAI IT team which has resulted in a delay in introducing a new server. This means that the main infrastructure for further community-facing initiatives is not yet in place and as a consequence all work on such projects has been stopped until the problem can be resolved.

It is felt that good deal of momentum and goodwill generated by the Pilot Survey has been lost, as we have not yet been able to put our mailing list to use to distribute the results of the survey to the wider community and call attention to new initiatives of the group.

At this point, about 50% of the work on the Country Directory has been completed. This directory will incorporate all research (past and future) conducted on a country-by-country basis and will be a main resource for information on the state of soaring activity in each country. Further work on this depends on the specifications of the server.

A decision needs to be made soon in collaboration with the Bureau and Secretariat as to whether the site can be developed within the FAI server, or if it should be hosted independently to expedite its launch.

Once the site is operational, the working group will continue with the currently planned research and development initiatives which include the following:

- Creating a network for discussion and initiation of development initiatives through the website
- Creating a pilot exchange program between emerging and advanced countries
- Conducting further research on major stakeholders of the soaring movement (NACs, clubs etc)

At this moment the working group is also looking into developing a further part of its strategy focusing on soaring tourism. We hope to have more information on this topic by the plenary.

January 2011

Alexander Georgas

Chairman - Country Development working group



IGC SAILPLANE GRAND PRIX ACTION PLAN January 2011

This plan was published in 2010. I am proposing that we allow time for a short discussion on whether the plan needs updating or amendment following the report on the SGP+ (Sky Race World Cup) project.

Vision (Mission)

To use the Sailplane Grand Prix concept to combine the spectacle of gliding and glider racing with a short, sharp and understandable format to attract the media and the public to the sport of gliding.

Goals of the SGP

The IGC Bureau has defined three goals for the SGP:

1. To **educate** the general public about the sport of gliding including the challenges of glider racing, the performance of modern gliders and the excitement of the GP race through the use of television as the primary medium
2. To **engage** glider pilots with the GP race format using the internet as the primary medium
3. To **entertain** the public and glider pilots through television and the internet
4. To **create sponsorship** opportunities to benefit all aspects of the sport of gliding

Strategic Actions

Goal no. 1 - Educate by using visual imagery combined with professional commentary. Outputs may be TV programmes, DVD products, Internet (YouTube)

Goal no. 2 - Engage by providing internet based tools and commentary to enable glider pilots to follow the races and selected pilots. Outputs may be tracking; interactive tracking; interactive commentary; delayed coverage; replayed coverage

Goal no. 3 - Entertain by creating stories about gliding and “heroes” amongst the competing glider pilots. Outputs may be visual imagery products (as per Goal no. 1) and internet based (as per Goal no 2)

Goal no. 4 - Create sponsorship by providing an entertaining television and internet product that creates value for potential sponsors by increasing their opportunities for public exposure. Outputs will be visual imagery products and internet based

Tactics/ Solutions to Achieve the Goals

Ensure high quality consistent and safe events through:

- IGC appointed “Director of the GP” to provide overall management of the product, races, and coordination with local organisers and media providers
- Race management by IGC selected personnel including Contest Director and Scorer
- Constant review of the product and achievement of the goals during and at the end of each GP Round

Provision of high quality internet and visual imagery products through:

- Creation of partnership through FAI with potential technical providers
- Creation of partnerships through FAI with skilled media producers
- Development of protocols for internet support to tracking and live streaming products
- Developments of protocols for live filming on the ground and in the air of the GP race and the pilots

Creation of a story and “heroes” by:

- Following pilots progressing through the QGPs to the Final
- Ensuring the pilots are clearly identifiable as individuals and nationally through branding (uniforms; logos on gliders etc)
- Modifying the “race” as necessary to enable the telling of a story and the creation of “drama” to hold public interest

Providing competent GP events by:

- Identifying the role for the Local Organiser and their relationship with the FAI/IGC Officials and with the media providers
- Seeking hosts who can provide the infrastructure necessary to support the media technical requirements
- Ensuring the Local Organiser has experience in running gliding competitions, has a pool of volunteers to assist and has accommodation and catering facilities on or adjacent to the airfield

REPORT FROM THE IGC HISTORY SUB-COMMITTEE

For the IGC meeting March 2011

By Tor Johannessen

The sub-committee for IGC history consists of the same members as last year, Fred Weinholtz, Angela Sheard, John Roake, Peter Selinger, Manfred Reinhardt and Tor Johannessen.

Since last year it has been decided to include portraits also of winners of the Majewskaja Medal and the Gehriger Diploma. This has expanded the work considerably. There are now 87 portraits to be included, up from 61. To help in this work additional authors have been asked to provide portraits. As no remuneration is provided for the authors, some patience is needed

In the search for the early part of the commission's history we have looked for the confiscated papers in several places. The German Bundesarchiv in Freiburg and Berlin have been visited as well as the National Archives in Washington DC twice. At these places all microfilms that might shed some light on the history have been scrutinized with negative result.

Last year I told you that the estimated time for our work had been greatly underestimated. I have to repeat the same this year, especially taking into consideration the addition of the new portraits. However, as our search for the early history of the commission has come to an end, the time will be focused on getting the file of portraits complete, getting them translated to the other language and then getting the history as completely as possible.

Our challenge to NACs to help us to find the missing minutes from 1956 (St Yan) and 1958 (Leszno) has been in vain. We will now ask for help from the FAI Secretariat to write directly to the various NACs that might have the minutes.

Report to the IGC Plenum

Scoring Software Testing Group

Jan. 13th 2011

Actions in 2010:

The major scoring issue in international competitions 2010 has been the obvious need to secure the version of the script used for scoring FAI competitions. This can be done easily enough by downloading the latest version before the competition and so making sure that the script used is unmodified. It is also easy to add an version check-sum and encryption key for unlocking to the file.

The scoring guide for FAI competitions will be part of organizers handbook that is currently being developed.

The question of geometric paradox has been risen from inside the group and an short explanation of this problem is annexed to this report. A meeting is called to address this issue with chairmen of the sporting code and Annex A groups.

Description of the geometric paradox by Rick Sheppe, member of the group:

Delegates should know that a geometric paradox exists.

There are two earth models, the sphere and the ellipsoid. Ideally, the software used for flight planning, flight evaluation, scoring, and in-flight calculations should all use the same earth model. Furthermore, the designers of programs should all use the same geometric algorithms. This should be obvious to all. Any other situation has the potential to produce discrepancies and disputes.

One of the Scoring Software Committee's responsibilities is to investigate the possibility of establishing computational standards for the scoring of gliding competitions. At present, no such standards exist.

In practice, scoring programs use a combination of earth models and geometrical algorithms. For example, it is common for the ellipsoid to be used for tasking and for calculation of credited distances, while the sphere is used to determine whether a line has been crossed, and a third model (Cartesian) is used to display flight tracks on a screen.

The reason that a combination of methods must be used is that the algorithms for performing certain necessary calculations are not available in all earth models. For example, using the ellipsoid, it is practically impossible to determine if the glider has crossed a line. This has implications for starts, finishes, assigned areas, and prohibited airspace. Consequently, programmers must arbitrarily switch to the sphere to determine the crossing of a line.

The blending of earth models and algorithms by the authors of scoring programs is not specified by IGC; nor do we know if the various scoring programs are blending the algorithms in the same way.

The root cause of this confusion is the lack of mathematical rigor in the General Section. The GS specifies how to calculate the distance between two points, but it is mute on the subjects of bearings and lines.

It is the Committee's opinion that the problem should be addressed before it causes trouble in a competition.

The Scoring Software Committee recommends that the delegates consider these possibilities:

1. Wait for the GS to improve and hope for the best in the meantime.
2. Mandate the use of a single scoring program
3. Return to the spherical earth for Annex A calculations.

The members of the Scoring Software Committee are happy to discuss this issue with the delegates at the 2011 Plenary.

Members of the group:

Visa-Matti Leinikki (chairman), Peter Ryder, Angel Casado, Hans Trautenberg, Tim Shirley and Peter Platzer, Rick Sheppe

Helsinki, January 13^h 2011

Visa-Matti Leinikki

To: IGC Plenum – Lausanne, Switzerland – March 2011
Re: Championship Structure Working Group (CSWG) Report
From: IGC Bureau
Agenda Item: 10.1.2

At the 2010 IGC Plenum meeting in Lausanne several proposals were adopted that would impact the Competition Calendar of the IGC.

The first proposal adopted was from the IGC Light-End Working Group. It states;

A 13.5m racing class be created to allow all eligible¹ gliders and motor gliders² with a wingspan of less than 13.5m to participate in IGC international competitions. This new racing class will subsume and replace the current FAI World Class at WGC and international competitions.

A working group chaired by Roland Stuck was charged to develop the guidelines for the 13.5 Meter Class. The report and recommendations of this WG will be considered under agenda item 10.1.

The second proposal adopted by the 2010 Plenum was a proposal from Norway. It asked for the immediate inclusion of the 20-meter Two-Seater Class in the World Gliding Championships structure.

At the conclusion of the 2010 plenary meeting, the IGC President tasked the Championship Structure Working Group (CSWG) with incorporating the two adopted proposals into the IGC Competition Calendar. The Charter given to the CSWG included the following;

- From the 2010 IGC MINUTES. *"It is proposed that the IGC Championship Working Group, in conjunction with the Bureau, conduct a complete review of the World Championships calendar, with respect to classes supported. The group will consider all classes defined in Annex A. A report, with recommendations, will be presented at the 2011 meeting of the IGC Plenary."*
- 13.5 METER CLASS. *Recommend how and when we fit the newly created 13.5 meter class into the IGC Competition Calendar,*
- 20 METER TWO-SEATER CLASS. *Recommend how and when we fit the 20 meter Two-Seater Class into the IGC Competition Calendar.*

¹ Eligibility for participation in IGC international competitions is defined in Sporting Code Section 3 (2009 Edition, valid from 1 October 2009), para. 6.1.6: A glider must hold a valid Certificate of Airworthiness or Permit to Fly that does not exclude competition flight and comply with the conditions of its airworthiness documents

² SC3, para. 6.4: Motor gliders are integrated into the other championship classes (except the World Class) under championship rules for motor gliders (Annex A refers). SC3-A, para. 1.3.3: Motorised sailplanes shall be permitted to participate in their appropriate classes, provided they have fully functioning MoP recorders.

The work of the CSWG was conducted via email between April and June 2010. The following persons agreed to contribute their thoughts to the work of the CSWG:

- Eric Mozer (USA) – moderator
- Brian Spreckley (UK)
- Roland Stuck (FRA)
- Terry Cubley (AUS)
- Goran Ax (SWE)
- Axel Reich (GER)
- Arild Solbakken (NOR)
- Rene Vidal (CHI)
- Bob Henderson (NZL)

The proposal from the IGC Bureau is as follows:

1. No changes are to be made to the following classes; **15 Meter, 18 Meter, Open, Standard, Club**
2. No changes to the IGC Competition Calendar are recommended to the Multi-Class World Gliding Championships comprised of the **Open, 15 Meter, 18 Meter**. This event is recommended to remain in **EVEN** years.
3. The Multi-Class World Gliding Championship that has the current configuration of **Standard, Club and World** classes will be changed. The **World Class** will be deleted and the **20 Meter Two-Seater Class** will be added.
4. The Multi-Class World Gliding Championship comprised of **Standard, Club and 20 Meter Two-Seater Class** classes will be competed in **EVEN** years. The entry configuration for this WGC will be as follows:
 - **Standard Class** – 2 entries per NAC
 - **Club Class** – 2 entries per NAC
 - **20 Meter Two-Seater Class** – 1 entry per NAC
5. The **13.5 Meter Class** will have it's own World Gliding Championships to be held for the initial time in 2015 and be competed bi-annually in **ODD** years
 - **13.5 Meter Class** – 4 entries per NAC

If the proposal from the Bureau is adopted the first opportunity to consider bids for the new structure of Multi-Class Championships will be in 2013 for the WGC's to be held in 2016.

If the proposal from the Bureau is adopted with respect to the 13.5 Meter World Gliding Championships, the first event can be held in 2015. Bid applications for this event will be due to the IGC Bid Specialist by September 30, 2011. The IGC Plenum will consider the bids and decide on the venue for this WGC at its 2012 meeting.

Report of the Continental Records Working Group

Review and Update

The latest IGC plenary 2010 in Lausanne clearly confirmed our Year Two proposal regarding Continental Records.

“The (year two) proposal was adopted with 31 votes for, 1 vote against and 1 abstention. The President asked the Plenary to empower the Bureau to complete the proposal with minimum performance required per continent, which was unanimously approved”

The main features of our Year Two decision are:

The FAI Sporting Code (General Section and Section 3) be modified to include continental records for gliding performances.

1. The record categories, classes and types defined for world records (see Sporting Code, General Section, 3.1) shall apply also to continental records.
2. The rules for world records and the procedures for their verification and homologation shall apply as far as possible to continental records.
3. For continental records, the continental regions defined in para 3.4.5 of the General Section will be used, with one exception: that part of the Russian Federation east of the 61° meridian will be assigned to Asia.
4. Flights which cross the borders of continental regions will be assigned to that region in which the greater part of the flight took place.
5. A minimum performance shall be stipulated for each continental record category, class and type. Proposals for the minimum performances should be worked out by the continental records working group in cooperation with the FAI office.
6. All continental records are open to any pilot with a valid FAI Sporting Licence.

There still is broad agreement and support for the major goal, which is to ensure that record flying continues to be attractive and provides an incentive for exploring new regions for gliding worldwide. Another important aspect is to open record flying to a wider group of pilots and to make our sport attractive to media.

CASI

We now have four Air Sport Commissions (Ballooning CIA, Parachuting IPC, Hang Gliding CIVL and IGC) which are on the way towards implementing continental records. CIVL has just finished their rulemaking on Continental Records, their rules have been in force since 1st May 2009.

Therefore CASI (the FAI "Air Sports General Commission") has established a working group on how to implement Continental records into the overall framework, the General Section (GS) of the Sporting Code, with me representing the IGC.

In the meantime we had detailed and lengthy discussions within the CASI WG on the issue. One of the problems to solve was the requirement in the current version of the general part of SC, which states that international records (these are world and continental records) have to be recognized first as national records. The other challenge was with regard to handling continental geographical regions for record purposes, e.g. differentiating Europe and Asia within the Russian federation.

We have been very successful in bringing in our IGC decisions into CASI's Continental Records Working Group recommendations. On the FAI General Conference in Dublin in October 2010 these proposals have been adopted and will result in an appropriate amendment of the General Section of the Sporting Code. They will be in force from 1st January 2011.

Implementation into SC3

In the meantime a compact and precise wording to amend rules in the SC3 on the basis of our Year Two decisions has been elaborated by our Sporting Code Committee.

A list of minimum performances for continental records has still to be set up, a work currently in progress.

Summary

The implementation of CR into the SC3 (our sporting code) now seems to be only a formal matter.

It can be expected that our ambitious pilots can start “Continental Records flying” from 1st of October 2011 or latest 1st January 2012.

Acknowledgement

At this point I would like to express my very thanks to all who contributed to implement continental records into the Sporting Code, the members of the CASI WG, the IGC Sporting Code Committee, to Max Bishop, to Marcel Meyer from the FAI office, to Peter Ryder and of course to all members of the continental records working group for their support and valuable advice.

Hanno Obermayer

Continental records working group

In Addition

It would be worth publishing and advertising this new kind of record flying in our gliding magazines and on our homepages. We expect we can count on all IGC delegates and of course on our established record pilots.

REPORT FROM THE IGC REPRESENTATIVE TO CASI

For the IGC meeting March 2011

By Tor Johannessen

The FAI General Conference (GC) with the two CASI meetings were held in October in Dublin, Ireland.

The CASI Bureau has consisted of the same people as last year: President Henk Maertens (Australia), 1st Vice President John Grubbström, Sweden, Vice Presidents John Aldridge (CIVL), Graeme Windsor (CIP) and Jean-Pierre Delmas (France), and Secretary Gill Winter (France).

All of the ten NACs elected to be part of CASI were present this year

The following long list of subjects were on the agenda:

1. A Greek proposal regarding insurance. At a previous FAI event an insurance sold at the venue did not comply with the stipulated requirements in the local rules. How to rectify this was the subject of a lengthy discussion. At the end it was decided to simply add such a requirement to the GS.
2. Continental Records. These were introduced last year and a working group consisting of representatives from four of the ASCs was supposed to propose how to implement them. The group reported that they had a split view on whether all commissions needed to have the same rules. The same split was obviously evident in the commission too, as it was decided by a 9-8 vote that each commission could decide its own rules.
3. Requirements for world records. This agenda point was raised by FFVV and supported by IGC. It was unanimously decided that a record set by a two-person crew in a glider does not need to be a national record to become a world record. The general rule that records have to be approved as national records to become world records was questioned, and a working group was established to look into why this requirement exists. Ross Macintyre is a member of this working group.
4. Human powered flight with flapping wings (ornithopter). This category does not exist in FAI. A group in Toronto in Canada seems to have solved the technical problem, and record categories should be established. CIACA will look into how to implement this.
5. Revision of SC 11. The working group with Henk Meertens as the leader had not functioned because of Henk's long sickness. The group was "consolidated" with Buzz Bennett in the chair, Henk Meertens, John Aldridge and Mike Close.
6. Standards of Distance Measurement. This WG also had its problems caused by the President's sickness. The understanding of the general problems with the various distance measuring methods was greatly helped by a paper from Rick Sheppe. Instead of revising GS 7.3.1.1 as proposed, it was requested that each commission review the section on distance measurement in its sporting code to ensure compliance with the GS.
7. CIMA proposal for changes to the GS. According to the new president of CIMA, the commission has decided to change its name and include microlight autogyros (up to 450 kg gross) in the commission's area of responsibility. CASI could not deal with the first item because the decision was not documented in the minutes from the meeting. The second item raised the temperature at the meeting, as the CIG had not been contacted at all. The two commissions involved, CIMA and CIG, were asked to consult together and come up with a proposal.
8. CIVL proposal for change of representation. It was proposed that the two calendar year period between representation for different NACs in FAI 1st Category Events be reduced in certain cases. The resolution lost 11-5 with 1 abstention.
9. IPC proposal for change of the GS 4.2.3. It was unanimously approved to accept video evidence with only one Official Observer being present at the event.
10. Review of FAI guide lines in case of serious accidents at FAI events. A WG was established with Graeme Windsor in the chair, Jean-Pierre Delmas and Jürgen Knüppel (CIMP President) to review the document.

11. Request by the FAI Secretariat for a review of FAI appeal procedures. A WG consisting of Henk Meertens and Jean-Claude Weber was established to prepare new guidelines.

At the General Conference the following NACs were elected: Australia, Czech Republic, France, Germany, Poland, Serbia, Spain, Sweden, Switzerland and USA.! **OBS!! Probably not correct as the minutes from the General Conference in Dublin are not yet available**

Bureau Elections:

President Henk Maertens (Australia) was re-elected. As the previous 1st Vice President John Grubbström from Sweden had been elected FAI President, he could not be re-elected. Graeme Windsor (CIP) was elected. As Vice Presidents were elected John Aldridge (CIVL), Jean-Pierre Delmas (France) and Tor Johannessen (IGC). Gill Winter (France) was re-elected Secretary.



Report to the IGC-Meeting 2011

As in previous years, the past year has required a significant volume of activity from the Executive Board, which was also supported by Andy Miller and Mika Mutra. Roland Stuck was faced with serious health problems but, after a spectacular rehabilitation, took up his function again as advisor/webmaster and even attended the last board meeting in December. Many thanks for the dedicated work and support!

The Technical Officers provide detailed information at our annual Congress Meeting with an outline of each one's work in their domain posted to members in advance.

Below, a short overview of the subjects which have required our attention during recent months.

EASA has continued to publish a flow of NPA's (Notice of Proposed Amendment), CRD's (Comment Response Document) and Opinions. EGU has done its best to attend workshops/meetings and to comment on all these documents within the deadlines:

Training Organisations

- A combined Europe Air Sport/EGU delegation met EASA on 16th of February to explain our concerns about the *NPA 2008-22 – Approved Training Organisations* and to present our proposals for alternative rules. Unfortunately, the promised follow up meeting was dropped.
- On the 4th of October, the CRD to NPA 2008-22 – 'Organisation Requirements' was published. EASA's Workshop on 20/21 October was attended but little information resulted. Some comments were posted on EGU's behalf.
- We are awaiting publication of the final 'Opinion'

Licensing & Medical

- On 9th of April, the long awaited '*Comment Response Document*' to *NPA 2008-17 part B – Flight Crew Licensing* was published on the EASA website. The document was studied and a number of comments were again forwarded to EASA on behalf of EGU.
- On 26th of August, EASA published the '*Opinion 04/2010*' containing the final proposal for '*Implementing Rules for Pilot Licensing*'.
- On 23rd of June, the *CRD to NPA 2008-17 part C – Medical Fitness* was published. EGU also posted some comments on this part and EGU-delegates were able to explain our concerns once more during a meeting on 30th September/1st October.
- On 13th December, EASA published the '*Opinion 07/2010*' containing the proposal for the '*Implementing Rules for the medical certification of pilots*'.

The whole package is now again on the 'political' table and we can expect the final outcome in March 2011. The final implementation date for the EU-licensing system is still 08-04-2012, but there is an option for an extra transfer period of up to 3 years.

Initial Airworthiness

Implementation of ELA into Part 21: A final commenting round for CRD2008-07 was undertaken in mid 2010. There was a high yield of inputs, but these resulted in little change in the proposal. A window for further comment exists until mid-January 2011. An EGU input has already been forwarded with developments expected in the new year 2011.

Minor installations in Sport Aircraft (inc. gliders): The EGU paper formed part of the input to CRD 2008-07. The most recent CRD round recognised the need to adopt external documentation such as AC43-13 to provide an adequate and economic approach to GA needs. However, the timescale required to bring this to any kind of fruition is as yet undefined by EASA.

Continuing Airworthiness

EGU maintains a continuous interest and review of *Part M* in its operation, and recognises the ongoing difficulties, particularly in nations with low numbers of sailplanes, where the bureaucracy is completely disproportionate to the volume of business. The EGU Part M Implementation report is available on the EGU website.

Standard Interpretation across the member states: EGU is also concerned at significant inconsistencies in interpretation of Part M by National Authorities (NAA). We remain concerned that, in some member states, bureaucrats are raising requirements unnecessarily under the perceived 'threat' of action against them by the EASA Standardisation Team. This is counter-productive in time, cost and consistency of interpretation and is causing massive frustration within our community.

(E.g. There appears to be a particular issue associated with the preparation and use of *Generic Aircraft Maintenance Programmes (AMP iaw. M.A.302)* which are vital to economic maintenance in sailplanes. This has been highlighted in the latest issue of the EGU Part M - Implementation Report (available on the website), and an Executive Summary which has been forwarded to EAS for their discussion with EASA.

Personal Licensing

NPA 2008-03 was returned to EASA by the European Commission as being over- complex for purpose. The 'L' licence provisions for sailplanes was specifically criticised. Information is now emerging to suggest that the process will be delayed until 2013. If so, then presumably the current Part 66 provisions will remain extant at least until then.

'Grandfather' Rights: Given the above situation, any discussion of licence conversion remains premature. EASA maintains the position that this aspect remains for negotiation with NAA's.

Airspace

Günter Bertram, technical officer for airspace, attended a number of meetings related to airspace and management, new ruling at Eurocontrol and organised the annual workshop on 27th November in Frankfurt. Broader participation by our members would be more than welcome.

Statistics

Another important item in negotiations are our statistics on activities, incidents and accidents. (In fact, we are the only organisation who can present reliable figures.) We are very careful with the use of this information as misuse could easily occur.

Finances

Luckily, the EGU's financial situation is healthy. As decided during the last congress meeting, a smart reshuffle of membership fee calculation will be presented, without big changes in the overall budget, as proposed by the Board.

Membership

In Spring, the Soaring Society of South Africa joined us as an associate member. The current membership counts 22 full members and 4 associate members. The bad news was, that the Soaring Association of Serbia had to resign. On the other hand, we are still missing some active gliding nations. May I ask all of you to use every opportunity to promote membership of our organisation.

Communications

Thanks to Roland's webmaster skills, we have a very useful website with easy access to all reports, documents, regulations, etc. Five short newsletters were published to keep you informed about the topics of the moment.

Relations

EGU continues to maintain very good relations with Europe Air Sports, which is the only platform representing the whole air sport community (large numbers count!) and to gain entry at the political level, such as the EU-Commission, EU-DG's and regular meetings with EASA. There is also close contact and exchange of information with the IGC, the OSTIV Safety & Training Panel, the Association of Manufacturers. Maintaining the necessary independence but, in cooperation with the other partners, we can survive in this complex world.

Conclusion

For the near future, we need more support and input from our members. Our gliding world has become very complex and everyone is becoming overloaded. Without the support of new people, we will be forced to change the organisation and engage professional support with the related financial impact.

Patrick Pauwels
President
2011-01-10

WORLD MEMBERSHIP DECLINES 12.8% IN TEN YEARS A DRAMATIC 2.2 % IN 2010

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ARGENTINA	252	264	186	174	182	230	249	223	120	165	214	205
AUSTRALIA	2976	2785	2725	2673	2606	2637	2575	2444	2460	2436	2420	2382
AUSTRIA	3928	3817	3790	3692	3690	3687	3598	3481	3458	3504	3447	3428
BELGIUM	1591	1530	1520	1472	1916	1877	1850	1760	1743	1713	1832	1917
BRAZIL					647	633	630	619	622	610	598	399
CANADA	1313	1290	1350	1297	1232	1134	1103	1191	1140	1075	943	1046
CHILE								147	148	152	156	161
COLUMBIA									29	27	25	30
CROATIA					270	272	149	150	161	148	136	82
CZECH REPLY	3190	3142	3114	3206	3246	3249	3196	3121	3198	3240	3260	3191
DENMARK	1950	1892	1875	1841	1766	1756	1783	1738	1740	1683	1674	1648
FINLAND	2602	2814	2600	2548	2493	2442	2446	2329	2132	2244	2169	2004
FRANCE	11100	11510	12020	12155	13582	12829	12471	12375	12214	11643	11357	9579
GERMANY	36687	36414	35852	35650	35236	34642	33196	32229	31279	30792	30117	30216
GREECE	51	52	53	60	60	83	82	85	85	95	99	98
HUNGARY	1664	1628	1637	1643	1602	1450	1001	1063	1020	892	893	873
ICELAND	101	80	70	68	49	55	57	55	59	52	59	65
ISRAEL	190	183	184	175	180	176	170	175	175	170	180	180
IRELAND	85	94	98	111	118	111	119	112	116	85	78	75
ITALY	2125	2110	2122	2129	2129	1749	1641	1742	1807	1734	1425	1310
JAPAN	675	663	684	670	643	640	670	630	655	663	655	869
KENYA					7	9	8	13	23	12	10	7
KOREA					10	9	8	8	10	8	10	10
LUXEMBURG					49	35	35	38	46	35	38	44
LITHUANIA	469	472	494	510	526	532	540	527	510	475	472	468
NTHRLNDS	4079	4065	4088	3816	3617	3952	3949	3857	3822	3825	3953	3869
NEW ZEALAND	889	867	901	917	919	893	875	861	871	797	782	807
NORWAY	1574	1550	1578	1760	1760	1513	1528	1435	1411	1332	1250	1233
PAKISTAN	25	28	29	28	27	25	24	27	22	19	16	13
POLAND	2902	2892	3048	3058	3058	2996	2587	2362	2394	2274	2133	2087
PORTUGAL					167	168	171	168	162	161	157	166
RUSSIA	326	326	357	360	360	349	350	333	331	315	282	270
SERBIA					43	38	37	36	36	38	39	30
SLOVAK REPLY	774	736	699	729	675	652	680	624	662	715	762	789
SLOVENIA	861	872	924	949	949	798	779	824	793	757	789	950
STH AFRICA	728	579	597	613	635	598	628	590	596	582	580	557
SPAIN	498	496	435	436	560	561	550	526	489	449	434	391
SWEDEN	3025	2700	2950	2700	2912	2776	2678	2567	2391	2321	1979	1987
SWTZRLND	3680	3145	3040	2977	2871	3154	2995	2745	2794	2813	2675	2616
UNTD KNGDM	9164	8802	8848	9166	8341	8242	8105	8079	7950	8531	8229	8050
U.S.A.	32133	31592	31148	31146	30125	30222	30186	30136	29513	29214	29131	28830
TOTALS	131607	129390	129016	128729	129258	127174	123699	121425	119187	117796	115458	112932

Comment : Membership numbers for Hungary, Ireland and Switzerland were unobtainable. The numbers shown are based on the previous years total less the world average decline percentage.

March 2011

9



Report of the World Soaring Championships Trophies Manager

The document has been updated with the names of the 2010 Champions.

I am still searching news about the first Club Class trophy, but unfortunately nobody remember its history. Since we have two trophies for the Club Class, I will consider a different destination for the second trophy donated by Italy.

I'm working on the Team Cup for the 2011 Juniors WGC.

I'm very much sorry to notify that for the first time, the 15m, 18m, Open class trophies, the World Soaring Cup and the Robert Kronfeld Challenge Cup were delivered in Szeged without the names of the winners engraved, despite my recommendations.

Current 2010 Champions – 31st FAI WGC Prievidza (Czech Rep.) and Szeged (Hungary)

Class	Pilot		email address
Standard	Sebastian Kawa	Poland	sebkaw@gmail.com
Club	Arndt Hovestadt	Germany	info@wings-and-wheels.de
World	Laurent Couture	France	lolocouture@hotmail.fr

The 32nd FAI WGC for the non flapped classes will be held in Adolfo Gonzalez Chávez (Argentina) in 2012 - Contact person Edoardo Toselli email: edtoselli@uolsinectis.com.ar

Class	Pilot		email address
15 meters	Stefano Ghiorzo	Italy	stefano-vs@gmx.org
18m	Zbigniew Nieradka	Poland	j.dankowski@wp.pl
Open	Michael Sommer	Germany	michaelsommer@siemens.com

The 32nd FAI WGC for the flapped classes will be held in Uvalde (USA) in 2012 - Contact person Linda Murray email: linda@easternsailplane.com

Team Cup 2010: Poland

Contact person Jacek Dankowski email j.dankowski@wp.pl



Current Junior's Champions – 6th FAI JWGC Räyskälä (Finland) 2009

Class	Pilot		email address
Standard	Felipe Levin	Germany	U.Gmelin@daec.de
Club	Volker Sailer	Germany	U.Gmelin@daec.de

Team Cup not existing yet for the JWGC

The 7th FAI JWGC will be held in Musbach (Germany) in 2011 - Contact person Axel Reich email: axel.j.reich@t-online.de

Current Women's Champions – 5th FAI WWGC Szeged (Hungary) 2009

Class	Pilot		email address
15 meters	Susanne Schoedel	Germany	schoedel@aol.com
Standard	Sue Kussbach	Germany	suekussbach@web.de
Club	Nathalie Hurlin	France	eric.napoleon@wanadoo.fr

Women's Team Cup 2009: Germany - Contact person Uli Gmelin email U.Gmelin@daec.de

*The IGC Trophy Manager
Marina Vigorito*

*Tel. +39 333 4126631
Email marina_vigorito@yahoo.it*



1. The FAI Challenge Cups

Rules. The FAI Challenge Cups are awarded to the winners of the classes at the World Gliding Championships.

1.1 The FAI Open Class Challenge Cup

1.1.1 **History.** The FAI Open Class Challenge Cup was donated in 1948 and was first awarded to the winner of the 1948 World Gliding Championships in Samaden, Switzerland. From 1952 until 1956 it was the first prize in the Single Seater Class. In 1956 it was changed to the Open Class

1.1.2 **Rules.** See above.

1.1.3 **Description.** The FAI Open Class Challenge Cup is a 32 cm high silver cup mounted upon a green marble foot forming a two-layer octagon. The following is engraved: FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE, CHAMPIONNAT DU MONDE DE VOL À VOILE.

1.1.4 **Administration.** The FAI Open Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the Open Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.

1.1.5 **Engraving.** The engraving shall include the year and the place of the event, the name and the country of the winner.

1.1.6 **Change of rules.** If the Open Class is discontinued as a World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.

1.1.7 List of FAI Open Class Champions from 1948

- 1948 Per-Axel Persson, Sweden. Samedan (Switzerland)
- 1950 Billy Nilsson, Sweden. Örebro (Sweden)
- 1952 Phillip Wills, UK. Madrid (Spain)
- 1954 Gérard Pierre, France. Champhill (UK)
- 1956 Paul MacCready, USA. Saint Yan (France)
- 1958 Ernst Haase, W. Germany. Leszno (Poland)
- 1960 Rudolfo Hossinger, Argentina. Cologne (Germany)
- 1963 Eduard Makula, Poland. Junin (Argentina)
- 1965 Jan Wroblewski, Poland. South Cerney (UK)
- 1968 Harro Wodl, Austria. Leszno (Poland)
- 1970 George Moffat, USA. Marfa (USA)
- 1972 Göran Ax, Sweden. Vrsac (Yugoslavia)
- 1974 George Moffat, USA. Waikerie (Australia)
- 1976 George Lee (UK). Räyskälä (Finland)
- 1978 George Lee (UK). Chateauroux (France)
- 1981 George Lee, UK. Paderborn (Germany)
- 1983 Ingo Renner, Australia. Hobbs (USA)
- 1985 Ingo Renner, Australia. Rieti (Italy)
- 1987 Ingo Renner, Australia. Benalla (Australia)
- 1989 Jean-Claude Lopitiaux, France. Wiener Neustadt (Austria)
- 1991 Janusz Centka, Poland. Uvalde (USA)
- 1993 Janusz Centka, Poland. Borlänge (Sweden)
- 1995 Ray Lynskey, New Zealand. Omarama (New Zealand)



- 1997 Gérard Lherm, France. Saint-Auban (France)
- 1999 Holger Karow, Germany. Bayreuth (Germany)
- 2001 Oscar Goudriaan, South Africa. Mafikeng (South Africa)
- 2003 Holger Karow, Germany. Leszno (Poland)
- 2006 Michael Sommer, Germany. Eskilstuna (Sweden)
- 2008 Michael Sommer, Germany. Lüsse (Germany)
- 2010 Michael Sommer, Germany. Szeged (Hungary)

1.2 The FAI Standard Class Challenge Cup

1.2.1 **History.** The FAI Standard Class Challenge Cup was donated in 1952 by the Royal Aero Club of Spain. It was first awarded to the winner of the Two-seater Class in the World Gliding Championships near Madrid, Spain. When the Two-seater Class was replaced by the Standard Class in 1958, the Cup was transferred to that class.

1.2.2 **Rules.** See above.

1.2.3 **Description.** The FAI Standard Class Challenge Cup is a 52 cm high classic two handle silver trophy on a wooden base. The following is engraved: CAMPEONATO DEL MUNDO DE VUELA A VELA CATEGORIA “D” (BIPLAZAS), TROFEO CEDIDO POR EL REAL AERO CLUB DE ESPAÑA A LA FEDERACION AERONATICA INTERNACIONAL.

1.2.4 **Administration.** The FAI Standard Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the Standard Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.

1.2.5 **Engraving.** The engraving shall include the year and the place of the event, the name and the country of the winner.

1.2.6 **Change of rules.** If the Standard Class is discontinued as a World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.

1.2.7 List of FAI Standard Class Champions from 1952

- 1952 Ara Luis Juez, Spain. Madrid (Spain)
- 1954 Komac Rain, Yugoslavia. Camphill (UK)
- 1956 Foster Goodhart, UK. Saint Yan (France)
- 1958 Adam Witek, Poland. Leszno (Poland)
- 1960 Heinz Huth, W. Germany. Cologne (Germany)
- 1963 Heinz Huth, W. Germany. Junin (Argentina)
- 1965 François Henry, France. South Cerney (UK)
- 1968 Andrew J. Smith, USA. Leszno (Poland)
- 1970 Helmut Reichmann, W. Germany. Marfa (USA)
- 1972 Jan Wroblewski, Poland. Vrsac (Yugoslavia)
- 1974 Helmut Reichmann, W. Germany. Waikerie (Australia)
- 1976 Ingo Renner, Australia. Räyskälä (Finland)
- 1978 Baer Selen, Netherlands. Chateauroux (France)
- 1981 Marc Schroeder, France. Paderborn (Germany)
- 1983 Stig Oye, Denmark. Hobbs (USA)
- 1985 Leonardo Brigliadori, Italy. Rieti (Italy)
- 1987 Markku Kuittinen, Finland. Benalla (Australia)



- 1989 Jaques Aboulin, France. Wiener Neustadt (Austria)
- 1991 Baer Selen, Netherlands. Uvalde (USA)
- 1993 Andrew Davis, UK. Borlänge (Sweden)
- 1995 Markku Kuittinen, Finland. Omarama (New Zealand)
- 1997 Jean-Marc Caillard, France. Saint-Auban (France)
- 1999 Jean-Marc Caillard, France. Bayreuth (Germany)
- 2001 Laurent Aboulin, France. Mafikeng (South Africa)
- 2003 Andrew Davis, UK. Leszno (Poland)
- 2006 Leigh Wells, UK. Eskilstuna (Sweden)
- 2008 Michael Buchthal, Germany. Rieti (Italy)
- 2010 Sebastian Kawa, Poland. Prievidza (Czech Rep.)

1.3 The FAI 15 Meter Class Challenge Cup

- 1.3.1 **History.** The FAI 15 m Challenge Cup was donated in 1981 by the goldsmith and glider pilot Heinrich Schönke of Bünde, Germany. It was first awarded retroactively to the winner of the 15 m Class in the 1978 World Gliding Championships in Chateauroux, France.
- 1.3.2 **Rules.** See above.
- 1.3.3 **Description.** The FAI 15 m Class Challenge Cup is a 31 cm high silver cup with a round wooden base. Circling the low, narrow waist of the cup is a band of silver oak leaves mounted on a wooden ring. The following is engraved: FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE, CHALLENGE CUP WORLD CHAMPION, 15 m CLASS
- 1.3.4 **Administration.** The FAI 15 m Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the 15 m Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.3.5 **Engraving.** The engraving shall due to lack of space include only the year of the event, the name and the abbreviated name of the country of the winner.
- 1.3.6 **Change of rules.** If the 15 m Class is discontinued as a World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.
- 1.3.7 **List of FAI 15 Meters Class Champions from 1981**
- 1981 Göran Ax, Sweden. Paderborn (Germany)
 - 1983 Kees Musters, Netherlands. Hobbs (USA)
 - 1985 Doug Jacobs, USA. Rieti (Italy)
 - 1987 Brian Spreckley, UK. Benalla (Australia)
 - 1989 Bruno Gantenbrink, Germany. Wiener Neustadt (Austria)
 - 1991 Brad Eduards, Australia. Uvalde (USA)
 - 1993 Eric Napoleon, France. Borlänge (Sweden)
 - 1995 Eric Napoleon, France. Omarama (New Zealand)
 - 1997 Werner Meuser Germany. Saint-Auban (France)
 - 1999 Giorgio Galetto Italy. Bayreuth (Germany)
 - 2001 Werner Meuser, Germany. Mafikeng (South Africa)
 - 2003 John Coutts, New Zealand. Leszno (Poland)
 - 2006 Janusz Centka, Poland. Eskilstuna (Sweden)
 - 2008 György Gulyas, Hungary. Lüsse (Germany)



- 2010 Stefano Ghiorzo, Italy. Szeged (Hungary)

1.4 The FAI World Class Challenge Cup

- 1.4.1 **History** The FAI World Class Challenge Cup was donated in 2001 by the Finnish Aeronautical Association at the World Air Games in Lillo, Spain. The cup was damaged during transportation to Lillo and could consequently not be awarded that year. A similar cup was awarded in Nitra, Slovakia, in 2003 and also awarded retroactively to the winners of the World Class in 1997, 1999 and 2001.
- 1.4.2 **Rules** See above.
- 1.4.3 **Description** The FAI World Class Challenge Cup is a xx cm high and xx cm wide crystal cup. The following is engraved: FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE, WORLD CLASS CHALLENGE CUP
- 1.4.4 **Administration** The FAI World Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the World Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.4.5 **Engraving** The engraving shall include the year and the place of the event, the name and the country of the winner.
- 1.4.6 **Change of rules** If the World Class is discontinued as a World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.
- 1.4.7 **List of FAI World Class Champions from 2001**
- 2001 Olivier Darroze, France. Lillo (Spain)
 - 2003 Sebastian Kawa, Poland. Nitra (Slovak Rep.)
 - 2006 Christophe Rusch, France. Vinon (France)
 - 2008 Laurent Couture, France. Rieti (Italy)
 - 2010 Laurent Couture, France. Prievidza (Czech Rep.)

1.5 The FAI Club Class Challenge Cup no. 1

- 1.5.1 **History.** Any news available so far
- 1.5.2 **Rules.** See above
- 1.5.3 **Description.** The FAI Club Class Challenger Trophy is a xx cm high and xx cm wide bronze eagle mounted on a wooden base. No information about the engraving on the basement so far.
- 1.5.4 **Administration.** The FAI Club Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the World Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.5.5 **Engraving.** The engraving shall include the year and the place of the event, the name and the country of the winner.
- 1.5.6 **Change of rules.** If the World Class is discontinued as a World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future



1.5.2 The FAI Club Class Challenge Cup no. 2

- 1.5.1 **History.** The FAI Club Class Challenger Cup was donated in 2008 by the Countess Maria Fede Caproni at the 30th World Gliding Championship in Rieti. It was awarded retroactively to the former winners of the FAI Club Class Championships.
- 1.5.2 **Rules.** See above.
- 1.5.3 **Description.** The FAI Club Class Challenge Cup is a stylised figure of a man with the arms raised as a sign of victory, made of green glass. On the basement the following is engraved: “Gianni Caproni” FAI Club Class Challenger Cup.
- 1.5.4 **Administration.** The FAI Club Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the 18 m Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.5.5 **Engraving.** The engraving shall include the year and the place of the event, the name and the country of the winner.
- 1.5.6 **Change of rules.** If the FAI Club Class is discontinued as a World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.
- 1.5.7 **List of FAI Club Class Champions from 2001**
- 2001 Peter Masson, UK. Gawler (Australia)
 - 2002 Tomas Suchanek, Czech Rep. Musbach (Germany)
 - 2004 Sebastian Kawa, Poland. Elverum (Norway)
 - 2006 Sebastian Kawa, Poland. Vinon (France)
 - 2008 Matthias Sturm, Germany. Rieti (Italy)
 - 2010 Arndt Hovestadt, Germany. Prievidza (Czech Rep.)

1.6 The FAI 18 Meter Class Challenge Cup

- 1.6.1 **History.** The FAI 18 m Class Challenge Cup was donated in 2006 by the Swedish Soaring Federation at the World Championships I Eskilstuna. It was awarded retroactively to the winners of the 18 m Class in the 2001 World Air Games in Lillo, Spain, and the 2003 World Championships in Leszno, Poland.
- 1.6.2 **Rules.** See above.
- 1.6.3 **Description.** The FAI 18 m Class Challenge Cup is a 22cm wide and 9 cm high silver bowl with a 5 cm high twelve-sided walnut base. The following is engraved: FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE, CHALLENGE CUP WORLD CHAMPION, 18 m CLASS.
- 1.6.4 **Administration.** The FAI 18 m Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the 18 m Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.6.5 **Engraving.** The engraving shall include the year and the place of the event, the name and the country of the winner
- 1.6.6 **Change of rules.** If the 18 m Class is discontinued as a World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future
- 1.6.7 **List of FAI 18 Meters Class Champions from 2001**
- 2001 Steven Jones, UK. Lillo (Spain)
 - 2003 Wolfgang Janowitsch, Austria. Leszno (Poland)



- 2006 Phil Jones, UK. Eskilstuna (Sweden)
- 2008 Olivier Darroze, France. Luesse (Germany)
- 2010 Zbigniew Nieradka, Poland. Szeged (Hungary)

1.7 The FAI 15m Class Women's Challenge Cup

- 1.7.1 **History:** The FAI 15m Class Women's Challenge Cup was donated in 1981 and was first awarded to the winner of the Women's European Championships in Cherence, France. When in 2001 the Europeans were replaced by the Worlds, the Cup was transferred to that competition.
- 1.7.2 **Rules:** The FAI 15m Class Women's Challenge Cup is awarded to the winner of the 15m Class in the Women's World Gliding Championships
- 1.7.3 **Description:** The FAI 15m Class Women's Challenge Cup is a 52 cm high classic two handle silver trophy on a wooden base. The following is engraved: "Vol a Voile – Championnat Europeen Feminine". The names are engraved on labels on the base.
- 1.7.4 **Administration:** The FAI 15m Class Women's Challenge Cup shall be kept by the winner until the next World Gliding Championships in the 15m Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.7.5 **Engraving:** The engraving shall include the year and the place of the event, the name and the country of the winner.
- 1.7.6 **Change of rules:** If the FAI 15m Class is discontinued as a Women's World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.
- 1.7.7 **List of FAI Women's 15 Meters Class Champions**
- 2001 Gillian Spreckley, UK. Pociunai (Lithuania)
 - 2003 Alena Netusilova, Czech Rep. Jihlava (Czech Rep.)
 - 2005 Mette Pedersen Schmeltz, Denmark. Klix (Germany)
 - 2007 Kathrin Senne, Germany. Romorantin (France)
 - 2009 Susanne Schoedel, Germany. Szeged (Hungary)

1.8 The FAI Standard Class Women's Challenge Cup

- 1.8.1 **History:** The FAI Standard Class Women's Challenge Cup was donated by Hungary in 1979 and was retroactively awarded to the winners of European Women's Championships. When in 2001 the Europeans were replaced by the Worlds, the Cup was transferred to that competition.
- 1.8.2 **Rules:** The FAI Standard Class Women's Challenge Cup is awarded to the winner of the Standard Class in the Women's World Gliding Championships
- 1.8.3 **Description:** The FAI Standard Class Women's Challenge Cup is a 47 cm high round shape silver cup with a metallic insert in the middle. The following is engraved: "Hungarian Chief Military Organization Awards this Cup to the Women's European Gliding Champions". The names are engraved on labels on the base.
- 1.8.4 **Administration:** The FAI Standard Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the Standard Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.



- 1.8.5 **Engraving:** The engraving shall include the year and the place of the event, the name and the country of the winner.
- 1.8.6 **Change of rules:** If the FAI Standard Class is discontinued as a Women's World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.
- 1.8.7 **List of FAI Women's Standard Class Champions**
- 2001 Sarah Kehlman, UK. Pociunai (Lithuania)
 - 2003 Cornelia Schaich, Germany. Jihlava (Czech Rep.)
 - 2005 Jana Veprekova, Czech Rep. Klix (Germany)
 - 2007 Sarah Kehlman, UK. Romorantin (France)
 - 2009 Sue Kussbach, Germany. Szeged (Hungary)

1.9 The FAI Club Class Women's Challenge Cup

- 1.9.1 **History:** The FAI Club Class Women's Challenge Cup was donated by the German Aeroclub and awarded to the winner of the European Women's Gliding Championships. When in 2001 the Europeans were replaced by the Worlds, the Cup was transferred to that competition.
- 1.9.2 **Rules:** The FAI Club Class Women's Challenge Cup is awarded to the winner of the Club Class in the Women's World Gliding Championships
- 1.9.3 **Description:** The FAI Club Class Women's Challenge Cup is a 62 cm high classic silver plated cup, on a wooden base. The following is engraved: "Club Klasse Wanderpocke Europameisterschaften der Frauen in Segelfliegen. Aeroclub SAAR e V." The names are engraved on labels on the base.
- 1.9.4 **Administration:** The FAI World Class Challenge Cup shall be kept by the winner until the next World Gliding Championships in the Club Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.9.5 **Engraving:** The engraving shall include the year and the place of the event, the name and the country of the winner.
- 1.9.6 **Change of rules:** If the FAI Club Class is discontinued as a Women's World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.
- 1.9.7 **List of FAI Women's Club Class Champions**
- 2001 Tamara Sviridova, Russia. Pociunai (Lithuania)
 - 2003 Christine Grote, Germany. Jihlava (Czech Rep.)
 - 2005 Hana Vokrinkova, Czech Rep. Klix (Germany)
 - 2007 Gillian Spreckley, UK. Romorantin (France)
 - 2009 Nathalie Hurlin, France. Szeged (Hungary)

1.10 The FAI Women's Team Cup

- 1.10.1 **History:** The FAI Women's Team Challenge Cup was donated in 2001 by the Lithuanian Aeroclub, in occasion of the first Women's World Gliding Championships.
- 1.10.2 **Rules:** The FAI Women's Team Cup is awarded to the team scoring the highest number of points according to the IGC Annex A rules.



- 1.10.3 **Description:** It is a wooden sculpture of a stylised woman, with the logos of all the participants NACs at the first Women's World Gliding Championships in Lithuania. The following is engraved: "Pirmas Pasaulio Moteru Skladymo Cempionatas. First World Women's Gliding World Gliding Championships".
- 1.10.4 **Administration:** The FAI Women's Team Challenge Cup shall be kept by the winner until the next World Gliding Championships and shall be returned before the start of the championships to the organizers of this event.
- 1.10.5 **Engraving:** The engraving is not present.
- 1.10.6 **Change of rules:** If the FAI Women's WGC is discontinued as a World Championship, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.

1.11 The FAI Juniors' Challenge Cups

1.11.1 The Giulia Incisa della Rocchetta Challenge Cup.

- 1.11.2 **History** The Giulia Incisa della Rocchetta Challenge Cup was donated by the Italian Air Force (Aeronautica Militare) in 2007 on the occasion of the Junior World Gliding Championships in Rieti, Italy, in memory of Giulia, a member of the Italian Air Force sport squadron, who was killed in an outlanding in Romorantin, France, during a local gliding contest, just before she was to compete in the Junior World Gliding Championships in 2005. It was awarded retroactively to the winners of the Standard Class in the Junior World Gliding Championships in 1999, 2001, 2003 and 2005.
- 1.11.3 **Rules** The Challenge Cup is awarded to the winners of the Standard Class in the Junior World Gliding Championships.
- 1.11.4 **Description** The cup is a 49 cm high classic two-eared silver trophy on a 10 cm high round wooden base. On the top of the cup is engraved the Incisa della Rocchetta's family arm. The following text is engraved below the family arm: GIULIA INCISA DELLA ROCCHETTA CHALLENGE CUP, JUNIOR WORLD GLIDING CHAMPIONSHIPS, STANDARD CLASS" followed by the FAI logo. On the wooden base is a plate with the logo of the Aeronautica Militare.
- 1.11.5 **Administration** The Giulia Incisa della Rocchetta Challenge Cup shall be kept by the winner until the next Junior World Gliding Championships in the Standard Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.
- 1.11.6 **Engraving** The engraving shall include the year and the place of the event, the name and the country of the winner
- 1.11.7 **Change of rules.** If the Standard Class is discontinued as a Junior World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.
- 1.11.8 **List of FAI Junior Standard Class Champions from 1999**
- 1999 Günther Stahl, Germany. Terlet (Netherlands)
 - 2001 Jay Rebbek, UK. Issoudun (France)
 - 2003 Jez Hood, UK. Nitra (Slovak Rep.)
 - 2005 Mark Parker, UK. Husbands Bosworth (UK)
 - 2007 Patrick Gai, Germany. Rieti (Italy)
 - 2009 Felipe Levin, Germany. Räyskälä (Finland)



1.12 The Rieti Challenge Cup

1.12.1 History The Rieti Challenge Cup was donated by Associazione Rieti FAI World Gliding 2007/2008 on the occasion of the Junior World Gliding Championships in Rieti, Italy, in 2007. It was awarded retroactively to the winners of the Club Class in the Junior World Gliding Championships in 1999, 2001, 2003 and 2005.

1.12.2 Rules The Rieti Challenge Cup is awarded to the winners of the Club Class in the Junior World Gliding Championships.

1.12.3 Description The cup is a 52 cm high classic two-handled trophy of plated silver on a 9 cm high wooden square base. There is no engraving on the cup itself. The following is engraved on a plate on the wooden base: FAI JUNIOR WORLD GLIDING CHAMPIONSHIPS CLUB CLASS, Rieti CUP.

1.12.4 Administration The Rieti Cup shall be kept by the winner until the next Junior World Gliding Championships in the Club Class and shall be returned before the start of the championships to the organizers of this event. The organizers are responsible for the engraving.

1.12.5 Engraving The engraving shall include the year and the place of the event, the name and the country of the winner.

1.12.6 Change of rules. If the Club Class is discontinued as a Junior World Championship class, the FAI Gliding Commission shall decide how the cup shall be awarded in the future.

1.12.7 List of FAI Junior Club Class Champions from 1999

- 1999 Robert Scheiffart, Germany. Terlet (Netherlands)
- 2001 Peter Toft, Denmark. Issoudun (France)
- 2003 Michael Streit, Germany. Nitra (Slovak Rep.)
- 2005 Christoph Nacke, Germany. Husbands Bosworth (UK)
- 2007 Killian Walbrou, France. Rieti (Italy)
- 2009 Volker Sailer, Germany. Räyskälä (Finland)

2. Other Awards

2.1 The Robert Kronfeld Challenge Cup

2.1.1 History.

The-Robert-Kronfeld-Cup was awarded by the State Government of Austria on the occasion of the 21st World Gliding Championships 1989 in Wiener Neustadt.

Robert Kronfeld was the son of an Austrian dentist living in Vienna. When the young man visited the Wasserkuppe, he was immediately enthusiastic about the glider pilots and their activities. Professor Walter Georgii detected the great gifts of the young Austrian, who flew his A, B, and C Badges within a very short time.

Soon Robert Kronfeld was flying the high performance ships of the late twenties. His friends mocked him for his "apparent great hunger", because, when he entered a glider, he always carried a paper bag for rolls and a thermos flask with him. Nobody knew that he was trying out an instrument which the balloonist already used, the variometer (climb and sink indicator).

Professor Georgii had asked him to test it, but to tell nobody about it, because both of them had not been unsure of its success. But Robert Kronfeld had a lot of very successful thermal flights and was doing a great service for the research of these kind of up currents.



In 1926 with the thunderstorm flight of Max Kegel, a real cross-country fever broke out. The great challenge was the 100 km distance. The "Gruene Post" - a German weekend magazine - offered 5,000 Marks to the first glider pilot flying this distance, which was the amount of 45 monthly wages of a married teacher. But the project was very ambitious, because at those times, cross country flights were made along hill chains by ridge soaring. Robert Kronfeld found the Teutoburger Wald, a chain of low hills, a bit more than 100 km long, from NW to SE. On May 15th 1929, the ridge lift seemed to be OK. In his glider "Wien" he was bungee-launched near Ibbenbueren and flew - often very low - in the direction South East. When he arrived at one of the many gaps in the hill chain, he was waiting for a cumulus cloud, climbed a few metres in the thermal and jumped across the gap. After five hours he landed at Horn-Bad Meinberg near Detmold, 102.5 km away from his launching point. This was a world record. Enthusiastically, he mentioned the strong thermals above the "Senne", a sandy area near Oerlinghausen, which was the reason for founding the now famous German gliding field, which was - with 54,000 launches per year - the busiest one of the whole world in the 60s and 70s of the last century.

From the award of 5,000 Marks, Robert built the "Austria", with a span of 30 metres, the biggest glider of those times, which unfortunately broke up in a cloud. Robert Kronfeld was a Jew. When Hitler and the national socialists took over in Germany, he immigrated to England and became a British subject. He was killed after the Second World War, when he was testing a tail-less glider which was spun into the ground.

Now the state museum of Nordrhein-Westfalen, the state where the record was flown, wants to open an exhibition on Robert Kronfeld and his first 100 km flight in 1929.

Article contributed by Fred Weinholtz, as printed in the 30 July, 2003 issue of the "Leszno Lift".

- 2.1.2 **Rules.** The Robert Kronfeld Cup is a challenge cup to be awarded to the pilot who flies the longest task distance during the world championships. If the greatest distance is flown by more than one pilot, the trophy is awarded to the pilot with the highest speed. Outlandings are valid. If two or more pilots tie according to these rules, the one among them with the earliest outlanding or finish time will be the winner.
- 2.1.3 **Description.** The cup is a crystal globe mounted upon a round crystal pillar on a heavy metal base.
- 2.1.4 **Administration.** The winner shall keep the Cup until the next World Gliding Championships.
It is the responsibility of the last winner of the Cup to have it delivered before the next World Gliding Championships to the organizers of that event.
- 2.1.5 **Engraving.** The WGC organizers shall have the winner's name, the year and place of the World Gliding Championships engraved on a metal plate which is then glued to the footing of the Cup.
- 2.1.6 **Change of rules.** If the structure of the World Gliding Championships changes to such a degree that the present rules no longer apply, the IGC shall change the rules only after consultation with the gliding section of the Austrian Aero Club

2.2 The Kees Musters Speed Awards

- 2.2.1 **History.** The Kees Musters Speed Award was initiated in 1988 by individual members of the Soaring Society of America (SSA) in memory of former World Soaring Champion



Kees Musters of the Netherlands. Funding for the awards came from donations from soaring pilots around the world.

- 2.2.2 **Rules.** The award is given permanently to the pilot achieving the fastest daily speed in the 15m Class at the World Gliding Championships. Should there be a tie, it shall be resolved between the tying pilots in favor of the one who achieved the second (or third, etc. in case of continuing tie) fastest daily speed, compared to the other tying second (of third, etc.) pilot(s).
- 2.2.3 **Description.** The awards consist of an oak wood plaque with lucite over a photo of a 15m class glider with a brass plate with engraving.
- 2.2.4 **Administration.** The Soaring Society of America has accepted to be responsible for the administration of the awards. Each plaque shall be sent by SSA to the organizers of each 15m World Gliding Championships for delivery prior to the end of the competition. The organisers are responsible for the engraving.
- 2.2.5 **Engraving.** The organizers are responsible for the engraving. The inscription entered on the brass plate shall be in Footlight MT Light or similar font in the following style:

THE KEES MUSTERS TROPHY

Award to

BIRGER BULUKIN, NORWAY, LS-6, 137,77 KM/H

For Achieving The Fastest Daily Speed In The 15 Meter Class At

The World Gliding Championships

June 1993, Borlänge, Sweden

- 2.2.6 **Change of rules.** If IGC discontinues 15m World Championships, SSA shall determine, with the advice of IGC, how the award shall be made. If SSA shall be terminated, the funds shall be distributed as determined by the directors of SSA, with the advice of IGC. If IGC or its successor shall be terminated, the SSA directors shall determine how the funds shall be administered.

2.2 The World Soaring Cup

- 2.3.1 **History** The World Soaring Cup was donated in 1995 by nine New Zealand gliding families and was first awarded in the World Gliding Championship in Omarama, New Zealand.
- 2.3.2 **Rules**
 - 2.3.2.1 The World Soaring Cup is awarded to the team scoring the highest number of points according to these rules.
 - 2.3.2.2 An eligible pilot shall be one competing in the World Gliding Championships in a class of at least ten competitors representing at least five NACs. Every eligible pilot shall be a member of a Team representing his or her NAS and this Team shall compete for the World Soaring Cup.
 - 2.3.2.3 **Scoring**
 - 2.3.2.3.1 The maximum points in each class is to be 1000. No Day Factor is to be applied.
 - 2.3.2.3.2 Team points for each championship day (Pt) will be determined by dividing the total numbers of points gained by the Team (Sum of Pn) divided by the number of team pilots having had a competition launch on the day (nt).
$$Pt = (\text{Sum of } Pn) / nt$$



2.3.2.3.3 The winning Team is the team with the highest total score, obtained by adding the team points for each competition day.

2.3.3 **Description** The World Soaring Cup is a bronze globe of about 25 cm diameter inside a bronze "thermal" spiralling up and around the globe, which has New Zealand prominently displayed, all on a wooden base.

2.3.4 **Administration**

2.3.4.1 The World Soaring Cup shall be held by the NAC of the winning team until the next World Gliding Championships and shall be returned before the start of the championships to the organizers of this event, who are responsible for the engraving.

2.3.4.2 If the Cup is not competed for at a subsequent World Championships it is to be returned to Gliding New Zealand, Wellington, New Zealand, at the expense of the holders.

2.3.5 **Engraving** The engraving shall be done on the metal plaques around the socket and shall state the winning team's country, the year and the venue.

2.3.6 **Change of rules** The rules for the World Soaring Cup may be changed by IGC only after consultation with the donors and Gliding New Zealand.

3. THE HELLI LASCH CHALLENGE

3.1.1 History

After the 27th World Gliding Championships, which was held at Mafikeng, S.Africa in 2001, the Helli Lasch Challenge was formed – this is an exclusive gliding event held at the Tswalu Kalahari Reserve and is hosted and funded by Nicky & Strilli Oppenheimer in memory of Strilli's late father, Helli Lasch. The current World Champions and the current S.African team squad members are invited to attend, and this exciting and very special gliding event is run alternate years after the World Championships.

3.2 Objectives of the Helli Lasch Challenge

Living Memorial to Helli Lasch

Foster International relations

Promote South Africa as a gliding destination

Develop the competition skills of the S.African gliding team

Not only does the Challenge celebrate and remember Helli and his interesting gliding career, but it achieves the other objectives that were made when the Challenge was formulated.

3.2.1 Rules

The current reigning World Champions of the Open, 18m. 15m. & Standard class gliders are invited to attend which not only fosters international relations; it also promotes S.Africa as a wonderful gliding destination. If for any reason any of the Champions cannot attend, the runner-up pilot is invited. All expenses for the Champions (as well as their wives/partners) getting to and from South Africa and whilst at Tswalu are fully paid for.

Members of the current South African team squad are also invited to attend the event and they are given competition training by a qualified very experienced ex world champion. The current World Champions are also invited to share their knowledge and expertise with the SA pilots and so this interaction not only builds good relations, but also develops the competition skills of our leading SA pilots. When not gliding, visitors can enjoy some amazing scenery, wonderful game and bird viewing, as well as the total peace and tranquillity of the Reserve. The Reserve is home to all but elephant.



3.4 Administration

Three Challenges have been held to date, and Nicky Oppenheimer has definitely agreed to a further three events. The 4th HLC will be held in March 2009.”

*The IGC Trophy Manager
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IGC Steward Report

31st. FAI World Gliding Championships

Prievidza (Slovakia) 4th to 17th July 2010

Contest Director: Jozef Snirc

1. ORGANISATION

1.1 Overall organisation

Overall organisation was effective and friendly.

1.2 Quantity of officials

Sufficient.

1.3 Experience of officials

The CD and the Deputy CD had experience in running national Championships and the international Flight Challenge Cup (FCC), organised every year in Prievidza. The CD also served as steward at the WGC 2008 in Rieti.

1.4 Suitability of meetings and briefings

The briefings were held, not by the CD, but by a speaker who is very fluent in English and who presented the information very clearly. The briefings were short and to the point. Emphasis was put on safety.

At the first team captains' meeting, the Local procedures were presented and some clarifications were given.

At the beginning of the competition, team captain meetings were organised just before the main briefing but at our request, they were stopped because we found it unnecessary to give the same information twice and preferable to give the organisers more time to prepare the main briefing. Afterwards, short TC meetings were only organised when a specific problem had to be discussed with the Tcs.

1.5 Suitability of weather information

Weather information was provided by a professional meteorologist. The information given at the briefing and on paper distributed to the pilots was adequate and well presented.

1.6 Suitability of facilities

The organisers had put a great deal of effort into the infrastructure and the facilities were nearly perfect.

The briefings were held in a large and well equipped hangar. A good audio system was used to ensure that everyone could hear the information. Also, coffee and other drinks were available. Team captain meetings were held in an adjacent large lecture room.

The competition office, the scoring office, the office for the Jury members and for the steward, and an official notice board were located in a building next to the briefing hangar.

A large campground with adequate toilets and showers was available. A fence protected the campground from unwanted visitors. The competitors could also be accommodated in chalets built

for the championships. Chalets and containers for team meeting were also available.

Catering was well organised in the aero club restaurant and in a large tent, both located between the briefing hangar and the campground. Good quality food was available at reasonable prices.

A Wifi network covered most of the airfield and the Internet connection worked very well.

1.7 Transportation

The Jury president and the Chief Steward shared a car. The hotel was located at walking distance from the airfield.

1.8 Information dissemination (Announcements, schedules and decisions)

All the official information and results were displayed on the official notice board located in the briefing hangar. Printed information was distributed to the team captains and to the FAI officials in mail boxes. The results were also displayed on internet and on screens located in the bars.

SMS messages were regularly sent to the team captains in give them information about briefings, meetings, gridding etc...

1.9 Pilot assistance

Pilots and crews could always find adequate and friendly assistance from the organisers at the competition office.

1.10 Retrieval

There were no problems with retrievals.

1.11 Launch control for fair access and efficiency

All launches were performed by 14 Dynamics manufactured by Aerospool, a company located on the airfield. Even though these micro-light aircraft are powered by engines delivering no more than 100 hp, the aero tows were efficient. The launching of the 106 gliders usually took about 1 hour and 10 minutes

On several occasions pilots needed re-launches but the launching was fair.

1.12 Opening and closing ceremonies including presentation of Jury and Stewards

The opening ceremony was held on the airfield. The ceremony was reasonably short considering the very hot weather. The FAI flag was flown during the ceremony and the FAI anthem played. It is to be noted that the former Secretary General Max Bishop was present.

The prizegiving ceremony was held at the briefing hangar. All FAI protocols were followed. Some traditions seemed to get lost since the FAI flag was still on the flagpole after the farewell party.

The Jury and the Stewards were presented during one of the briefings.

1.13 Other social events

A very successful international evening was held. In addition to that, there was the usual closing party. The Organisers also invited the Jury and the stewards to a friendly dinner.

1.14 Total number of scheduled days and number of contest days

The total number of scheduled day was 14. We had 11 competition days in the Standard and in the World Class and 12 days in the Club Class.

1.15 Media liaison and internet coverage

Local newspapers covered the competition. Also, national papers had shorter stories. A TV crew

was at the airfield during the last two days. The information given after the fatal accident was well controlled.

The internet coverage was the responsibility of the "Pentagon", a team of young people who did an excellent job by taking care of the contest pages, video and photo gallery, tracking, and virtual contest.

More than 2000 pictures are available on their website.

A video team produced a short video every day with plenty of poetic or funny pictures illustrated by songs by Blackmore's Night. (These videos were also displayed at the beginning of every briefing and much appreciated by the competitors).

The statistics of their web site are impressive:

1 424 989 pages viewed

223 708 visitors

64 547 individual visitors

6,37 visitor/ pages

Visitors/country :Germany: 34 022, Slovakia: 24 632, Czechia: 12 235, Poland: 10119

1.16 Public and Internet display of real-time aircraft positions and information

Internet display of tracking was done by using the DSX system, working with Condor and excellent scenery of the contest area. Every day, the 10 first pilots in one class plus 5 additional pilots in the same class were tracked. After some problems during the first days, the system worked reasonably well but it seems that only the GSM transmission worked reliably. Nevertheless, the mix of virtual views, real video footage (even if not from the same day), commentary by Art Grant and music was very much appreciated. On the best day, up to 2700 people watched the race. Even an outlanding was shown (with views from the cockpit!). Since these pictures are shown with a delay (30 minutes), some kind of control of the information broadcast will perhaps be needed in the future to avoid pictures of accidents or incidents being broadcast.

In parallel with the WGC, on-line virtual Championships were organised in every class by using the Condor SW program, the virtual pilots having to fly the same task as the "real" pilots. 138 virtual pilots from 33 countries participated. The winner in Standard class, out of 90 competitors, is Sergey Prochorov, with a Discus 2; in World class, Tomas Siejek's PW5, out of 13 competitors. All competitors received a diploma signed by the "real" pilot with the same ranking.

1.17 Other organisational comment

Overall, the organisation was one of the best ever seen in a WGC.

2. RULES

2.1 Adequacy of Local Procedures

The local procedures were adequate and covered all eventualities.

At the first team captain briefing, some team captains complained about the minimum altitude required for crossing the finish line. The organisers explained that they feel this measure necessary because they want to avoid having pilots flying in ground effect when the finishes are made from the North, because there are high buildings and trees on this side of the airfield. Since some pilots again criticised this procedure at the first briefing, we definitively closed all discussions by publishing a clarification recalling that according to rule 7.7.2.b "a minimum altitude shall be imposed for crossing the ring". We set this altitude to 310m AMSL and, every day, the task sheet showed the QNH to be used to measure the altitude by the scoring (See You allows setting the same QNH for all flights). This procedure worked well and we had no contestation during the rest

of the competition.

2.2 Addendums or changes

No changes were made during the competition.

2.3 Fair applications of Rules and Local Procedures

All rules were applied fairly.

2.4 Possible improvements of Rules and/or Local Procedures

2.4.1 Annex A

Handicap list and reference weights in the club class

Before the competition, we had a major problem with the handicap list for the club class. A few weeks before the championship, the official handicap list published on the IGC website was still outdated, with handicaps missing for some gliders, missing reference weights, and some wrong statements in the notes. The bureau decided to replace this list by the one established by Göran Ax, which is limited to the gliders really used in the Club Class in WGCs but some information about reference weights was still missing. We urge the Handicap Working Group to establish a complete and rock solid handicap list. During the scrutineering, we also noticed that the procedure for establishing the reference weights was somewhat strange and somewhat difficult to apply because data are missing or uncertain. We think that it would be much more simple and much more fair to set a maximum wing loading limit for this class ,as proposed 3 years ago by the German Delegate.

Identification of igc files

On contest days, all .igc files had to be uploaded on a website. This worked very effectively. However, during the official training, the scorers had a lot of trouble identifying the files because many files did not contain any information about the name of the pilot or the competition ID of the gliders. It took them several days to sort this out. We suggest making it mandatory in Annex A to identify the files.

Protest time on the last day

On the last day the protest time is 2 hours and this is fine. But it may happen that due to a complaint the result of the previous day are still not official on the last day and in such a case the protest time may expire very late. In order to avoid such an occurrence we suggest to set an absolute time limit for all protest times (for example 20:00 on the last day).

2.4.2 Local Procedures

Nil

2.5 Task setting and operations

The task setters did an excellent job during the competition, except on the penultimate day where he overestimated the soaring conditions so that 97 pilots landed out. At the next briefing he was punished with ten lashes from the executer of the Castle of Bojnice...

The operations were also extremely well managed. As already mentioned, the launches were also very effective.

Daily weighing ran fluently every day on three scales and one reserve scale. The scales were removable on the east part of RWY 22/04 in pre-prepared concrete square holes with iron plate covers. Weighing was carried out with an accuracy of 5 kg. The wind had no significant influence on the weighing. Unfortunately, it was not possible to re-weigh on the grid. Gliders which needed

a re-weigh were reweighed after landing.

The airfield was large enough for gridding 106 gliders. The PW5s were gridded in 3 rows (5 + 5 + 3) , the Club Class in 9 rows (5 x5 + 2) and the Standard Class in 9 rows (5x5 + 1).

2.6 Scoring system (use and application)

The scoring was done by 4 experienced scorers using See You. A little mistake in the configuration of See You was discovered during the training period and was corrected. The scores were accurate and published with only little delay. The results were published to Soaring Spot and to the official web pages.

2.7 Protest handling and registration

Several complaints and two protests were filed.

The first protest was filed by the Argentinian Team Captain because one of his pilots had got a warning after a near miss with another pilot (see below). This protest was somewhat unusual since it was filed directly without first filing a complaint to the Organisers. The Jury decided against the protester.

The second protest was filed by the Swedish Captain against the decision of the Organisers not to disqualify several pilots, who, according to him, had flown dangerously when entering a thermal in which two of his pilots were circling. The protester obviously wanted to demonstrate that the Swedish pilot involved in the mid-air collision on the first day (See below) was not the only pilot misjudging his entry in a thermal. The Jury found no evidence of dangerous flying and decided against the protester.

On the penultimate day, the organisers received a complaint from the American Team Captain requesting disqualification of two French pilots (FH and EZ) for alleged unsporting behaviour, wilful interference with one of his pilots (TS) and hazardous flying. The complaint was rejected because the investigation of the traces did not show any evidence of such behaviour. The CD stated that requesting disqualification in such a case is totally disproportionate. The normal procedure would have been to first submit this issue to the safety committee. The US TC accepted the answer..

The two latter cases indicate that some TC's tried to take advantage from the decision made by the Organisers to disqualify the pilot considered as responsible for the mid-air on the first day.

3. SAFETY

3.1 General safety of the event

The safety record of the competition was one of the worst in a WGC since we had three accidents, one of them fatal. Additionally, we had a near miss and we received several reports about aggressive and reckless flying. All these accidents or incidents occurred during the first week.

These accidents and incidents cannot be considered as the fault of the Organisers. The launches were safe and the finishes were also safely managed. At every briefing, emphasis was put on safety, safety notes on outlanding (presented in Rieti by Dick Bradley) and safety flashes made in St Auban were shown.

The safety committee was formed according to the rules. The following members formed the committee:

- Jaroslav Vach – steward
- Luca Urbani ITA – World class
- Gerard G. Dale UK – Club class

- Mario Kiessling GER – Standard class

The safety committee received reports about gliders:

- flying hazardously before the start.
- not observing the right hand rule.
- not keeping to the same, main circle.
- crossing the circle of other gliders.
- flying in clouds

The Committee investigated the cases and spoke to the pilots involved.

3.2 Occurrence of incidents and/or accidents

Mid-air collision

Right on the first competition day (4 July), we had a collision between two gliders 8K (Ronnie Lindell) and GX (Tomas Suchanek). The collision happened at an altitude of 2200m, approximately 10 km South West of Ruzomberok town. Only GX had a proximity warning device. Both gliders were damaged. 8K had his tail and bottom damaged but flew back to the Prievidza airport. GX was more severely damaged, losing part of the right wing and had his canopy broken but was able to land on the Ruzomberok airfield. Luckily the pilots were not injured.

The organisers heard both pilots and analysed the igc flight records of their gliders. They came to the conclusion that GX was circling to the right in a thermal when 8K was entering the same thermal. For unknown reasons, the two pilots didn't see each other. 8K entered the thermal in a normal way considering other gliders he saw in the same thermal but he didn't see GX. When he started to turn right, he suddenly saw GX coming from behind and below. He pulled up but could not avoid the collision.

According to the organisers, although unintentionally, the pilot of 8K created an extremely dangerous situation by cutting the circle flown by GX. Considering that it is the full responsibility of the pilot entering a thermal to make sure that s/he does not interfere with a glider already circling in this thermal, the director of the competition decided to disqualify the pilot of 8K for the day and to exclude him temporarily from the competition for the next two flying days. The decision was accepted by the Swedish Team Captain.

The pilot of GX had to replace his glider which could not be repaired for this competition.

At the next briefing, the competition director announced his decision and showed the traces. He also urged all pilots to look out all the time and fly safely.

Near Miss

On July 8, shortly after the opening of the start line for the Club Class, a near miss occurred between the Austrian glider ISV and a Argentinean glider, G1.

The pilot of ISV reported a collision to his team captain and landed immediately. His glider was inspected and no damage of any kind was found. The pilot could have relaunched but decided not to take off again because he was shocked by what he believed to have been a collision.

The pilot of G1 felt that the two gliders were very close but did not touch each other. He therefore decided to continue to fly the task. The Competition Director nevertheless asked him, via his Team Captain, to land immediately as required in rule 4.1.4 of Annex A. The pilot was allowed to be re-launched because, like ISV, his glider was undamaged.

According to the pilot of G1, he was flying in level to the south when he saw a glider approaching very close under his left wing, below and behind. He made an immediate right turn to fly away from him. He stated, that the other pilot did not see him because he was looking towards a thermal in

front of him and to the left.

According to the pilot of ISV, he was joining a gaggle from the right side turning slightly to the left. Suddenly looking upwards, he saw the underside of a fuselage of a glider coming from behind very close to his canopy. The other glider turned left.

Only ISV had a Flarm.

The analysis of the tracks of both gliders on their flight recorders showed that both gliders were flying nearly parallel before converging slowly. ISV was slightly behind G1 and was flying a little faster but it is difficult to assess if he really did not give way to G1 coming from his right. Since both pilots left the previous thermal together, and were close all the time, they should both have monitored the other glider better. ISV should have looked from time to time at 90° to the right to see G1, whereas G1 should have looked at 90 ° to the right to see ISV.

The Competition Director therefore decided to give a warning to both pilots for not having maintained sufficient look-out. The Argentinian Captain filed a Protest against this decision.

Fatal accident

The same day, the Russian Standard Class pilot, Alexander Martynov, crashed in his LAK 19 sailplane about one hour after the opening of the start line, close to Horna Stubna, approximately 23 km North East of Prievidza.

At least two other pilots witnessed the accident. According to them, Alexander was circling in a thermal at nearly 1000 meters AMSL when he entered into a spin. He did not recover from this spin and crashed into a forest. Pilots sent the coordinates and one of them landed in Martin in order to help identify the crash location.

The Organisers were immediately alerted by the team captain of one of these pilots. They immediately activated the search and rescue system. They also sent an aircraft to the accident location to search for the sailplane and after a few minutes, it was joined by a helicopter from the Search and Rescue system. Due to the density of the forest, none of the aircraft could find the glider. Finally, the police informed us that they had found the wreckage and that the pilot was dead. The crash site is at an elevation of 800m.

The Organisers decided to cancel the task in the Standard Class and informed the team captains about their decision. In order to honour the memory of the Russian pilot, they also decided that the day after (9 July) would not be a competition day.

In accordance with the FAI Casualty Procedures, a press statement was made and the FAI was informed within a few hours of the accident

It seems that the pilot had little experience on the type of glider and also little experience in mountain flying. The Accident and Incident Investigation Department of the Ministry of Transportation and Communication of the Slovak Republic is currently investigating the accident.

Since the pilot had no personal life insurance, the organisers invited donations, which were given to the widow when she came to Prievidza.

Accident during an outlanding

The day after the fatal accident (July 9th), we had another accident. During an outlanding, the Hungarian pilot, Andras Gyongyosi, (Discus 2BR competition ID: DX) was landing out on a field when he saw a fence in front of him. He tried to avoid the obstacle by pulling up. He managed to fly over the fence but made a hard landing. The landing was so hard that he was injured and the rescue (rocket) parachute was activated. He was transported to a local hospital where spinal injury was diagnosed, following which, he was repatriated to Hungary for surgery. The pilot was supposed to be the Competition Director in Szeged...

3.3 Availability of medical personnel

A doctor was present all the time on the airfield.

3.4 Use of safety officers

An airline pilot, former member of the Slovak CAA, was appointed as safety officer. He monitored all operations from the control tower and solved all possible problems in English. He was also the interface with the Slovak CAA during the accident investigations.

3.5 Launch safety

As already mentioned the launches were safe.

3.6 Pilot skills relating to safety

We do not really understand why we had so many accidents and incidents during the first week. It seems that the level of the pilots was quite non-homogeneous and that several pilots were not accustomed to flying in a competition with so many other pilots. Also, some pilots seemed to be "over motivated" and flew too aggressively. After the series of accident, we felt it necessary to make a powerful speech to remind everybody that no medal, no placing in a world championship is worth putting his own life or the life of other pilots at stake.

3.7 Suggestions for future safety enhancements

We believe that the IGC needs to set up clear guidelines for the organisers and the stewards on how to handle a mid-air collision like the one we had. In such a case, do we have to determine the responsibilities and to penalise pilots having not given way or flown too aggressively or do we simply consider that the event was simply due to bad luck and continue as if nothing had happened? We believe that adopting the latter attitude would give a wrong message and show that we do not really have the willingness to improve safety at competitions.

Another issue is the fact that not all pilots used a FLARM. We should perhaps find a way to make such devices mandatory in international championships, despite them not being allowed in all countries...

Finally, we should also consider decreasing the number of entries in a class. Simple statistical considerations show that the probability of having a mid-air collision increases very rapidly with the number of pilots in a class (it is more than proportional to this number). We know that it would not be a very popular decision but if the IGC restricted the number of pilots to one pilot per country and class we would certainly limit the risk of mid-airs...

Roland Stuck

Jaroslav Vach

Chief Steward

Steward

IGC Steward Report

31st. FAI World Gliding Championships

Szeged Hungary 24th July to 7th August

Contest Director: Andras Gyongyosi

Competition overview.

The competition organisation was under resourced and poorly prepared; it was evident that the Aero Club of Hungary had not respected their obligation to ensure that the competition organisers met their responsibilities in providing suitable infrastructure and facilities. The local organising club did not use the funding provided by the competition entry fees and tow charges to provide suitable infrastructure or personnel.

We recommend that the FAI write officially to the Hungarian Aero Club to make a formal complaint that the competition was not sufficiently resourced and did not achieve the basic level expected for a WGC organisation.

This is no reflection on the small team of dedicated organisers who worked extremely hard with poor infrastructure and facilities and co-operated well with the FAI officials.

The competition was unlucky to suffer poor weather conditions with low cloud bases and weak conditions on most flying days.

Pre Competition

In 2009 there was a Women's World Championships held at the same site and attended by the Chief Steward. At the closing of this competition the CS met with the then designated competition director for 2010 and the local organiser committee representative. At this meeting a number of issues were identified as requiring improvement and attention prior to the 2010 contest, assurances were given that these issues would be attended to. The same issues were raised again six months before the competition and assurances were once again given that the issues would be corrected. It is very disappointing that virtually none of these assurances were fulfilled. It is evident from this experience that greater sanction is required to ensure organisers reach minimum performance standards, comply with the bid conditions and fulfil promises.

Practice period

The practice period was not taken seriously enough by the organisers or pilots which resulted in many problems on day 1 of the competition. (One pilot receiving a warning on day 1 admitted he had not been to a single briefing in the practice period). During the practice period the information stream was chaotic, with the briefing, website and printed information media's being used at random. Important (flight and technical) information didn't reach pilots and the TC's.

The importance of the official practice period should be reinforced requiring competitors to attend and organisers to follow all the competition procedures.

ORGANISATION

The organisation was not fully prepared and lacked sufficient helpers at all levels. The core organisers were very capable and they worked very hard to compensate for the lack of facilities but lacked proper procedures and administrative support.

Quantity of officials

Most of the organising team performed more than one function, the consequent overlapping of tasks and shortage of time available was a constant cause of mistakes entering the information at briefings and information to pilots.

Experience of officials.

The Director, scorer and task setter were experienced at a local level but did not appreciate the difference in standards and procedures expected in the organisation of a three class WGC. They responded positively to advice and input from the stewards.

Suitability of meetings and briefings

During the practice period the briefings were almost impossible to understand due to poor acoustics and a

poor PA system, this was significantly improved during the first few competition days. The main briefings were much improved after several competition days and subsequently they were conducted in a professional and suitable manner.

The team captains meetings held each day on a relaxed and informal basis 30 minutes before briefing were extremely useful and devoted to a discussion on problems and important issues.

Suitability of weather information

Weather information was provided by a professional meteorologist, the initial presenter had to be changed due to poor English and the second presenter was quite satisfactory. The information given at the briefing and on paper distributed to the pilots was adequate.

Suitability of facilities

The info office was located in the briefing hangar and functioned satisfactorily. The competition scoring and directors offices were cramped and lacked sufficient space for them to perform their functions efficiently.

The campground was crowded and suffered constant power failures due to the large number of air-conditioning units in operation. The sanitary facilities were barely adequate and insufficient attention was paid to their cleanliness and hygiene.

Catering was well organised in the aero club restaurant next to the briefing hangar and reasonable quality food was available at reasonable prices, however the facilities were wholly inadequate for the number of persons at the event.

A Wifi network covered most of the airfield and the Internet connection worked well most of the time.

The airfield surface was very poor in some areas resulting in many complaints from the pilots and some minor damage to landing gear doors etc.

Information dissemination (Announcements, schedules and decisions)

Once the competition had started all the official information and results were displayed on the official notice board located in the briefing hangar and signed by the director. Printed information was distributed to the team captains and to the FAI officials in mail boxes. The results were also displayed on internet and on screens located in the bar. Due to a lack of administrative support several mistakes were made in the distribution of information which required corrective action. There was no effective means of communicating with the team captains or pilots until the organisation started to use the tower radio for official announcements

Retrieval

There were many out landings most of which were uneventful. There were considerable problems crossing the border into Serbia resulting in long delays and difficulties finding pilots. After a large number of 15m class gliders landed in Serbia the following day was cancelled for that class due to late arrivals back at Szeged. Two pilots did not arrive back until after briefing the next day.

Launch control

In general the launching was handled efficiently and with few problems. There was a tendency for the launching to commence before the announced time resulting in complaints from the pilots at the front of the grid.

Finish procedures

During finishing on the first competition day in the 15m and 18m classes, there were a number of incidents which indicated that the procedure needed to be improved. A finish ring and new landing procedure was introduced which was found to be very satisfactory for the rest of the competition..(see section on Annex A recommendations).

Opening and closing ceremonies including presentation of Jury and Stewards

The opening ceremony was well organised with a march through the town of Szeged to the town hall. The speeches were rather long due to translation into English. There was a fly past of two Hungarian air force jets and the FAI flag was raised during the ceremony and the FAI anthem played, the contest was opened by the Jury president Prof, Peter Ryder.

The Jury and the Stewards were presented during one of the briefings.

The prize giving ceremony

This was held in the main briefing hanger. It was well organised and efficient culminating in the lowering of the FAI flag and Anthem being played.

Steward and Jury facilities

The organisers provided the chief steward with a car for use of the stewards and jury. The accommodation reserved for the Stewards and Jury was unsatisfactory requiring the Jury President and Chief Steward to find alternative accommodation. The office provided for use by the officials was satisfactory.

Other social events

There was very nice Hungarian evening with good food at no cost, the music was cancelled and the money saved was added to the truck driver fund. The German team organised a free food and beer evening sponsored by Mercedes Benz.

The International evening was a great success and most countries contributed to make the event very enjoyable.

The last night party was a very sociable event. The organisers sold tickets at 14e for the food at the party despite the bid document stating the farewell party was included in the entry fee. This caused many complaints to the organisers from pilots and TC's. However they did provide a welcome aperitif and made some beer available free of charge.

Total number of scheduled days and number of contest days

The total number of scheduled day was.

15m Class 7 days

18m Class 7 days

Open Class 8 days

Media liaison and internet coverage

There was no dedicated person or facilities to assist the press. Several camera teams from different nations arrived toward the end of the competition. They were mostly guided by team captains and as far as we are aware there were no complaints about their activities.

There was no media board at the event and no evidence of local coverage.

Public and Internet display of real-time aircraft positions and information

The organisers used Yellow Brick tracking, they placed trackers in about 5 of the top gliders in each class although some of the pilots refused to carry the trackers. Due to the low number of trackers per class and the low speeds in the poor soaring conditions the tracker system was not very effective and lacked an audio channel for commentary. Regular internet and power cuts caused many delays in the tracker system.

Task setting and operations

The procedures and strategy for task setting were not of a standard required for WGC events. Tasks were required to be changed on several occasions and were often over optimistic. There was little creativity in the setting of fallback tasks resulting in fewer options during the decision period prior to launching.

Scoring system (use and application)

The scoring system worked satisfactorily once the problems in file handling were resolved. The scorer was also involved in the task setting process, there was only one computer covering both areas and no network in place for file sharing. This resulted in delays to correct scoring status being achieved in a timely manner.

Protest handling and registration

There was no procedure for handling or filing of enquiries or complaints, a procedure was put in place and the relevant documentation was organised by the stewards.

There were no protests during the competition.

RULES

Adequacy of Local Procedures

The local procedures were amended several times prior to the contest and the final version was issued during the practice period. Several additions needed to be made during the both practice and competition periods, these were distributed to teams and covered in detail at briefing.

The changes included.

- Release from tow procedures.
- Landing procedures
- Strong wind landing procedures
- Finish procedures.
- Engine run procedures
- Control point radius
- Scoring enquiry procedure.

Possible improvements of Rules and/or Local Procedures

IGC File upload

Organisers are increasingly making use of web based file upload systems. This is a positive improvement to the procedures but presents problems at the beginning of a contest if the FR information is not accurate.

The system only works well once all file names are recognised and associated with a pilot. To improve the situation we suggest amendments to Annex A as follows.

Flight recorder details

All Flight recorders nominated should contain the correct pilot and glider information where the FR features allow this. This is to reduce the problem of having lots of flights from "Buzz Light Year"

Scrutineering

During the scrutineering process one flight file should be submitted from both nominated FR's. This is probably the best way to ensure the scorers have FR files to prime the system

Changing of flight recorders.

Any change to a pilot's nominated recorder should be registered and accompanied by an IGC file from the new recorder.

Primary and secondary FR.

The requirement to always hand in the primary FR could be deleted and replaced with "a file from either nominated recorder". There seems to be no logical reason why we should have a primary and secondary as this creates more work for the scorers.

Finish procedure.

We suggest that the finish procedure in Annex A should be amended to make the use of a finish ring a default for all contests unless it can be proved unsatisfactory for a specific location.

The finish ring should have large enough diameter to make the crossing line as flat as possible (min 3km)

The line should be a minimum of 1km from the airfield threshold.

Procedures should be included to avoid deliberate outlanding and low high speed line crossings where obstacle exist.

1. The LP's could contain a rule requiring a continuously descending flight path during the final glide.
2. There could be a compulsory minimum altitude marked on the task sheet for crossing the finish ring which allows a direct landing on a glide slope appropriate to the class and taking into consideration the wind strength.
e:g Standard 1:30/35. 18m 1:40/45 Open 1:50.
3. There could be a 5 minute penalty for crossing the line but not landing on the airfield.

In post contest discussion option number one was considered the most appropriate for most circumstances.

Practice Period

The importance of the official practice period should be reinforced in Annex A requiring competitors to attend and organisers to follow all the competition procedures.

Annex A procedure for duplicate contest numbers

There should be an Annex A regulation regarding action in the event of duplicate contest numbers. We suggest the first number registered should be given priority any subsequent conflicting competition numbers must be changed prior to the contest.

Engine run procedure could be modified.

With a large number of gliders in a World Contest the engine run procedure creates an unnecessary hazard. We suggest the procedure could be modified according to the procedure in annex 1 to this report.

Control points.

The rules for racing task TP sectors should be relaxed if applied to control points to allow more separation of classes.

Release areas.

Annex A states that separate release areas should be used for each class. During this competition a single release area was used and this procedure worked extremely well allowing for launching of two classes simultaneously. We recommend that Annex A should not require separate release areas but require the procedures to be included in the local procedures as each airfield has differing criteria.

SAFETY

General safety of the event

The event was conducted in a safe manner with procedures being modified to improve safety whenever they were identified..

A pilots safety committee was elected at the beginning of the competition but did not meet during the event.

A Pilot comments Box was introduced and pilots were encouraged to post any comments in the box either signed or anonymous. This was a very successful initiative and resulted in many comments from pilots providing feedback to the stewards.

Safety briefings were made during briefing by the Chief Steward when it was considered appropriate to do so.

Occurrence of incidents and/or accidents.

On the first competition day in the 18m and 15m classes there was an accident involving an 15m class glider VW and a lorry passing the airfield on a main road. The glider was very low on the last stages of his final glide but would almost certainly have passed over the boundary fence. He did not see a truck driving on the road and left his pull up over the fence too late and with very little energy, the resulting impact with the truck caused injury to the driver. The glider then hit the boundary fence going backwards and the pilot was unhurt. The accident is subject to an investigation by the Hungarian officials and a full report will be issued in due course.

Availability of medical personnel

There were no medical personnel on the airfield and response was required from the local emergency services based in Szeged.

Use of safety officers

A safety officer was appointed by the organisers who also took the role of co-ordinator in the event of an accident. The organisers produced a document for the team captains outlining action to be taken in the

event of an accident. Unfortunately at the time of the accident on day one in the 15m class the safety officer was not available.

Launch safety

The launching was conducted safely once initial small procedures were improved, the organisers held a tug pilot briefing each day which improved the towing procedures and discipline of the tow pilots. The organisers co-operated with the stewards on the spacing and timing of each class launch.

Pilot skills relating to safety

A briefing by the CS was held on the last practice day for all pilots flying in a WGC for the first time.

Due to the large number of competitors it was very difficult to communicate with individual pilots except in case of a complaint or observed incident. There were many reports of gliders flying too close to each other and use was made of flight traces to discuss the situation with the pilots. It was evident that there was considerable difference in the skill and experience levels of pilots.

Stewards.

The current system of Stewards has been in place for many years and reflects their role in competitions from some years ago. The many changes in competition procedures during recent years has also changed the demands on the stewards and changes in their role. The use of IGC files to analyse flights for both potential and reported hazards is an increasing part of the stewards work.

We suggest that for future WGC one of the stewards should be a specialist in the analysis of flight data and the preparation of 3D and flight analysis videos. This person would work under the direction of the chief steward and support him and the organisers with the analysis of flight data and the preparation of safety video clips for the contest briefing and general distribution.

The situation regarding FAI officials liabilities needs to be clarified by FAI and we should ensure that proper liability insurance is in place to protect them against legal action.

All FAI officials should have travel and sickness insurance, it may be possible for FAI to have a policy that covers all officials otherwise we should pay for suitable individual insurance.

Annex 1

Modified Engine-Run Procedure for Motor Gliders

Annex A, section 5.4.d, *Control Procedures*, and the Local Procedures dated 21st July 2010 section G – *Competition Procedures* require “On motor gliders having an MoP capable of being started in flight (including sustainer MoP) the engine must be started and run for a maximum of two minutes either before the launch, or within 5 minutes after release if the motor glider is launched by aerotow.”

This procedure needs to be followed ONLY on the first competition day, PROVIDED THAT:

- 1) Flight recorder logs from both the primary and back-up flight recorders are submitted on the first competition day showing a positive record of the engine run, and
- 2) Flight recorder logs on each subsequent competition day must show evidence that the engine noise sensor is enabled.

The pilot also has the option to run the engine on each competition day according to normal Annex A, section 5.4.d procedures.

REPORT OF THE JURY PRESIDENT TO THE IGC

Event Details

31st FAI World Gliding Championships in the 15m, 18m and Open Classes, 25.7. – 6.8.2010, Szeged, Hungary

Organizing NAC: Magyar Vitorlázórepülő Szövetség (Hungarian Aeronautical Association)

Number of flights: 991, Number of tasks: 22, Number of competitors: 143.

Competition days: there were 7 competition days in the 15m and 18m classes and 8 competition days in the Open Class.

Event Personnel

Event Director: András Gyöngyösi

Deputy Directors: Milán Kmetovics

Chief Scorer: Gábor Pacz

Chief Steward: Brian Spreckley

Stewards: Frouwke Kuijpers, Ken Sorensen

FAI Jury

President: Peter Ryder

Members Jaroslav Vach¹, Peter Eriksen²

Complaints and Protests

There was only one official complaint and no protests.

General Remarks

The Organisation was generally not up to the standards expected for a World Championship event. However, thanks to the persistent efforts of the Stewards a successful championship was eventually achieved. I refer to the Stewards' Report for details.

The overall final results are attached to this report.

(Signed) Peter Ryder, Jury President.

¹Present for the last 3 contest days.

²Not present at the site.

31st FAI World Gliding Championship 2010

Szeged, Hungary, 24.07.2010 - 06.08.2010

15-meter - Overall results after 7

#	CN	Pilot	Country	Glider	Total
1.	VS	GHIORZO Stefano	Italy	Diana 2	5959
2.	LE	WELLS Leigh	United Kingdom	ASG 29	5826
3.	KT	GOSTNER Thomas	Italy	Diana 2	5719
4.	RP	RUBAJ Tomasz	Poland	Diana 2	5684
5.	5A	BREIDAHL Henrik	Denmark	Ventus 2	5676
6.	V8	GULYÁS György	Hungary	Ventus 2	5651
7.	EY	RUCH Christophe	France	Ventus 2	5634
8.	AZ	TICHY Petr	Czech Republic	Ventus 2	5628
9.	AX	TOMANA Jaroslav	Czech Republic	Ventus 2	5613
10.	LI	WOJCIK Lukasz	Poland	ASW 27	5549
11.	EQ	BOUDERLIQUE Louis	France	Ventus 2	5523
12.	V7	LAURINYEZ Sándor	Hungary	Ventus 2	5499
13.	EH	HIRVOLA Harri	Finnland	Ventus 2	5480
14.	C64	CRABB Paul	Ireland	Ventus 2	5447
15.	K1	LEEUVENBURGH Mark	Netherland	Ventus 2	5436
16.	V	COLSON Jean-Luc	Belgium	ASW 27	5351
17.	KX	TOURULA Tapio	Finnland	Ventus 2	5344
18.	CD	HAAS Jürg	Switzerland	ASW 27	5216
19.	MM	LITT André-Emmanuel	Belgium	Ventus 2	5116
20.	Z3	SCOTT Timothy	United Kingdom	ASW 27	5095
21.	A9	DORTU Maurits	Netherland	Ventus 2	5089
22.	SE	SCHÖDEL Susanne	Germany	Ventus 2	5051
23.	LX	ALLENSPACH Andreas	Switzerland	Ventus 2	5028
23.	8X	ERIKSSON Börje	Sweden	Ventus 2	5028
25.	LK	KUVIK Lubor	Slovakia	ASG 29	4906
26.	XY	ZUBE Gintautas	Lithuania	Ventus 2	4880
27.	BB	COCHRANE John	USA	ASW 27	4867
28.	MR	SWANSTROM Richard	Sweden	Ventus 2	4801
29.	M2	DICKINSON Dane	New Zealand	Ventus 2	4658
30.	VI	JANCIK Dominik	Slovakia	Ventus 2	4534
31.	DM	FASSI Eduardo	Argentina	Ventus 2	4393
32.	GA	ACHLEITNER Guido	Austria	ASG 29	4182
33.	VV	TAMÁS Ferenc	Hungary	Ventus 2	4089
34.	PS	SPRINGFORD Dave	Canada	ASW 27	4088
35.	70	DELFABRO Mauricio	Argentina	ASW 27	4085
36.	71	BESTER Andries	South Africa	Ventus 2	4065
37.	LT	THEISINGER Georg	Germany	ASW 27	3994
38.	M1	ZIEGERHOFER Herbert	Austria	Ventus	3893
39.	EM	JENSEN Johnny R.	Denmark	ASW 27	3860
40.	SV	MILIUNAS Kestutis	Lithuania	LAK 17	3731
41.	LV	MCLAUCHLAN John Mannie	South Africa	ASG 29	3485
42.	73	MYKHAILENKO Oleg	Ukraine	Ventus 2	3453
43.	SP	DUARTE Claudio Blois	Brasil	ASG 29	3360
44.	WT	THEISINGER Martin	Germany	ASW 27	3353
45.	8H	TYLER Allison	USA	ASG 29	3237
46.	29	STIPICIC Carlos	Chile	ASG 29	2724
47.	AMI	CRACIUN Mircea	Romania	AFH 24	2641
48.	GE	ZIVA Frenc	Serbia	Ventus 2	2447
49.	VW	ZEHNDER Lars	Australia	ASW 27	605

31st FAI World Gliding Championship 2010

Szeged, Hungary, 24.07.2010 - 06.08.2010

18-meter - Overall results after 7

#	CN	Pilot	Country	Glider	Total
1.	PL	NIERADKA Zbigniew	Poland	ASG 29	6279
2.	WZ	JONKER Uys	South Africa	JS-1	6199
3.	MC	STARYSZAK Karol	Poland	ASG 29	5909
4.	XG	SZEMPLINSKI Jerzy	Canada	ASG 29	5898
5.	ZP	JONKER Attie	South Africa	JS-1	5870
6.	7D	DIVOK Maros	Slovakia	Ventus 2	5867
7.	WO	JANOWITSCH Wolfgang	Austria	Ventus 2	5797
8.	MP	TERMAAT Ronald	Netherland	JS-1	5729
9.	B	BASTIAANSE Rien	Netherland	ASG 29	5721
10.	E1	CHEETHAM Russell	United Kingdom	JS-1	5673
11.	10	FOLTIN Vladimir	Slovakia	LS 10	5669
12.	CZ	LOUZECKY Pavel	Czech Republic	Ventus 2	5638
13.	29E	DARROZE Olivier	France	ASG 29	5612
14.	F	FRIEDLI Rolf	Switzerland	ASG 29	5572
15.	UJ	COUTTS John	New Zealand	JS-1	5534
16.	MD	DÜNNER Marcel	Switzerland	ASG 29	5523
17.	RB	BRIGLIADORI Riccardo	Italy	Ventus 2	5516
18.	SDI	GOLDENZWEIG Damian	Argentina	Ventus 2	5465
18.	AS	SIRONI Alberto	Italy	Ventus 2	5465
20.	3B	JEANMOTTE Yves	Belgium	Ventus 2	5411
21.	PX	NOVAK Ivan	Czech Republic	Ventus 2	5374
22.	DID	DIDIER Hauss	France	Ventus 2	5372
23.	HE	HEINONEN Erkki	Finnland	ASG 29	5338
24.	M	ICHIKAWA Makoto	Japan	Ventus 2	5330
25.	AB	BOYE-MULLER Arne	Denmark	Ventus 2	5318
26.	EF	KILLIAN Walbrou	France	Ventus 2	5305
27.	MO	HOELGAARD Mogens	Denmark	Ventus 2	5285
28.	VO	DREVINSKAS Gintaras	Lithuania	LAK 17	5209
29.	HI	VEREBÉLYI Zoltan	Hungary	Ventus 2	5173
30.	210	JONES Phil	United Kingdom	Ventus 2	5143
31.	WE	ELLIOTT Bill	USA	JS-1	5134
32.	C65	CRABB Stephen	Ireland	ASG 29	5090
33.	Y4	SCHRAMME Reinhard	Germany	Ventus 2	5057
34.	WG	AMANN Werner	Austria	Ventus 2	4959
35.	WM	MEUSER Werner	Germany	Ventus 2	4899
36.	2J	MILKO Thomas	Brasil	ASG 29	4896
37.	AL	LEHTO Antti	Finnland	Ventus 2	4888
38.	F2	JEANMOTTE Michaël	Belgium	Ventus 2	4759
39.	BX	SZABÓ Péter	Hungary	Ventus 2	4727
40.	WK	JANSEN David	Australia	ASG 29	4531
41.	A8	ROCCA Carlos	Chile	ASG 29	4443
42.	IR	ZORAN Frenc	Serbia	Ventus 2	4310
43.	BO	LARSSON Hans	Sweden	Ventus 2 Cxm	4209
44.	IKX	KARLSSON Gunnar	Sweden	Ventus 2	3980
45.	CX	SHALNEVA Nina	Russia	Ventus 2	3901
46.	KM	MACIULIS Vytautas	Lithuania	LAK-17B -FES	3883
47.	LZ	ZNIDARSIC Luka	Slovenia	LAK-17A-FES	3874
48.	RI	Kelley Tom	USA	ASG 29	3849
49.	S	RODIC Daniel	Bosnia	HPH 304S	3804
50.	4A	KRUSIC Ales	Slovenia	Ventus 2	3430
51.	MPI	PARKER Graham	Australia	Ventus 2	1842



31st FAI World Gliding Championship 2010

Szeged, Hungary, 24.07.2010 - 06.08.2010

Open - Overall results after 8

#	CN	Pilot	Country	Glider	Total
1.	EB	SOMMER Michael	Germany	EB29	6834
2.	110	JONES Steve	United Kingdom	Nimbus 4	6596
3.	IP2	DE BROQUEVILLE Pierre	Belgium	EB-28 Edition	6535
4.	A	ANDERSEN Jan Walther	Denmark	Nimbus 4	6483
5.	XXL	ABOULIN Laurent	France	ASW 22BL	6471
6.	N1	HARVEY Peter	United Kingdom	Nimbus 4	6400
7.	SS	TABERY Ron	USA	ASW 22BL	6372
8.	72	GERBAUD Sylvain	France	Nimbus 4	6259
9.	RX	KREJCIRIK Petr	Czech Republic	ASW 22BL	6191
10.	X	KAROW Holger	Germany	Nimbus 4	6169
11.	II	BECK Stephan	Germany	ASW 22BL	6161
12.	PF	RENDLA Tomas	Czech Republic	ASW 22BL	6097
13.	KS	MATKOWSKI Christoph	Poland	ASW 22BL	6070
14.	NB	GäUMANN Markus	Switzerland	Nimbus 4	6034
15.	ZY	SCHMELZER Tilj	Belgium	Nimbus 4D	5991
16.	22	GOUDRIAAN Oscar	South Africa	ASW 22BL	5884
17.	7	PRISTAVEC Bostjan	Slovenia	EB-28 Edition	5817
18.	VX	CENTKA Janusz	Poland	ASH-31Mi	5815
19.	W	WILLAT Garret	USA	ASW 22BL	5766
20.	FE	GALETTI Giorgio	Italy	Nimbus 4	5604
21.	TEX	AVANZINI Luciano	Italy	Nimbus 4	5572
22.	HM	GOUDRIAAN Laurens	South Africa	ASW 22BL	5482
23.	IP	GAUDE Javier	Argentina	ASH 25 EB 28	5465
24.	4T	BATENBURG Peter	Netherlands	Nimbus 4	5459
25.	LSJ	JEREMIASSE Francois	Netherlands	Nimbus 4	5428
26.	FJ	EDER F. Josef	Austria	EB-29	5377
27.	4M	CLAFFEY Tom	Australia	Nimbus 4	5376
28.	HJ	LARSEN Poul Kim	Denmark	ASH 25	5168
29.	GX	TÜLKÖS János	Hungary	ASH 25 EB 27	5164
30.	UC	REICH Dirk	Switzerland	Nimbus 4D	4982
31.	LB	SABECKIS Vytautas	Lithuania	Nimbus 4	4824
32.	XX	HEGEDŰS László	Hungary	Nimbus 4	4771
33.	A1	MARAZ Ales	Slovenia	Nimbus 3	4764
34.	SD	BOROVYK Dmytry	Ukraine	Nimbus 4D	4604
35.	BY	HAAGENMÜLLER Reinhard	Austria	ASW 22BL	4421
36.	1	BLANCO Joaquin	Argentina	ASH 25 EB 28	4258
37.	VB	BOROVIK Vitaly	Russia	Nimbus 4D	4254
38.	IE	REHN Egon Otto	Brasil	ASW 22BL	4022
39.	EC	VIDAL Rene	Chile	Nimbus 4	4005
40.	IM	CERNY Pavol	Slovakia	ASH 25	3802
41.	FB	ANASTASSIOU Alexis	Greece	ASH 25 EB 28	3780
42.	SA	SKALSKIS Stasys	Lithuania	LAK 20T	2950
43.	OX	LANGELAAN Willem	Canada	Antares 18S	2356



Application for organizing a "FAI World Gliding Championships "

All the information sought in this bid document must complete prior to the application being submitted. Details, such as a diagram of the airfield, may be included as an Annex. When completed an electronic copy of the Bid must be sent to the IGC Bid Specialist (emozer@deltamold.com) before the closing deadline of September 30 to enable the application to be checked for completeness. Once the application has been checked and amended as necessary, the IGC Bid Specialist will forward the application to the Secretary of the IGC.

Applicant:

Name: The Finnish Aeronautical Association, Helsinki-Malmi airport, FIN-00700 Helsinki, Finland

www.ilmailuliitto.fi

Date of Application: December 28th , 2010

Organising Gliding Club or other organisation: Räyskälä Foundation, Räyskäläntie 311, FIN-12820 RÄYSKÄLÄ, Finland

Name and address of National Aero Club: The Finnish Aeronautical Association, Helsinki-Malmi airport, FIN-00700 Helsinki, Finland

Proposed Competition Director Mr Antti Koskiniemi

Mr Koskiniemi, 43, is an active glider pilot and gliding instructor with 2000 hours of gliding since 1985. He holds gold badge with three diamonds and 750km diploma. He has participated 40+ national and international gliding competitions including WGC 2002 (Musbach, club class) and 2008 (Rieti, std class). Winner of Pribina Cup 2004. Twice competition director at Finnish Nationals. He has also been acting as jury member and jury president in Finnish Nationals.

Member of Finnish Aeronautical Association's Gliding Section since 2003. IGC alternate delegate for Finland 2005-2010. Finnish FAI CANS and EGU Airspace Group delegate since 2009.

Antti holds a Masters degree in engineering sciences and has worked for 20 years for Finnair, where his current position is Head of Flight Planning.

(provide the name and a brief resume) .

Proposed Organisation of the event:

Competition Director	Mr Antti Koskiniemi
Deputy Director	Mr Heikki Pohjola
Task setter	Mr Kristian Roine
Meteorologist	Mr Heikki Pohjola

Head of Scrutineering	Mr Kari Lappalainen
Finance Manager	Mr Riku Rissanen (also General Manager / Räyskälä Foundation)
Press Relations	Mr Jari Pakkanen
Webmaster	Mr Hannu Niemi
Scoring	Mr Kimmo Sundström / Mr Esko Ollikka
Competition office	3-4 persons

Everyone has got experience of arranging gliding competitions and they have or have had at least glider pilot licence (GPL).

Safety Chief, SAR, Towing Chief, Tow Pilots etc will be notified later on. Our scope is that the organization is ready two years before the WGC 2014 and it will arrange two gliding competitions (2012 and 2013).

Airfield: Räyskälä (EFRY)
www.rayskala.com

Contact person (for the applicant):

Name: Kai Mönkkönen / The Finnish Aeronautical Association
Address: Helsinki-Malmi Airport, FIN-00700 Helsinki, Finland
Email address: monkkonen@ilmailuliitto.fi
Phone Number: +358 9 3509 3434
Mobile Number:
Fax Number: +358 9 3509 3440

1. Event and Year

1.1 Name of Competition

33. FAI World Gliding Championships in 15m, 18m and Open Classes

1.2 Year of event

2014

2. Site

2.1 Name of the airfield

Räyskälä (EFRY)

(Räyskälä: <http://www.rayskala.com/english/index.html>)

2.1.1 Co-ordinates

60 40 44 N, 24 06 40 E, elevation 124m

2.1.2 Direction and distance to nearest town, population of this town

- Forssa, 35 km W, population appr. 25 000
- Hämeenlinna, 40 km N/E, population appr. 40 000
- Riihimäki, 40 km E, population appr. 25 000
- Loppi, 25 E, population appr. 2 000

2.1.3 Experience of airfield staff in organising championships

- Nordic Championships 1971
- World Championships 1976
- Junior World Championships 2009
- European Championships 1988, 1996 and 2005
- European Motorgliding Championships 1984
- Junior Nordic Championships 1992, 2000 and 2008

Finnish Nationals have been flown from this famous site almost regularly during last 4 decades

2.2 Proposed period for the event

2.2.1 Training Dates

June 15th-21th 2014 (we are prepared also for unofficial training starting from June 1st)

2.2.2 Competition Dates

June 22nd-July 6th 2014

2.2.3 Alternate dates for training

June 29th- July 5th 2014
(preferably greater than 3 weeks from primary bid dates in 2.2.1)

2.2.4 Alternate dates for competition

July 6th- July 20th 2014
(preferably greater than 3 weeks from primary bid dates in 2.2.2)

2.3. Airfield operating data *(provide details for the following)*

2.3.1 Surface of airfield, number and directions of runways (provide diagram and photograph)

Two asphalt runways with parallel towing runways plus taxiways.
 RWY 08/26 1020m x 18m, RWY 12/30 1270m x 18m.
 The rest of the airfield is grass, suitable for sailplane landings.

Total area of the airfield is approx. 100 hectares.

2.3.2 Number of towplanes that will be employed

Sufficient, approx. one tow plane for 10 gliders. Maximum number of gliders 120 (then 12 tow planes).

2.3.3 Meteorological facilities that will be provided

A resident professional weather forecast person (also a glider pilot) with all the necessary equipment.

2.3.4 Parking facilities for gliders

Parking will be arranged in the open. Quite a few pilots want probably to keep their gliders in trailers. There is a lot of parking space in the airfield.

2.3.5 Repair facilities for gliders

At the airport.

2.3.6 Repair facilities for radios and instruments

Not available in Räyskälä. Some companies located in Riihimäki (40km), Hyvinkää (50km) and Helsinki (100km). Knowledge about these companies will be available before the competition.

2.3.7 Oxygen requirements and supply facilities, if required

Oxygen is not needed.

2.3.8 What plans do you have to implement the FAI Environmental Code of Conduct during your event?

In general, environmental awareness in Finland is at high level. Räyskälä airfield has its own environmental plan which fulfils both FAI Environmental Code of Conduct General Section and Gliding in Detailed Codes. Räyskälä airfield is also in process of obtaining national environment certificate.

2.4 Airfield Infrastructure *(provide descriptions for the following facilities at the airfield)*

2.4.1 Briefing Room

Briefing will be held in one of the smaller hangars. This room will easily seat the necessary number of pilots and team captains etc.

Loudspeaker system and on site monitors will be provided.

2.4.2 Common Room(s) for the competitors

Necessary facilities for the Teams will be provided.

2.4.3 Meeting Room for the International Jury

Security room for Jury meetings will be arranged.

2.4.4 Press Centre

Working places etc. for journalists will be arranged in the special Press Center with phone, fax and Internet-connections.

2.4.5 Communication and internet equipment

WLAN covers most of the airfield (free of charge).

2.4.6 Post and Banking

The nearest full service post and bank can be found in town of Loppi, approx. 20 km from the airfield. Post will be collected from the airfield on daily basis. Most common international credit cards are accepted for all payments at the airfield.

2.4.7 Insurance availability

All major insurance companies are located in Helsinki, Hämeenlinna, Riihimäki and Forssa.

2.4.8 Toilets, wash rooms and shower rooms

A sufficient number of toilets can be found in the motel, ATC building, café and sauna building. The sauna building also has a number of showers. Showers are also provided in some of the motel rooms. The organizers will provide additional facilities if needed. The most pleasant way to take care of personal hygiene is, of course in Finland, the sauna. At least two, maybe three, will be available right by the lake.

2.4.9 Car parking

Lots of empty space for hundreds of cars on site.

2.4.10 Emergency (including fire)

Nearest Fire Department is located in Loppi. Separate Rescue / Safety plan will be made.

2.4.11 Medical and First Aid

The nearest hospital is approx. 30 km from the airfield. A SAR (Search and Rescue) unit with medical and first aid possibility will be on airfield.

2.4.12 Conference and office rooms for the OSTIV Congress, if required

Facilities for OSTIV Congress can be arranged from vicinity of the airfield. Other option is to have the meeting in one of the nearby hotels. (for example Forssa 30km from Räyskälä)

3. **Accommodation and food for competitors** *(provide details of the following)*

3.1 Accommodation facilities available in the local area

- The motel at the airfield has 64 beds in 20 rooms. The price for these rooms is very reasonable.
- Rooms and cottages can be rented from motel Laakasalo, 7 km from the airfield.
- Hämeen matkailu (Hame Tourist bureau) and Loppi region have a number of private cottages for rent in the vicinity of the airfield (0-30 km).

3.2 Camping facilities at the airfield

There is lot of space for tents and caravans on site (with electricity)

3.3 Catering for competitors at the airfield

There will be a restaurant at the airfield open from early morning until very late if necessary.

4. **Competition area** *(provide descriptions of the following)*

4.1 Topography in the contest area

FLAT

4.2 A comprehensive survey of meteorological conditions

The weather in Finland in June is usually very good for gliding and especially for contest flying. The days are long and flights of 11 or even 12 hours are possible. The convection can start at 9 am and continues until 8-9 pm or even later (the last finisher in Europeans 1996 was after 10 pm). The cloud base is usually around 1500 – 2500 m AGL and the thermal strength can easily reach 3-5 m/s. The visibility is usually very good, 50+ km.

For the alternate dates of the event (see 2.2.3 / 2.2.4), the gliding conditions are normally good or very good in Finland. E.g. the EGC's 2005 were held July and the weather was very good (first competition day open class had 1000km task and 15m class 833 km).

4.3 Airspace restrictions in the contest area

It is not possible to fly far to Helsinki-Vantaa TMA which is SE from Räyskälä. In other directions there are few restrictions even though we usually have to observe some areas and even some altitude limitations.

4.4 Typical tasks to be expected

Over 1000km racing task has been flown in a competition. Typical tasks are around 500km.

4.5 Road and traffic conditions

Generally the conditions are good. Driving in Finland is safe and civilized.

5. Rules (*Note: The Championships must be conducted in accordance with Annex A*)

5.1 Indicate the options intended to be used from Annex A for:

5.1.1 Starting procedures

Start line.

5.1.2 Tasks

Racing Task and Speed Task, Assigned Areas.

5.1.3 Finish procedures

Finish Ring / Finish Line

5.1.4 Scoring

1000 points scoring systems

5.2 Indicate any particular conditions or possible restrictions that may be applied:

5.2.1 For pilots and crews

Validation is not needed (current interpretation) if:

- Licence is approved in glider's registration country

When a glider is registered to Finnish aircraft register, validation is not needed if the pilot has:

- JAR licence
- A licence from a member state of European Union (EU)
- A national licence from the Nordic Countries (Sweden, Norway, Denmark and Iceland)
- A licence (Annex 1 licence) from ICAO member state

Other licences have to be validated by CAA (preferably before the competition)

5.2.2 For sailplane and equipment

None

5.3 Number of competitors:

5.3.1 State the maximum number of competitors that may be entered the competition

Total maximum 120.

5.3.1.1 Provide explanation for this number

Räyskälä has more than adequate space to accommodate 120 gliders and the task area supports distribution of the classes.

5.3.2 Indicate how the classes will be separated for:

5.3.2.1 Starts

Separate start lines with sufficient spacing will be used for each class.

5.3.2.2 On task

Airspace makes it possible to separate tasks for each class.

5.3.2.3 Finishing and landing

There is plenty of space at the airfield (airfield area of 104 hectares).

6. Costs *(provide details of the following costs in Euros or USD)*

6.1 Entry fee

900 euro per sailplane

6.1.1 Services included in the entry fee

- ICAO map
- 2 x road maps
- all necessary competition documents

6.1.2 Cost of aero tows

50 euro / tow (depending on fuel price)

6.2 Price of car fuel per litre/gallon *(estimate)*

Gasoline approx 1,47 eur / litre and diesel approx 1,29 eur / litre (december 2010)

6.3 Rental cars

Starting from 300-400 euro / week

6.4 Accommodation *(as appropriate for local facilities)*

6.4.1 Hotels

57-77 euro / room (at the airfield motel, current price level 2011). Per one person approx 20 euro / person / night at the motel.

6.4.2 Apartments

6.4.3 Bed and Breakfast

6.4.4 Camping

25 eur / caravan / per day (at the airfield, current price level 2011)

6.5 Catering *(as appropriate for local facilities)*

6.5.1 Hotels

6.5.2 Restaurants

8-20 euro / meal

6.5.3 Airfield

Breakfast 5-8 euro

Lunch or dinner 6-10 euro

6.6 Provide an indicative example for the expected total costs during the contest period for a pilot with 2 crew members

Entry fee: 900 €

Travel from Europe: 900 €

Aero tows (10 * 50): 500 €

Accommodation: 1100 € (motel, one room) 350 € (camping)

Food: 500 € (in airfield restaurant)

Other costs 500 €

Total 4400 € 3650 €

7. **Glider Hiring** *(provide information on the following)*

7.1 The availability of local gliders for hire

Local gliders are available. Also Nordic and European countries can provide additional rental opportunities for overseas pilots.

7.2 The costs of hire

Normal rates

7.3 Any restrictions on hire *(e.g. license requirements)*

See 5.2.1

8. **Training**

8.1 Provide details of any proposed training opportunities for teams and individuals prior to the Championships.

Räyskälä is always welcoming visiting glider pilots. Tows are available during summer time (April-September).

An international gliding competition will be arranged in Räyskälä (summer 2013).



**ASSOCIATION AERONAUTIQUE
VERDON ALPILLES**

**1 LIEU DIT AÉRODROME
83560 VINON SUR VERDON - FRANCE**

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**BID
FOR ORGANIZING
THE WORLD GLIDING CHAMPIONSHIPS
2014**

15m Class – 18m Class – Open Class

VINON SUR VERDON – FRANCE

Dated : September 29, 2010





BID FOR ORGANIZING THE WORLD GLIDING CHAMPIONSHIP

15m Class – 18m Class – Open Class

VINON FRANCE 2014



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1. EVENT AND YEAR

World Gliding Championships 2014 – 15m Class, 18m Class, Open Class

1.1. Name and address of National Aero-club or other applicant

This bid to stage the 15m, 18m, Open Classes World Gliding Championship 2014 is submitted by the Fédération Française de Vol à Voile (FFVV). The competition is to be held at Vinon-sur-Verdon airfield, the home of the Vinon gliding club.

*Association Aéronautique Verdon Alpilles (AAVA)
 1 Lieu dit Aérodrome
 83560 Vinon sur Verdon*

1.2. Number of active gliding members

About 600 members, (300 of them are foreigners)

2. SITE

Refer to the enclose ICAO map (APP 1)

2.1. Name of airfield

VINON SUR VERDON - LFNF

2.1.1. Coordinates

The airfield is situated at Latitude 43° 44' 16" N, Longitude 005° 47' 03" E. The airfield altitude is 275meters (902 feet).

2.1.2. Direction and distance to next town, population of this town

The airfield takes its name from the adjacent village of Vinon, 1km east of the airfield. The two largest cities are MANOSQUE about 10 km north from the airfield and AIX EN PROVENCE, 35 km south-east from the airfield respectively 22 000 and 140 000 inhabitants.

2.1.3. Experience of airfield staff in organising championships/competitions

<i>in 1963/2008:</i>	<i>40 International championship of Vinon (CMVVM)</i>
<i>in 1979 :</i>	<i>French Nationals (Standard and Open classes)</i>
<i>in 1984 :</i>	<i>2nd European Gliding Championship (Standard, 15m, Open)</i>
<i>in 1988 :</i>	<i>French National (15M class)</i>
<i>in 2001 :</i>	<i>French Nationals (Standard, 15m and Open classes)</i>
<i>in 2005 :</i>	<i>French National (Club class) and Pre-word (Club Class – Word Class)</i>
<i>in 2006 :</i>	<i>Word Gliding Championships (Club Class, Word Class)</i>
<i>in 2009 :</i>	<i>French Nationals (Two-seater 20m, 15m and Open classes)</i>
<i>in 2010 :</i>	<i>French Nationals (15m and Open classes)</i>
<i>(2011 and 2012)</i>	<i>We expect to organize French Nationals in several classes</i>

2.2. Proposed period for the event

<i>Unofficial Practice :</i>	<i>The airfield site and tows are available at any time prior to the beginning of the official competition time.</i>
<i>Official Practice week :</i>	<i>07 to 10 July</i>
<i>Opening Ceremony :</i>	<i>Friday 11 July.</i>
<i>Competition :</i>	<i>A 14 days competition period, from 12 to 25 July.</i>
<i>Farewell Party :</i>	<i>25 July</i>
<i>Closing Ceremony :</i>	<i>Saturday 26 July</i>

2.3. Airfield operating data

Refer to APP 2.



BID FOR ORGANIZING THE WORLD GLIDING CHAMPIONSHIP

15m Class – 18m Class – Open Class

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2.3.1. Surface of airfield, number and direction of runways

Surface : grass and concrete

Number of runways : 4

Direction of runways : 10-28; 16-34; 02-20; (10-28 auxiliary for glider landing only).

2.3.2. Maximum number of sailplanes which can be accepted

120 (+ current world Champions if necessary)

2.3.3. Number of twoplanes which can be employed

From 8 to 12 towplanes

2.3.4. What meteorological facilities can be expected

Meteorologist from Meteo France, St Auban weather station, fax, PC-Met, Internet

2.3.5. Parking facilities for sailplanes

The sailplanes can stay in trailers or park, (refer APP 3)

2.3.6. Repair facilities for sailplanes

The local aeroclub as a well equipped workshop, moreover there is a special sailplanes repair and maintenance workshop on the airfield with a sufficient crew of authorized repair technicians to assist with repairs.

2.3.7. Repair facilities for radios and instruments

Possibilities of do-it-yourself repairs by team members available on the airfield.

2.3.8. Oxygen supply facilities

Competing Gliders should be equipped with oxygen, which could be necessary on strong thermal task days. Oxygen refill facilities will be available. All tasks will be in thermal and thermodynamic conditions. Cloud bases to 3500 meters are common, and on very strong days, tasks areas might find cloud bases more than 4000 meters. Moreover, some wave conditions can be encountered in the tasking area.

2.4. Airfield layout

Refer to APP 2 and 3

2.4.1. Description of the briefing room

A new hangar has been built 5 years ago. Possibility of more than 120 seats in the hangar

2.4.2. Description of common room(s) for the competitors

Bungalow could be available for each team

2.4.3. Description for the meeting Room for the International Jury

Separate small briefing room in the aeroclub office for up to 20 persons

2.4.4. Description of the Press Center

On office room with two working places and PC, fax, telephone, copier will be available

2.4.5. Number of public telephones, fax, and similar equipment

Three public telephones, fax, in Office available

2.4.6. Postal and banking facilities at the airfield

At the airfield : No Bank facility, Postman every day

At Vinon city : Several banks and post Office

2.4.7. Insurance facilities

Possibility to subscribe Third party insurance on site

2.4.8. Toilets, wash and shower rooms at the airfield

Toilets, wash and shower room on camping facility

2.4.9. Car parking facilities at the airfield

Unlimited park facilities on the airfield

2.4.10. Emergency and medical facilities at the airfield

Doctor at the airfield, doctors and firemen in Vinon, hospital in Manosque

2.5. Facilities for the OSTIV Congress

An Ostiv Congress could be organized and held at the Competition site

3. ACCOMMODATION AND FOOD FOR COMPETITORS

3.1. Accommodation facilities

3.1.1. Camping facilities at airfield

Camping facilities at the airfield for approximately 40 caravans or tents, 7 Eur. per person per one day

3.1.2. Youth Hostels

None

3.1.3. Boarding houses/guest houses

Several guest houses within 20 km

3.1.4. Hotels

Many hotels in Vinon, Greoux-les-Bains and Manosque

3.1.5. Other accommodation facilities

3.2. Catering for competitors at the airfield

3.2.1. Description of kitchen

Kitchen of the local aero club

3.2.2. Description of dining hall

One hangar will be reserved for restaurant purpose

3.2.3. Description of airfield restaurant

Traditional French restaurant.

3.2.4. Which meals will be offered

Breakfast (continental) + Victuals (sandwiches) + Dinner (traditional french food) : 30 Eur.

Breakfast + Victuals : 10 Eur.

3.2.5. Other catering facilities

Supermarkets in Vinon and Manosque

4. COMPETITION AREA

Refer to APP 1 – Alps Soaring map.

4.1. Description of topography and out-landing conditions

The main area for the competition is located in the south part of French Alps along the Durance river valley with a lot of airfields and listed out-landing fields.

The environment is composed of flat land and medium plateau up to 40 km north and north-east of the airfield, medium relief from 40km to 100 km, high mountains from 100 to 250 km.

4.2. Comprehensive survey of meteorological conditions

Area is covered with excellent thermal and thermodynamic conditions, which makes cloud-bases up to 2000/2500m in flat and plateau country, 3000m in medium relief and 4000m in high mountains.

4.3. Airspace restrictions

Please, refer to the ICAO map. Moreover, administrations of French civil aviation and French air force will give us regional airspace facilities for the event.

4.4. Typical tasks to be expected with examples of outstanding tasks hitherto flown

The main area for the competition is located in the south part of French Alps along the Durance river valley with a lot of airfields and listed out-landing fields. Some task can be set in the Northern Alps in the vicinity of the Mont Blanc.

4.5. Road and traffic conditions

Very good traffic system.

4.6. Standard of telephone communication

World-wide

5. RULES

5.1. Proposed modifications to the World Championships' Rules

Annex A and sporting code valid at the time of competition will be applied without any modification.

Traffic and collision warning system (like Flarm or any other compatible device) and High visibility markings are mandatory.

5.2. Particular conditions or possible restrictions for the participation

5.2.1. For pilots and crews

Pilots : mountain flight experience is mandatory.

Crew : no restrictions

5.2.2. For sailplanes and equipment

With permit to fly

5.2.3. Otherwise

No gyroscopic instruments. No flight in clouds are allowed

6. COST

Include a budget : all costs to competitors are particularly important. If a bid is accepted, costs to competitors will be expected not to increase substantially unless explained to and agreed by IGC.

6.1. Entry Fee

€1.000 per glider

6.1.1. Services included in the entry fee

The entry fees will cover all operational costs except aero tows and self-launch starts

6.1.2. Cost of launch

€10 for self launched glider (per flight day)

€42 for each aerotow

6.2. Price of car fuel (petrol/diesel) per litre

Following current prices unleaded fuel about €1,30 per litre and diesel about €1,12 per litre

6.3. Cost of rental cars for 20 days

€700 to € 800. for small car

€1300 to € 1500 for monospace

(To be revised function of expected number of cars and function of sponsoring action)

6.3.1. Are tow-ropes available

Each pilot must come with his own 60 m tow-rope (Tost rings equipped).

Some tow-ropes will be available for sale on the competition site.

6.4. Cost of transport for personnel / sailplanes from overseas, concessions, discounts

None

6.5. Any over cost for competitors

Catering, accommodation

Price list

Entry fee	1.000 €
Self launched glider (per flight day)	10 €
Aero towing up to 700m AAL	42 €
Camping at airfield (each day per head)	7 €
Full food (breakfast, victuals and dinner)	35 €
Partly food (breakfast and victuals)	20 €

b/ Roughly calculated example for one pilot and one crew assisting (catering and accommodation on the competition site)

Aero towing up to 700m AA	42 €one flight
Accommodation in the camping site	14 €for 2 persons
Full food in the competition restaurant	70 €for 2 persons
	<u>126 €per day</u>

6.6. Team cost (roughly calculated examples for two persons)

15 days * 126 €= 1 890 €	(one aero tow + camping + full food competition restaurant)
15 days * 56 €= 840 €	(one aero tow + camping + without food)

7. SAILPLANES HIRING

7.1. Possibilities

Yes. Fly test mandatory

7.2. Approximate cost

150 €to 200 €by day

2.000 €to 3.000 €for the competition

8. TRAINING POSSIBILITIES

8.1. Are the Organizers prepared to hold a competition with international participation and similar rules at the contest site the year before the Championship ?

We organise every year an international contest (CMVVM – Website : <http://www.vinon-soaring.fr>) in which National Teams could participate.

Moreover, Vinon is scheduled by the French Gliding Federation to organize the French National Championships in 2011 and 2012 (classes to be determined).

We have scheduled to organize in 2013 Pre-world Championships in which National Teams could participate.

8.1.1. If so, how many international competitors can be accepted ?

About 120

8.2. What airfields are available for training purpose ?

VINON	LFNF
ST AUBAN	LFMX
PUIMOISSON	LFTP
SISTERON	LFNS
GAP	LFNA
BARCELONNETTE	LFMR
ST CREPIN	LFNC

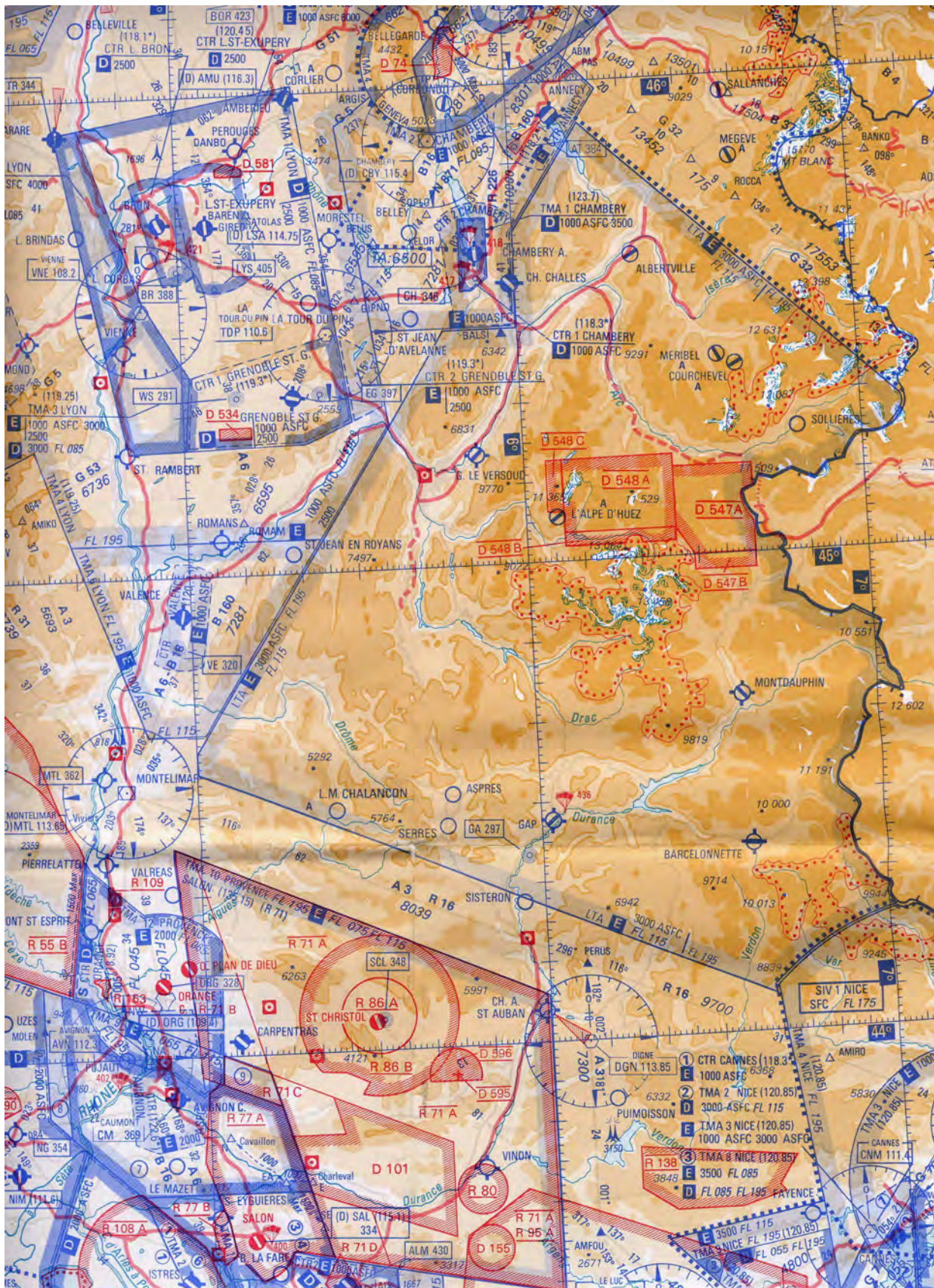




BID FOR ORGANIZING THE WORLD GLIDING CHAMPIONSHIP
15m Class – 18m Class – Open Class
VINON FRANCE 2014



APPENDICE 1

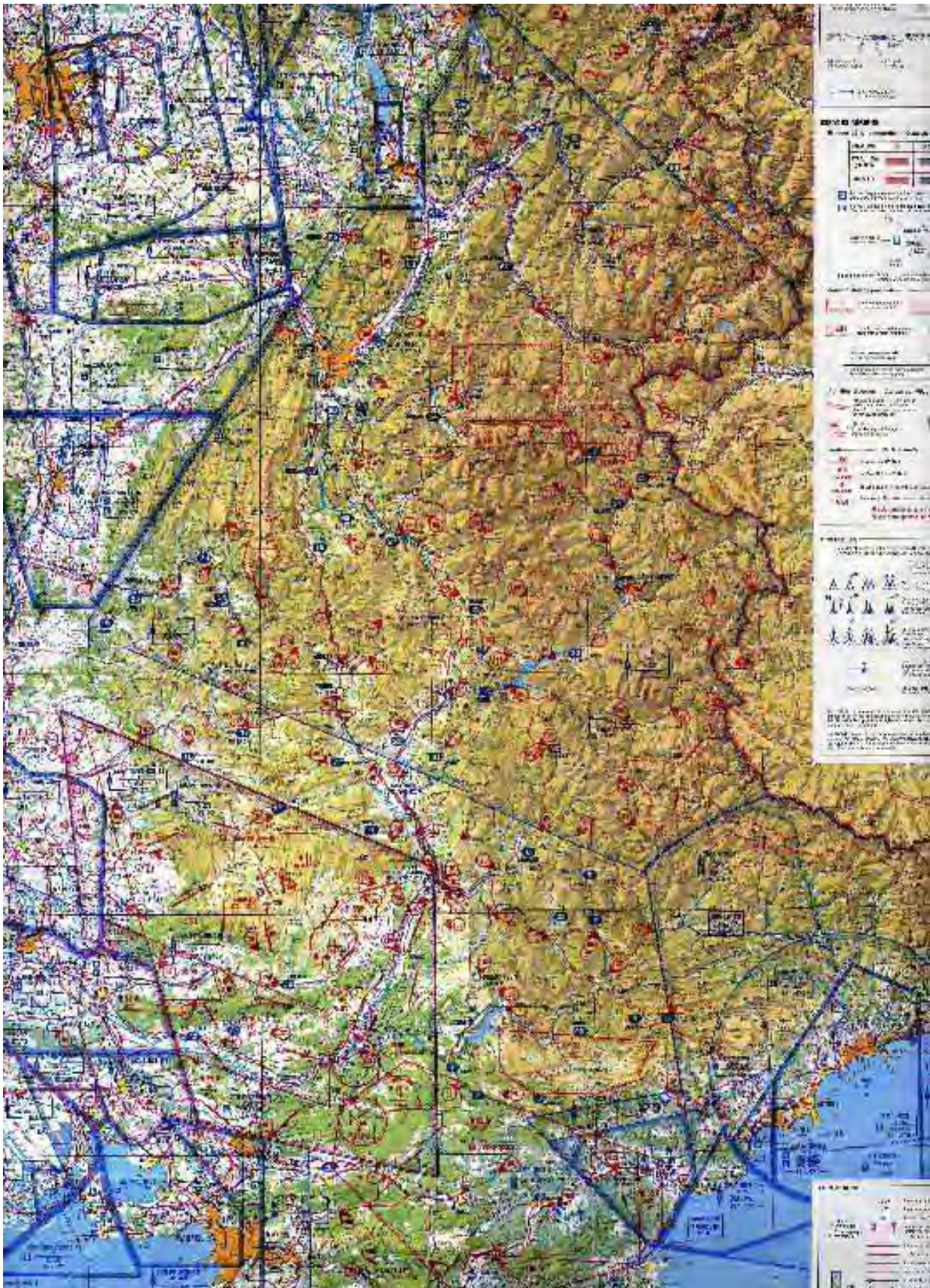




BID FOR ORGANIZING THE WORLD GLIDING CHAMPIONSHIP
15m Class – 18m Class – Open Class
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APPENDICE 1





BID FOR ORGANIZING THE WORLD GLIDING CHAMPIONSHIP

15m Class – 18m Class – Open Class

VINON FRANCE 2014



APPENDICE 2

ATERRISSAGE A VUE Visual landing

Ouvert à la CAP
Public Air Traffic

01 VINON LFNF

01 04 19

Non WGS-84

ALT en ft

ALT AD : 902 (32hPa)

LAT : 43 44 16 N

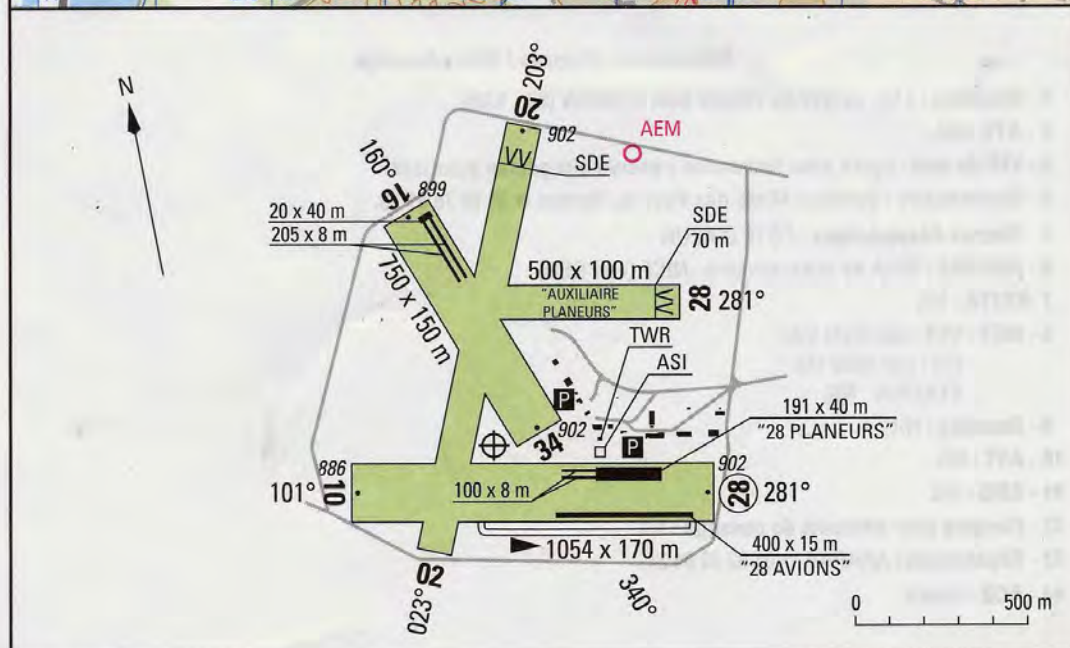
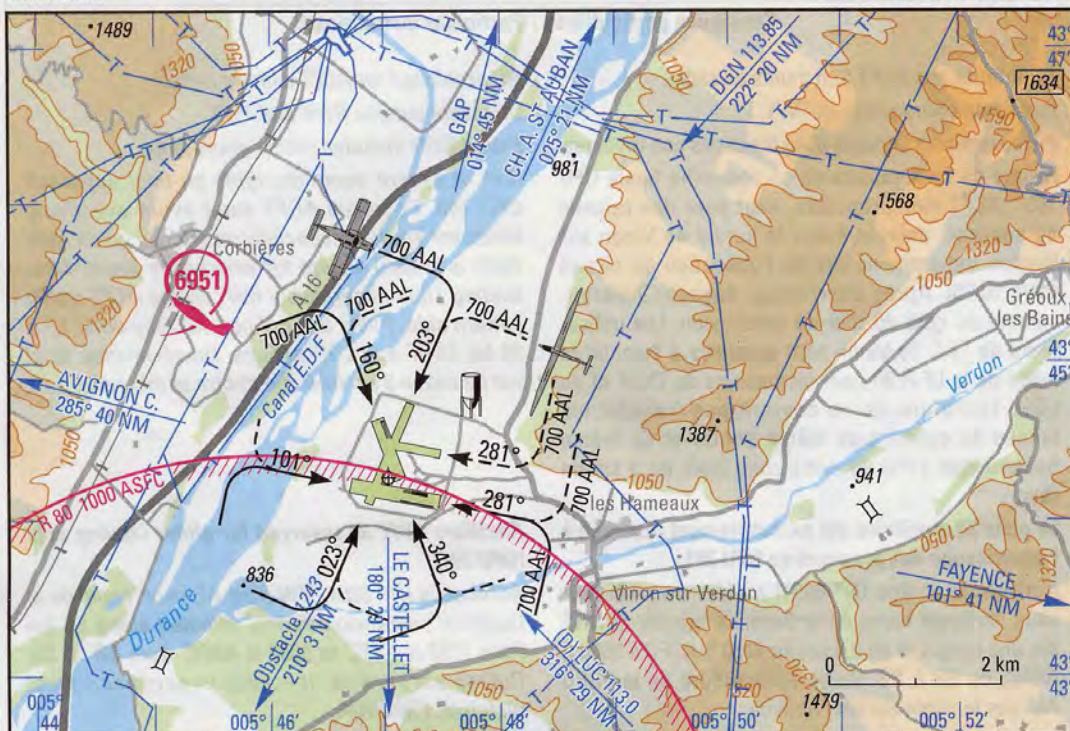
LONG : 005 47 03 E

DEC : 0° (00)

APP : NIL

TWR : NIL

A/A VINON : 118.15

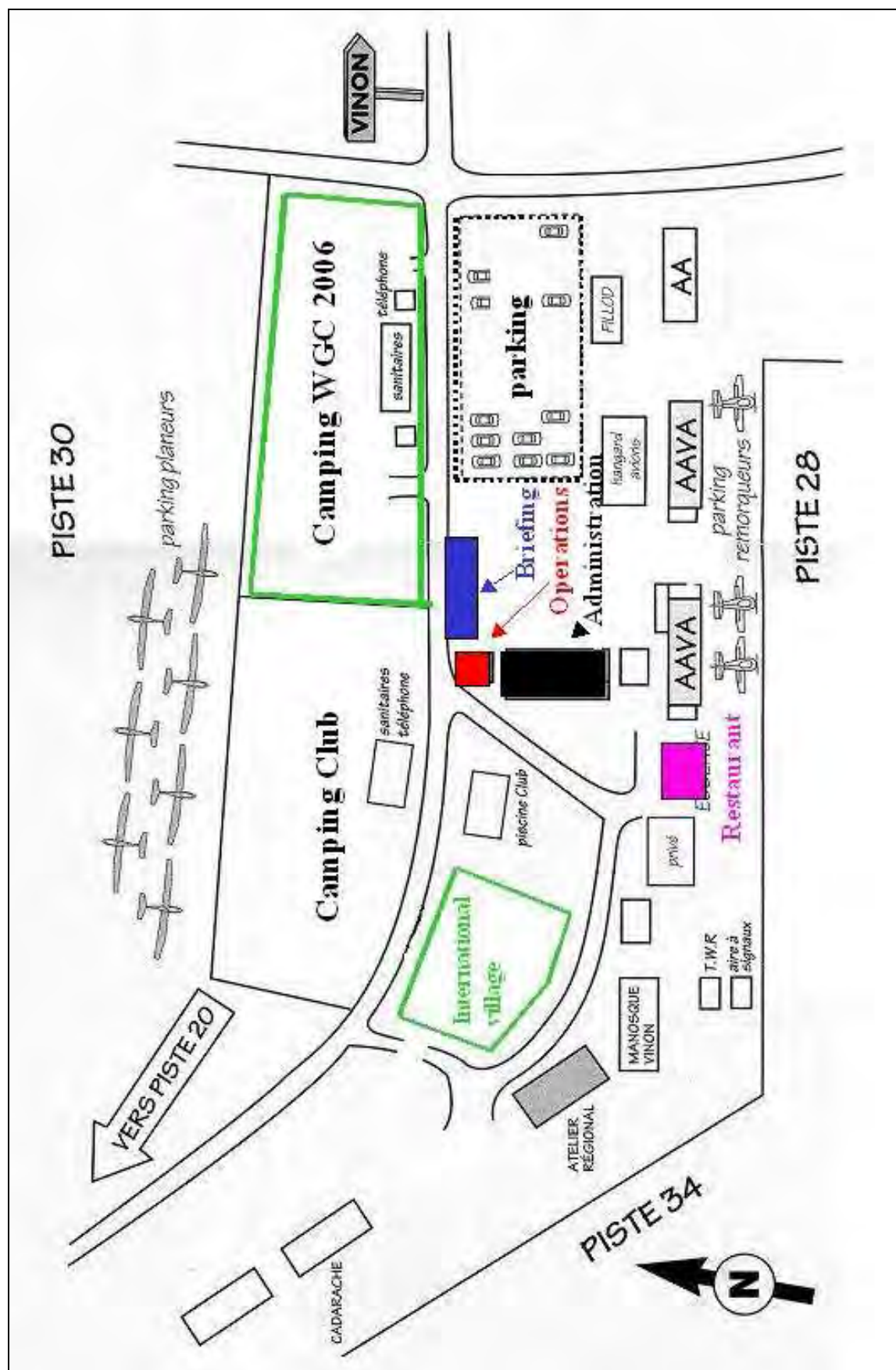




BID FOR ORGANIZING THE WORLD GLIDING CHAMPIONSHIP
15m Class – 18m Class – Open Class
VINON FRANCE 2014



APPENDICE 3





FEDERATION FRANÇAISE DE VOL A VOILE

29, rue de Sèvres – 75006 Paris

Tél. : 01 45 44 04 78 – Télécopieur : 01 45 44 70 93

<http://www.ffvv.org> – Email : info@ffvv.org



D10_3600

PARIS, october, 5th

M. Eric MOZER

1st Vice-President of IGC

emozer@deltamold.com

Dear Eric,

I am pleased to propose a bid for organizing the World Gliding Championships in 2014 in 15 m class, 18 m class and Open class in France in Vinon sur Verdon (83).

The competencies of Association Aéronautique Verdon Alpilles for organizing such a contest are well known and the French Gliding Federation supports completely this candidature.

Faithfully yours.

The President

Jean-Emile ROUAUX

Enclosed : 1



PRELIMINARY BID TO ORGANIZE THE 33RD WORLD GLIDING CHAMPIONSHIPS
2014

Applicant:

Name: Aeroklub Polski (Aero Club of Poland)

Date of Application: 30th September, 2010

Organising Gliding Club or other organisation:

Centralna Szkoła Szybowcowa w Lesznie

ul. Szybowników 28
64-100 Leszno
Phone: +48 65 529-24-00
Fax: +48 65 529-41-39
E-Mail: info@cssleszno.eu

In collaboration with

Aeroklub Leszczyński

ul. Szybowników 28
64-100 Leszno
Phone: +48 65 529 32 19
Fax: +48 65 528 75 10
E-Mail: aeroklub.leszno@onet.eu

Name and address of National Aero Club:

Aeroklub Polski
ul. 17. Stycznia 39
00-906 Warszawa
E-Mail: komisja@szybowce.pl
Contact person: Tomasz Rubaj

Proposed Competition Director:

Ryszard Andryszczak – Director of Central Gliding School in Leszno.

Proposed Organisation of the event:

Competition is intended to be held in July/August 2014 (21.07. – 10.08.). During organisation of the event local and national aeroclub funds will be used with a support from government and local authorities. We expect also some interest from sponsors.

Airfield:

Leszno Strzyżewice (EPLS).

Contact person (for the applicant):

Name: Tomasz Rubaj
Address: ul. Kusocińskiego 7/75; 05-500
Piaseczno
Email address: t.rubaj@szybowce.pl
Phone Number: +48 22 757 36 23
Mobile Number: +48 695 89 45 98
Fax Number: +48 22 757 36 23

1. Event and year:

- 1.1 Name of Competition: The 33rd World Gliding Championships 2014 in three FAI classes (15m, 18m and Open).
- 1.2 Year of event: 2014

2. Site.

- 2.1 Name of the airfield: Leszno – Strzyżewice (ICAO code EPLS).
 - 2.1.1 Coordinates: 51° 50'06''N 16° 31'19''E elevation 94 m AMSL.
 - 2.1.2 Nearest towns: Leszno, - 3 km, Poznań, - 80 km.
 - 2.1.3 Experience of airfield staff in organizing championships:
 - World Championships 1958 in two classes Open and Standard;
 - World Championships 1968 in two classes Open and Standard;
 - European Gliding Championships 1990 & 1998;
 - Juniors EGC 1995;
 - Women's EGC 1999;
 - World Championships 1999 in World Class;
 - World Championships 2003 in four classes Open, Standard, 15m and 18m;
 - Annual National Championships in Open class;
 - Annual Regional Competition in Club class;
- 2.2 Proposed period of the event – July/August 2014 (21.07. – 10.08.)
- 2.3 Airfield operation.
 - 2.3.1 Airfield details: Total area of the airfield is approximately 100 Hectares

Photo: View of the Airfield Looking South



- 2.3.2 Surface of the airfield, number and directions of runways: Grass, two runways RWY 06/24 920x100m, one RWY 15/33 880x100m and one RWY 15/33 810x100m.



- 2.3.3 The number of participants: Total 150, maximum 50 in each FAI class. To ensure safe operations Leszno airfield can host up to 150 gliders during one event.
- 2.3.4 The number of towplanes: Sufficient, approximately one tow plane for 7 gliders minimum.
- 2.3.5 Meteorological facilities: A resident, professional weather man (also a glider pilot) with all the necessary equipment and access to up-to-date meteorological information.
- 2.3.6 Glider parking: Parking will be arranged on the airfield. There is sufficient parking space for rigged gliders on the airfield.
- 2.3.7 Repair facilities: Repair facilities for gliders and accessories are available on site and in the vicinity.
- 2.3.8 Oxygen is neither needed, required nor supplied.

2.4 Airfield infrastructure.

- 2.4.1 Briefing facilities: Briefing will be held in a sufficient size briefing room located in the main building and equipped with Public Address and Data Projection systems.
- 2.4.2 Common rooms: Necessary facilities for the Teams will be provided in the airfield area in portakabins or marquee tents, which will include Internet connection, at a reasonable cost.
- 2.4.3 Jury room: A secure meeting room will be available.
- 2.4.4 Press Centre: Working places for journalists will be arranged in the designated press centre within the main building complex and equipped with phone, fax and internet connection.
- 2.4.5 Public telephones etc.: The GSM coverage throughout the contest area is very good and there is no need for extra fixed line telephones. The teams are required to bring their own mobile phones. All Polish GSM providers offer pre-paid SIM-cards.
- 2.4.6 Post and Bank: The nearest full service post office and numerous banks can be found in the town of Leszno (3 km). International credit and debit cards are accepted for most of the payments on the airfield.
- 2.4.7 Insurance: Assistance with personal health insurance and third party liability insurance for gliders will be available before the competition on request.
- 2.4.8 Toilets, washrooms and shower: There is sufficient number of toilets, washrooms and shower rooms available on site.
- 2.4.9 Car parking: There is sufficient parking space on the airfield.
- 2.4.10 Emergency facilities: Firefighting and other ground rescue services are available from the city of Leszno. The nearest hospital is approximately 5 km from the airfield. Helicopter Emergency Medical Service is available from nearby cities of Poznan and Wrocław. SAR is provided by Rescue Coordination Centre in Warszawa.

3. Accommodation and food for competitors.

3.1 Accommodation.

- 3.1.1 Hotel with 86 beds and hostel with 50 beds available on site. There are several hotels available in the town of Leszno also in direct vicinity of contest site.

Photo: Gliding centre and hotel



- 3.1.2 Camping, tents, caravans etc Camping site with sufficient space for tents and caravans on site.

3.2 Catering.

- 3.2.1 There is restaurant at the airfield open early morning until late evening.

4. Competition area and meteorological conditions.

4.1 Competition area (see Appendix 1).

- 4.1.1 Western Poland and the eastern part of Germany and the northern part of the Czech Republic

- 4.1.2 Topography, predominantly flat, with a lot of fields suitable for outlanding.

4.2 Meteorological conditions: During July/August we normally expect best soaring conditions with usually 20 flying days a month.

- Average temperature 22° C
- Average cloud base 1 500 m AGL
- Average Thermal Strength 1,5 m/s

4.3 Airspace restrictions: Poznan Lawica Airport (EPPO), approximately 80 km in northern direction, with class C airspace limits task setting in this direction. All the other directions are usually not influenced by controlled, restricted, dangerous or prohibited airspace.

4.4 Typical tasks: Speed task up to 750 km, numerous average speeds up to 115 km/h, some up to 140 km/h.

4.5 Road and traffic conditions: Good communication routes in all directions by first and

second class roads.

4.6 Telephone communications: The GSM coverage in the contest area is nearly 100%.

5. Rules.

5.1 IGC annex A: No anticipated changes to the latest IGC annex A.

5.2 Particular conditions or possible restrictions for the participation in Poland.

5.2.1 For the pilots and crews: Passport with or without visa depending on the country of origin is required according to EU immigration rules.

5.2.2 For the sailplanes and equipment: The third party liability insurance of gliders must meet the Polish requirements (100'000 SDR for MTOM ≤ 495kg and 1'500'000 SDR for MTOM > 495kg as of 2009).

6. Costs.

6.1 Entry fee – 800 EUR

6.1.1 Services included in the entry fee:

- Organisation;
- ICAO map;
- turn points database;
- scoring service;
- meteorological information;
- photocopy of briefing, meteorological and results charts;
- Wi-Fi Internet Access;
- Medals, trophies and diplomas;

6.1.2 Cost of aero tows: 50 EUR.

6.2 Price of car fuel per litre: Diesel 1,10 EUR and Unleaded Petrol (95 grade) 1,20 EUR (as of September 2010).

6.3 Rental cars: Range from 40 to 80 EUR per day (as of September 2010).

6.4 Accommodation.

6.4.1	Hotel rooms	25 – 80 EUR/day
6.4.2	Apartments	20 – 50 EUR/day
6.4.3	Camping	2 – 5 EUR/day

All prices are quoted in year 2010.

6.5 Catering per person.

6.5.1	Hotels	7 – 15 EUR/day
6.5.2	Restaurants	7 – 15 EUR/day
6.5.3	On the airfield	from 5 EUR

7. Glider Hiring.

There is limited number of competitive gliders available for rent in Poland but there is enough possibilities to hire a glider in Germany, Czech Republik or Slovakia.

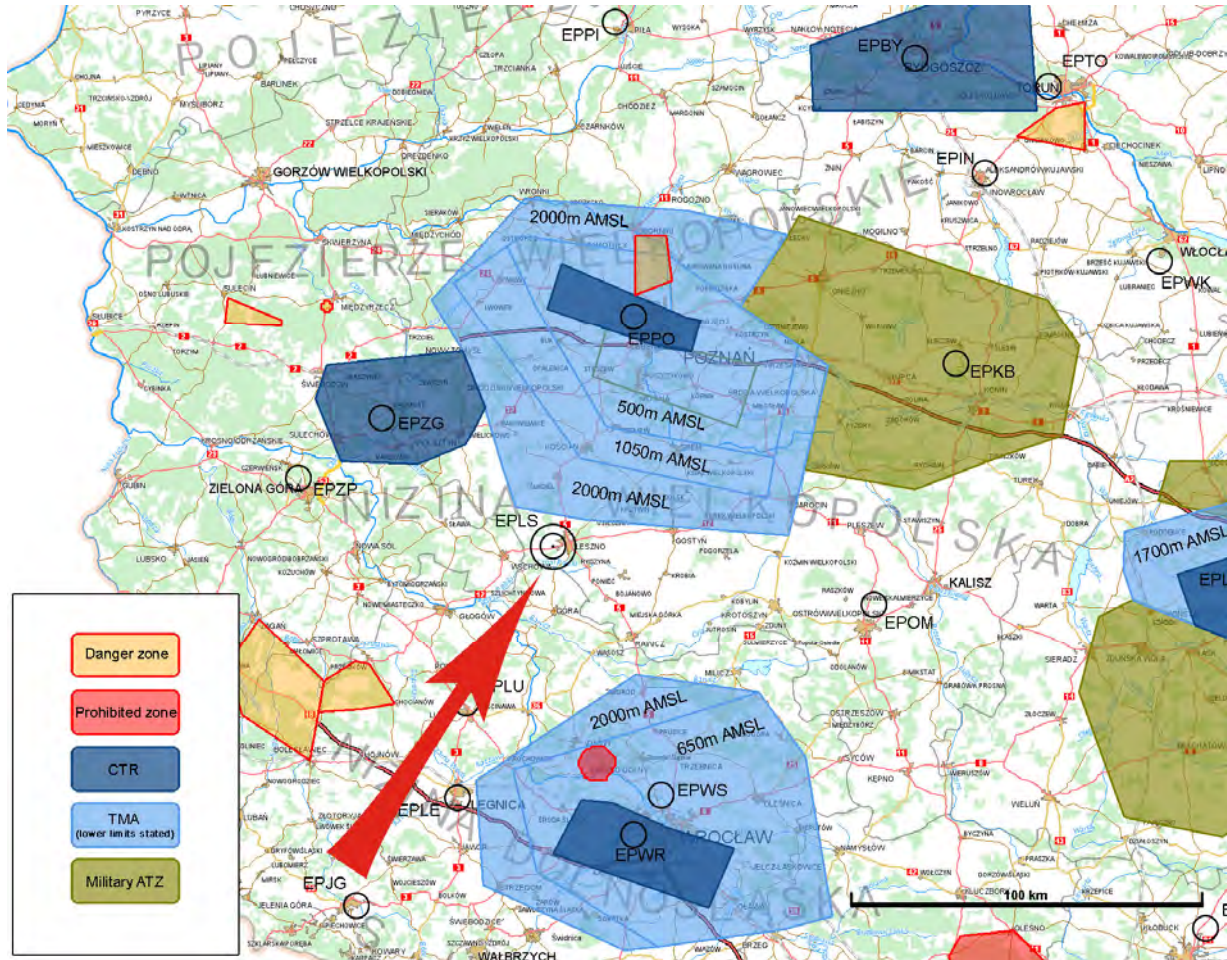
Assistance will be provided to teams on request.

8. Training.

Leszno will be open for foreign pilots at any time from April until end of August in 2013 and 2014. There are many other airfields in the area operating every day during the summer months.

Appendix 1

Competition area.



17th EGC

Ostrów Wielkopolski – Michałów, Poland

PRELIMINARY BID TO ORGANISE THE 17TH EUROPEAN GLIDING CHAMPIONSHIPS 2013

Applicant:

Name: Aeroklub Polski
Date of Application: 30 September, 2010

Organising Gliding Club or other organisation:

Aeroklub Ostrowski
Lotnisko Michałów,
PO Box 126
63-400 Ostrów Wielkopolski
Phone: +48 62 735 20 23
Fax: +48 62 735 20 23
E-Mail: dyrektor@aeroklub.osw.pl

Name and address of National Aero Club:

Aeroklub Polski
ul. 17 Stycznia 39
00-906 Warszawa
E-Mail: komisja@szybowce.pl
Contact person: Tomasz Rubaj

Proposed Competition Director:

Tadeusz Malarczyk – Director of Aeroklub Ostrowski.

Proposed Organisation of the event:

Competition is intended to be held in July/August 2013 (30.06-21.07.2013). During organisation of the event local and national aeroclub funds will be used with a support from government and local authorities. We expect also some interest from sponsors.

Airfield:

Michałków (EPOM).

Contact person (for the applicant):

Name:	Maciej Calka
Address:	ul. Wiśniowa 10 62-800 Kalisz
Email address:	maciej@calka.com
Phone Number:	+48 62 75 75 563
Mobile Number:	+48 601 563 832
Fax Number:	+48 62 757 10 27

1. Event and year:

1.1 Name of Competition: The 17th European Gliding Championships 2013 in four FAI classes (Club, World, Standard and Doubleseater).

1.2 Year of event: 2013

2. Site.

2.1 Name of the airfield: Michałków (ICAO code - EPOM).

2.1.1 Coordinates: 51°42'06"N 017°51'03"E elevation 143 m AMSL.

2.1.2 Nearest towns: Ostrow Wlkp., - 6 km, Poznań, - 122 km, Łódź -136 km, Wrocław 96 km.

2.1.3 Experience of airfield staff in organizing championships:

- The biggest polish regional gliding Championships "Ostrów Glide" for 17 years in a row (104 entries in 2010)
- Polish National Championships in open class 1991
- European Championships in Glider Aerobatics in 1998
- Polish Junior Gliding Championships 1999
- Women Gliding Championships of 4 Nations 2010

2.2 Proposed period of the event – July/August 2013 (30.06-21.07.2013).

2.3 Airfield operation.

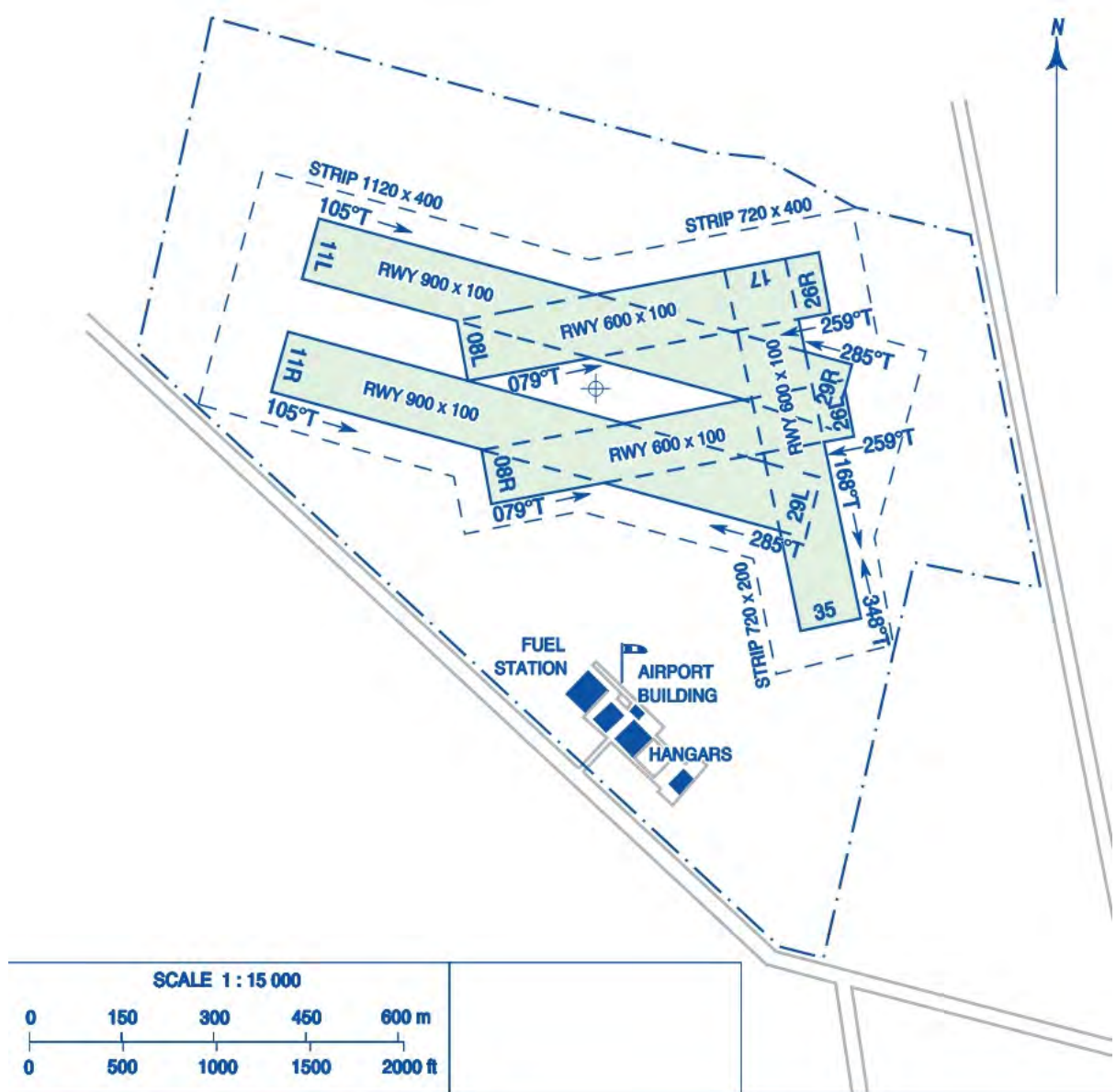
2.3.1 Airfield details: Total area of the airfield is approximately 95 Hectares

Photo: View of the Airfield Looking South





2.3.2 Surface of the airfield, number and directions of runways: Grass, two runways
RWY 11/29 900x100m, two RWY 08/26 600x100m and one RWY 17/35
600x100m.



- 2.3.3 The number of participants: Total 120. To ensure safe operations Michalkow airfield can host up to 120 gliders during one event.
- 2.3.4 The number of towplanes: Sufficient, approximately one tow plane for 6 gliders minimum.
- 2.3.5 Meteorological facilities: A resident, professional weather man (also a glider pilot) with all the necessary equipment and access to up-to-date meteorological information.
- 2.3.6 Sailplane parking: Parking will be arranged on the airfield. There is sufficient parking space for rigged gliders on the airfield.
- 2.3.7 Repair facilities: Repair facilities for gliders and accessories are available on site and in the vicinity.
- 2.3.8 Oxygen is neither needed, required nor supplied.

2.4 Airfield infrastructure.

- 2.4.1 Briefing facilities: Briefing will be held in a sufficient size briefing room located in the main hangar and equipped with Public Address and Data Projection systems.
- 2.4.2 Common rooms: Necessary facilities for the Teams will be provided in the airfield area in portakabins or marquee tents, which will include Internet connection, at a reasonable cost.
- 2.4.3 Jury room: A secure meeting room will be available.
- 2.4.4 Press Centre: Working places for journalists will be arranged in the designated press centre within the main building complex and equipped with phone, fax and internet connection.
- 2.4.5 Public telephones etc.: The GSM coverage throughout the contest area is very good and there is no need for extra fixed line telephones. The teams are required to bring their own mobile phones. All Polish GSM providers offer pre-paid SIM-cards.
- 2.4.6 Post and Bank: The nearest full service post office and numerous banks can be found in the town of Ostrow (6 km). International credit and debit cards are accepted for most of the payments on the airfield.
- 2.4.7 Insurance: Assistance with personal health insurance and third party liability insurance for gliders will be available before the competition on request.

- 2.4.8 Toilets, washrooms and shower: There is sufficient number of toilets, washrooms and shower rooms available on site.
- 2.4.9 Car parking: There is sufficient parking space on the airfield.
- 2.4.10 Emergency facilities: Firefighting and other ground rescue services are available from the city of Ostrow. The nearest hospital is approximately 6 km from the airfield. Helicopter Emergency Medical Service is available from nearby cities of Poznan, Lodz and Wrocław. SAR is provided by Rescue Coordination Centre in Warszawa.

3. Accommodation and food for competitors.

3.1 Accommodation.

- 3.1.1 Hotel with 45 beds available on site. There are several hotels available in the town of Ostrów and in direct vicinity of contest site.
- 3.1.2 Camping, tents, caravans etc Camping site with sufficient space for tents and caravans on site.

3.2 Catering.

- 3.2.1 There are 2 restaurants at the airfield open early morning until late evening.

4. Competition area and meteorological conditions.

4.1 Competition area (see Appendix 1).

- 4.1.1 Central and West Poland.
- 4.1.2 Topography, predominantly flat, with a lot of fields suitable for outlanding.

4.2 Meteorological conditions: During July we normally expect best soaring conditions with usually 20 flying days a month.

- Average temperature 22° C
- Average cloud base 1 500 m AGL
- Average Thermal Strength 1,5 m/s

4.3 Airspace restrictions: Poznan Lawica Airport (EPPO), approximately 80 km in northern direction, with class C airspace limits task setting in this direction. All the other directions are usually not influenced by controlled, restricted, dangerous or

prohibited airspace.

4.4 Typical tasks: Speed task up to 750 km, numerous average speeds up to 115 km/h, some up to 140 km/h.

4.5 Road and traffic conditions: Good communication routes in all directions by first and second class roads.

4.6 Telephone communications: The GSM coverage in the contest area is nearly 100%.

5. Rules.

5.1 IGC annex A: No anticipated changes to the latest IGC annex A.

5.2 Particular conditions or possible restrictions for the participation in Poland.

5.2.1 For the pilots and crews: Passport with or without visa depending on the country of origin is required according to EU immigration rules.

5.2.2 For the sailplanes and equipment: The third party liability insurance of gliders must meet the Polish requirements (100'000 SDR for MTOM \leq 495kg and 1'500'000 SDR for MTOM $>$ 495kg as of 2009).

6. Costs.

6.1 Entry fee – to 680 EUR.

6.1.1 Services included in the entry fee:

- Organization
- ICAO map
- turn points database
- results service
- meteorological information
- photocopy of briefing, meteorological and results charts
- Wi-Fi Internet Access
- Medals, trophies and diplomas

6.1.2 Cost of aero tows: 48 EUR.

6.2 Price of car fuel per liter: Diesel 1,10 EUR and Unleaded Petrol (95 grade) 1,20 EUR (as of September 2010).

6.3 Rental cars: Range from 40 to 80 EUR per day (as of September 2010).

6.4 Accommodation.

6.4.1	Hotel rooms	25 – 80 EUR/day
6.4.2	Apartments	20 – 50 EUR/day
6.4.3	Camping	3 – 5 EUR/day

All prices are quoted in year 2010 and can be modify later.

6.5 Catering per person.

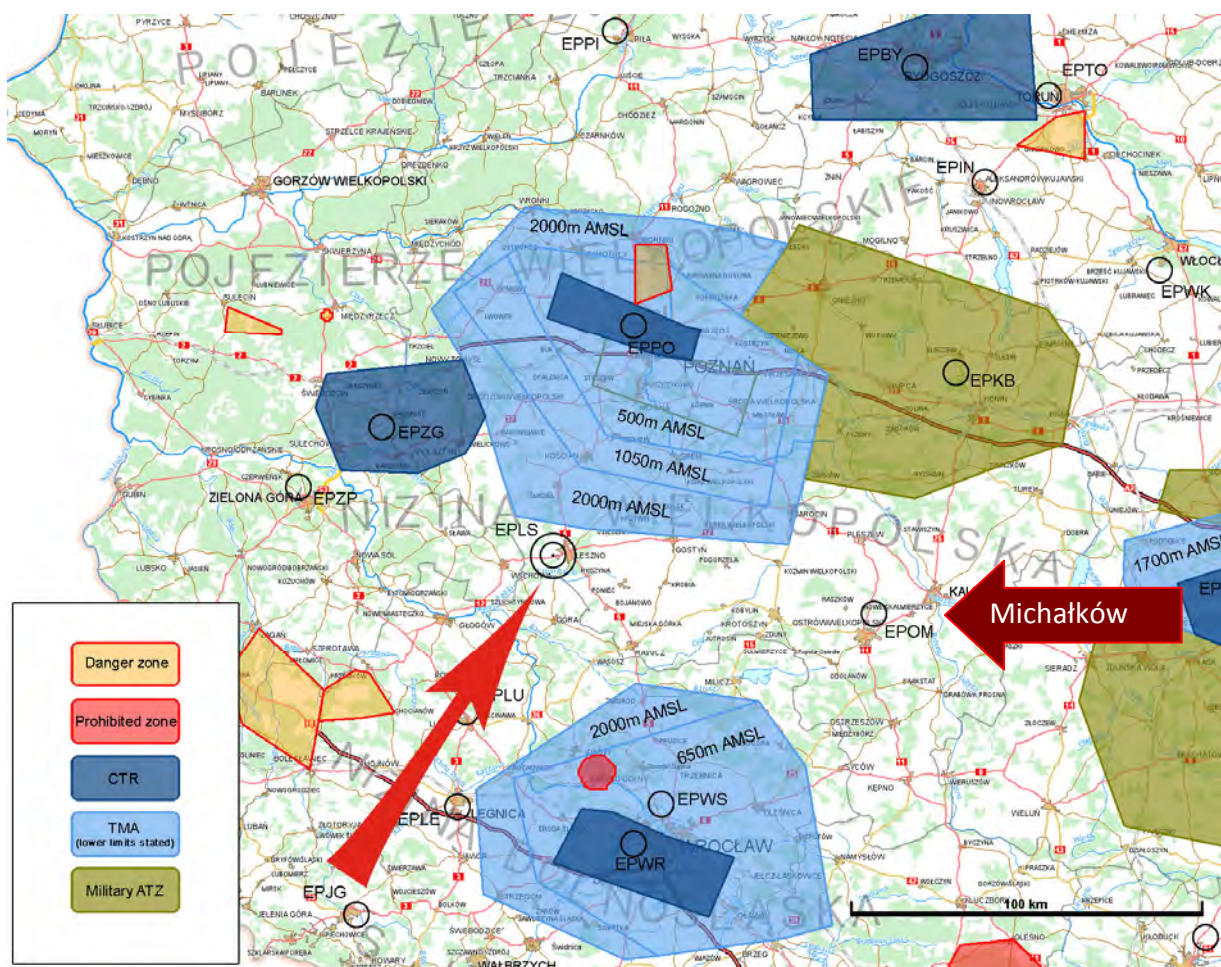
6.5.1	Hotels	7 – 15 EUR/day
6.5.2	Restaurants	7 – 15 EUR/day
6.5.3	On the airfield	from 5 EUR

7. **Glider Hiring.** There are many Club Class gliders in Poland and Aeroklub Ostrowski can provide Club Class gliders for rent for overseas pilots and other competitors.

8. **Training:** Michalkow will be open for foreign pilots at any time from April until end of August in 2012 and 2013. There are many other airfields in the area operating every day during the summer months.

Appendix 1

Competition area.



PROPOSAL TO IGC PLENARY 2011

Proposed by the Bureau

It is proposed that the IGC Competition Structure and Calendar is adapted as follows:

1. No changes are to be made to the following classes; **15 Meter, 18 Meter, Open, Standard, Club**
2. No changes to the IGC Competition Calendar are recommended to the Multi-Class World Gliding Championships comprised of the **Open, 15 Meter, 18 Meter**. This event is recommended to remain in **EVEN** years.
3. The Multi-Class World Gliding Championship that has the current configuration of **Standard, Club and World** classes will be changed. The **World Class** will be deleted and the **20 Meter Two-Seater Class** will be added.
4. The Multi-Class World Gliding Championship comprised of **Standard, Club and 20 Meter Two-Seater Class** classes will be competed in **EVEN** years. The entry configuration for this WGC will be as follows:
 - **Standard Class** – 2 entries per NAC
 - **Club Class** – 2 entries per NAC
 - **20 Meter Two-Seater Class** – 1 entry per NAC
5. The **13.5 Meter Class** will have it's own World Gliding Championships to be held for the initial time in 2015 and be competed bi-annually in **ODD** years
 - **13.5 Meter Class** – 4 entries per NAC

This Proposal affects:

Sporting Code Section 3 - nil

Annex A Rule – nil

Other – nil

Reasons supporting the Proposal:

See Agenda item 6.3.6, Championships Structure Report.

Note:

If the proposal from the Bureau is adopted the first opportunity to consider bids for the new structure of Multi-Class Championships will be in 2013 for the WGC's to be held in 2016.

If the proposal from the Bureau is adopted with respect to the 13.5 Meter World Gliding Championships, the first event can be held in 2015. Bid applications for this event will be due to the IGC Bid Specialist by September 30, 2011. The IGC Plenum will consider the bids and decide on the venue for this WGC at its 2012 meeting.

PROPOSAL TO IGC PLENARY 2011

Proposed by the Bureau

It is proposed that the 13.5 metre Class is redefined in the Sporting Code Section 3, Gliding (Main Body) as follows:

6.5.6 13.5 metre Class

Note: The first 13.5 metre class World Championship will not be before 1st October 2014

- a. WINGS: The span must not exceed 13.500 mm.
- b. BALLAST: Disposable ballast that may be discharged in flight is permitted.

Consequential to the above;

6.5.7 World Class

Note: No World Class World Championships after 1st October 2014

This Proposal affects:

Sporting Code Section 3 – 6.5.6 and 6.5.7

Annex A Rule – nil

Other – nil

Reasons supporting the Proposal:

Arising from decisions made at the 2010 IGC plenary meeting, the following paragraph needs to be inserted in Chapter 6. Proposals in 2010 to allow handicaps were not approved, while the proposal not to allow disposable ballast was also not approved, hence b, below. The Italic note re Championships is informational and reflects the IGC decision of the 1st of April 2014 as the effective date by aligning the start of this Class to the publication date of both the Sporting Code and Annex A.

Note: nil

PROPOSAL TO IGC PLENARY 2011

Proposed by the Bureau (Year-1 proposal)

It is proposed that the 20 Meter Multi-Seat Class is redefined in the Sporting Code Section 3, Gliding (Main Body) as follows:

6.5.7 20 metre Multi-seat Class

a. ENTRY - The 20m Multi-seat Class consists of multi-seat gliders having a crew of two persons.

b. CREW - The crew shall consist of two pilots who must represent the same NAC and have a Sporting License issued by that NAC. The winning crew shall jointly hold the title of Champion.

c. WINGS - The span must not exceed 20,000 mm.

This Proposal affects:

Sporting Code Section 3 – 6.5.7

Annex A Rule – nil

Other – nil

Reasons supporting the Proposal:

The proposal means that FAI sanctioned competitions are conducted without handicaps in order to foster development of high performance multi-seat gliders. Other competitions can use handicaps, should the organizers wish to do so.

PROPOSAL TO IGC PLENARY 2011

Proposed by : Annex A Committee

It is proposed that:

The Reference Weights are removed from the IGC Club Class Handicap List with immediate effect.

This Proposal affects:

Sporting Code Section – None

Annex A Rule – None

Reasons supporting the Proposal:

Initially introduced to stop competitors from increasing wing loading by adding fixed ballast in the wings, the specification of Reference Weights no longer serves any useful purpose. The scrutineering process will reveal any attempt to hide illegal ballast. In most cases the Reference Weight is equal to the Maximum Take Off Mass anyway, which means that fairness is in no way compromised by removing the specification of Reference Weights.

Missing Reference Weights in the IGC Club Class Handicap List and different Reference Weights for different models of the same glider WITH THE SAME HANDICAP are a continuous source of headache for Chief Stewards at World and Continental Championships. The determination of MTOM does not depend on the use of Reference Weights. MTOM for each glider is determined from the weight and balance sheet according to Annex A 4.2.1 d.

If this proposal is approved, a new IGC Club Class Handicap List that will include only glider type and handicap will be published.

PROPOSAL TO IGC PLENARY 2011

Proposed by the ANDS

It is Proposed:

Documentation/verification for glider flight altitude height achieved and gain made for claims of flight made above 50,000 feet MSL must utilize a GNSS-derived altitude from an IGC GFAC-approved FR. See the ANDS Report Appendix II for details.

This Proposal affects:

Sporting Code Section 3, Main Body, Chapter 4

Annex A Rule – nil

Other – SC3 Annex B and Annex C, relevant Chapters

Reasons supporting the Proposal:

See ANDS report

PROPOSAL TO IGC PLENARY 2011

Proposed by USA

It is Proposed:

to remove from the Sporting Code the requirement that the identity of the pilot and glider be included in the Flight Log for all Badge and Record claims involving electronic declarations.

This Proposal affects:

Sporting Code Section 3 para. 4.2

Annex A Rule – nil

Other – SC3 Annex C para. 6.3, 6.4, and 10.3

Reasons supporting the Proposal:

It is of fundamental importance that in all Badge and Record flights, the identity of the pilot, Flight Recorder, and glider be known with absolute certainty. The only means of accomplishing this is for the Official Observer to state that the pilot, the Flight Recorder and the glider were “together” at the time of takeoff.

SC3 4.2 currently requires that the pilot and glider be identified in the Flight Log. This has two effects, both negative:

1. If the requirement is properly obeyed, nothing is accomplished. It is still possible that a substitute pilot or glider was used.
2. If the requirement is not obeyed (usually inadvertently), then there exists a frivolous basis for denying a valid Badge or Record claim. This is a common situation in clubs in which gliders and Flight Recorders are shared.

The Official Observer’s statement is the only means of asserting the identity of the pilot and glider, and that the pilot, glider and FR were “together” at the time of takeoff.

Note:

This proposal does not affect Annex A, in which Official Observers are not used.

Proposal to IGC Plenary Meeting Lausanne 2010
by Aero Club of Poland

Proposal:

To establish medals for first three standings in Team Cup at World and Continental Gliding Championships. The medals are to be awarded to team captain at each championship event.

Rationale:

Gliding sport is in minority of aviation sports where medals are awarded only for individual achievements and joint effort of teams is not properly appreciated. This leads in particular to underestimation of sporting potential of our discipline when compared to other disciplines (e.g. aerobatics or precision flying) and in many cases is limiting financial support by states and private sponsors.

Individual classification and medals awarded accordingly sometimes obscures real potential of gliding in particular countries. Team classification of course makes the picture clearer for gliding community, but medals will make it more visible to the public.

This proposal affects:

Sporting Code Section 3

Artur Rutkowski
IGC delegate, Poland

Proposal to the IGC Plenary Meeting 2011 - Canada

On the use of GPS height for Silver or Gold badge claims

Flight evidence is now almost exclusively based on the data output from an FR or position recorder, and the OO retains little ability to interpret the evidence on an .igc file. Position evidence is precise, altitude evidence is somewhat less so, while pilot input flight data is subject to input error and the idiosyncrasies of certain flight recorders. The OO ought to retain the same ability to homologate flight claims that they had in the days of the camera and barograph, particularly for badge flights, which is by far the bulk of their work.

The ability to use Commercial off the Shelf (COTS) GPS position recorders was introduced in the 2009 Sporting Code to further encourage badge flying by allowing the use of these readily available and inexpensive units. However, the range of position recorder models and their use by pilots is considerably limited by the Annex to Chapter 4, which now excludes the use of GPS height evidence except for flight continuity. As many GPS recorders on the market have no pressure sensor, a separate barograph has to be installed for a flight, presenting a considerable disincentive to COTS position recorder use.

For badge flights, one requires evidence that a "general" performance level has been exceeded, not a "specific" level flown by a given pilot as for a record. A Silver height gain of 2000m often occurs, for example, and it is unreasonable not to accept GPS height data for a gain that is so far in excess of the requirement. GPS height ought to be acceptable provided that an error limit is introduced that ensures reasonable certainty for a gain of height for the altitude badge, or an allowed loss of height for a distance leg.

Of course, there is a probability that a rare "outlier" high GPS error during a flight would result in an occasional claim being passed that would not occur if pressure altitude evidence was available. But camera evidence was never absolute either when OOs interpreted position close to a sector boundary. Accepting the occasional claim having an excessive GPS height error is more than offset by the global benefit to badge pilots of allowing the use of many more simple GPS units that are on the market, while eliminating the need for a separate barograph installation. The current requirement is illustrative of "the perfect is the enemy of the good". As an aside, the use of GPS height data has been in effect by the CIVL for badges and records since 2004

Proposal

1. That the Chapter 4 Annex of the Sporting Code be modified to allow the use of GPS height evidence for Silver and Gold badge flights.
2. That the Sporting Code committee, with GFAC, establish an acceptable height error margin; for example, no more than 600m loss of height on a distance flight, and an excess of at least 400m over the required gain of height for an altitude flight.



Proposal to make the use of FLARM mandatory in FAI gliding competitions

INTRODUCTION

A few years after FLARM was introduced, the Italian Aero Club suggested to make the use of FLARM mandatory in their bid for the WWGC 2007 and the WGC unflapped 2008. IGC encourages the use of FLARM but can't make it mandatory : *".....as an organization mandate it's use as an in-flight collision avoidance system because it is not certificated"*, in case of (fatal) accidents legal problems can arise. This was the reason then IGC would not put FLARM as a mandatory instrument in the annex A.

Now, 4 years later, development and experiences with FLARM show the benefits of FLARM and are recognized and accepted widely. In many competitions FLARM is already obliged and in the French Alps for example, the use of FLARM is mandatory also.

IGC should reconsider it's former position regarding the mandatory use of FLARM. It is the responsibility of the IGC that FAI competitions are flown under the most safe conditions. Because of this reason, competitions should not be flown without using FLARM in every glider any more. IGC should 'lead by example' when safety is the subject.

Therefore the Netherlands propose to make FLARM mandatory for FAI gliding competitions.

Note: although the price of a FLARM unit shouldn't be an issue because it improves safety, this could bring up objections. A solution could be: IGC provides a certain amount of FLARM units for rent. This for the very few pilots who do not have FLARM in their own country, or for rented gliders without a FLARM unit.

PROPOSAL

To Annex A a new rule **4.1.1 c** will be added,

4.1 SAILPLANES AND EQUIPMENT

- 4.1.1 The competitors shall provide sailplanes, trailers, retrieve cars, and other equipment, including GNSS Flight Recorders, radios, oxygen systems, parachutes, and survival equipment of a performance and standard suitable for the event.
- The airworthiness, safety and safe operation of competing sailplanes and any associated equipment and vehicles, as appropriate, shall be the responsibility of the competitors at all times.
 - Each occupant of a competing sailplane shall use seat belt and shoulder harness and wear a serviceable parachute on each competition flight .
 - Each competing glider must be equipped with a FLARM unit.**

Helmut Fendt, Chairman of OSTIV SDP

Here please find some general thoughts that will drive my presentation. I would like to point out that this is my personal position, which is not discussed within OSTIV SDP, as the question about "Permit to Fly" arose after the WGC and the SDP meeting in Szeged took place.

1. The gliders, operated at WGC, are all (as far as I know) designed according to JAR-22 (or CS-22). So, there exists a common basis and understanding of a safety standard.
2. OSTIV SDP has worked with EASA to improve crashworthiness standards in CS-22, but up to now, as this requirement is very "fresh", the majority of gliders at a contest will not comply with these improved requirements.
3. Asking for exclusion of certain gliders from contests, because they are still in the certification process, will imply the consequence to exclude all gliders having a "Permit to Fly" from competitions.
4. Competitions are a testbed for many new gliders, flying with a "Permit to Fly". There are quite a lot of them operated under these conditions at WGCs.
5. The consequence of asking "for complete fulfillment of the latest safety standard" (which means: No Permit to Fly allowed, but Type Certification to CS-22, last issue, requested) would be a drying out of the variety of designs at WGCs.

From my point of view, OSTIV SDP proposes an excellent way forward to avoid "punishment": "Safety pays" can become a wonderful tool, Eric de Boer has put it in short words: "Safety measures shall be rewarded".

The use of safety devices according to the list, offered in "Safety Pays", will automatically lead to safer designs - because the pilots like to win, they want to get the additional points.

To put it in short words: I object to exclusion of gliders from Competitions due to the fact they are operated on a "Permit to Fly" - but I'm very much in favor to reward safety and give the "safer" glider a bonus in gaining competition points. My sincere hope is that IGC will make use of "Safety Pays".

Maybe these thoughts are some assistance for the discussion.
