

AGENDA ITEM 7.2

REPORT OF THE CONTEST DIRECTOR

**25TH World Aerobatic Championships
19-29 August 2009**

Stephen Green



Dedication

The 25th FAI World Aerobatic Championships are dedicated to the memory of Vicki Cruse who tragically lost her life flying her Q Programme during the event. The Organisers send their condolences to Vicki's family, friends, the US Team and the IAC.

All of the National Teams competing at WAC expressed the view that the Championships should be completed in honour of Vicki.

Organising Group

The 25th FAI World Aerobatic Championships were organised by three parties: Silverstone Circuits Ltd (The Venue), the British Aerobatic Association (The Officiating Body) and Flying Aces Ltd (The Organising Body).

Silverstone Circuits provided a world class venue for the Championships with excellent facilities, most of which were built especially for the Championships, including three large hangars and a Briefing & Dining Hall. Silverstone's staff were professional, supportive and always willing to assist with preparing the site both in the planning phases ahead of the event and during the Championships itself. It was a pleasure to work with their friendly, efficient team.

The British Aerobatic Association worked closely with Silverstone for more than 18 months to plan the event schedules, infrastructure and logistics. This included: site plan, infrastructure (fuel supply, electrics, wi fi, audio visual, flags, traffic control lights), box survey and set-up, aerodrome operating procedures, risk assessment, major incident planning, insurances (event, public liability, airside vehicle risks, equipment), designation of public/airside boundaries, scheduling issues (Championships, British Touring Car Championships, Airshow), catering requirements, ticketing and security.

The BAeA also supported this core event activity by arranging the volunteer workforce, hotel accommodation, Mazda transport fleet, ceremonies, social events, awards, IT/communications systems, production of an event programme, marketing the Championships to flying clubs and aviation press and commissioned use of the QinetiQ Line Judging System as well as the purchase and sale of WAC merchandise in aid of local Air Ambulance charity (which raised £5,000). The BAeA paid for the Hospitality Marquee and for the QinetiQ system from money raised from member contributions and donations. LG Arvidsson worked closely with the BAeA in the planning phase of work to ensure that appropriate facilities and procedures were put in place to support a world contest. A large group of very experienced BAeA volunteers worked extremely hard before, during and after the event to ensure that the participants had appropriate facilities and support. Angela Cassidy worked tirelessly as Volunteer Co-ordinator and Contest Liaison to ensure that WAC was resourced with appropriate staff and facilities throughout the event. Ben Ellis (Aerodrome Manager for WAC) and his team ran the Air Traffic Control unit very efficiently throughout the contest. Thanks are due to all of the BAeA volunteers who helped with the organisation of the Championships.

Flying Aces were responsible for financial support of the Championships, overall organisation of the event (most of which was delegated to the BAeA), media coverage, filming and sponsorship. All income (entry fees, sponsorship fees) was paid directly to Flying Aces.

QinetiQ

Alan Cassidy secured a commercial arrangement with QinetiQ to supply a radar based tracking system to provide electronic line judging at WAC. Stephen Madle (BAeA) designed a software interface to translate the raw QinetiQ data into visual output that was appropriate for Line Judging purposes. Alan and Stephen worked with QinetiQ to test the systems ahead of WAC and refine the software appropriately. The system performed extremely well during the Championships and was used to determine line outs and height penalties. John Gaillard is preparing a separate report describing the performance of the QinetiQ system at WAC. We are very grateful to QinetiQ for their support of WAC and we hope that the system can be used again at future Championships.

The intellectual property rights to the Line Judging software reside with Stephen Madle and the BAeA and are subject to a contractual agreement between the BAeA and QinetiQ.

Contest Administration

The contest was run efficiently by an experienced, international group of volunteers. Each person undertook their role with enthusiasm and diligence, which ensured that contest flights could be launched quickly to maximise the opportunity to complete contest flights whenever the weather was within limits. Specialists with previous experience of working at International Contests were recruited from a number of countries to perform key tasks. This



multinational approach to setting-up the contest team worked well and is recommended to CIVA as a good way to approach contest management in the future.

International Jury

President: Mike Heuer
Members: Osmo Jalovaara, Robert Chomono

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

Technical Commission

Chairman: Mark Davies (GBR)
Members: Gilles Lukazeau (FRA), Len Rulason (USA), Andrey Polikarpov (RUS)

The Technical Commission did an excellent job at WAC and resolved many technical issues with aircraft before they were needed for contest flights. Mark Davies travelled home each evening and used his maintenance facilities to fix broken parts overnight. Silverstone's own engineering centre and other engineering companies based on site helped supply parts and services, all of which helped keep aircraft airworthy and we are very grateful for their support. Thank you to all of the engineers who helped solve technical problems so efficiently.

International Judging Panel

Graham Hill and his Chief Judging Team (Nick Buckenham, Jen Buckenham, John Gaillard) led a panel of 10 International Judging Teams who all worked very hard during the contest. The Organisers are very grateful to all of the judges for their dedication and for spending so many hours in the fields around Silverstone either judging flights or waiting for the weather to improve so that flying could begin. The Judging Line was supported by an excellent video crew (Phil O'Donoghue and Joanna White) and QinetiQ Line Judging Team (led by Stephen Madle and Steve Kirton).

Scoring Team

Jürgen Leukefeld and Silvia Thoele are CIVA's most experienced scoring team and ran the Scoring Office at Silverstone using the ACRO system to produce flying orders and contest results in a format that could be uploaded to the CIVA Results website efficiently. All Free Programmes were submitted in electronic format and this enabled copies of the sequence diagrams to be published on the contest website very quickly after registration was complete. Alan Cassidy checked all of the Free Programmes before publication and found errors on a

small number of the submissions which were corrected prior to publication. Electronic submission of the Free Programmes worked well. Thanks are due to Jürgen and Silvia for their hard work in the Scoring Office at WAC.

Weather Information

Peter MacIntosh provided excellent weather briefings each day, with information being supplied by a Royal Air Force weather forecaster. Official wind measurements were made by the experienced Czech team, David Kaftan and Alena Kaftanova who did a very good job throughout the contest.

Information and Communications Systems

Peter Rounce managed the on-site IT Support Team and ensured that Wi-Fi systems, computers, printers and audio-visual equipment worked well. Information about the event was provided to the participants in a number of ways:

Public Information Website:	www.wac2009.com
Participant Info Website:	www.wac2009admin.com
WAC CD Blog:	http://wac2009.blogspot.com
CIVA Results:	http://www.civa-results.com
Jury President Blog:	http://www.fai.org/aerobatics/PresidentPage
Text Message System:	Via contest mobile phones given to Team Managers, Jury and Key Volunteers. These messages were also made available via Twitter .

Use of web based technology enabled participants to access up-to-date information from any location that had internet access. This enabled many of the procedure documents, maps and other information to be circulated to participants ahead of the event.

Fully comprehensive notes were issued to all participants with their welcome pack and additional copies were made available at the contest office.

Contest Progress:

Practice Days – Tue 18th and Wed 19th August:

Good weather on the two practice days allowed all participants that arrived at Silverstone to fly in the aerobatic box. During the practice period, the alignment of the aerobatic box markers was checked and the contest logistics systems were tested (judging support systems, video equipment, QinetiQ calibration, communications systems). The Contest Officials and Judging Teams had been asked to arrive at the site by the morning of the 18th, which allowed time for the judges to participate in a CIVA Judging Seminar (morning of the 18th) and the Jury to review the contest plans and infrastructure. This ensured that the contest staff and logistics were ready to start official contest flights promptly as soon as good weather was available.

The first briefing was held at 1700 on the 19th in the Briefing Tent, which included the draw for order of flight. An official opening ceremony arranged by the BAeA was held at 2030 at the Staverton Park Hotel.

Thur 20th to Tue 25th August: Qualification Programme

The Qualification flights progressed normally on the 20th and 21st August, although the weather interrupted flying on a number of occasions. The Flight Director (Alan Cassidy) and his team were able to launch contest flights quickly and efficiently which ensured that maximum use was made of any periods when weather conditions were within limits. The Flight Line team did a fantastic job and should be congratulated on the way that they performed during the contest.

On Saturday 22nd August, Vicki Cruse sustained fatal injuries in an accident during her Q flight. The incident happened at 1202, during Figure 5 of the Q Programme. Vicki initiated a 1¼ positive snap roll on a vertical down line and failed to recover from the downward auto-rotation.

The WAC Major Incident Plan and Silverstone's Incident Response Plan were initiated. Silverstone's emergency response crews (fire and paramedic) arrived at the accident site very quickly. They ascertained that nothing could be done to help the pilot, checked that no one else had been injured or was in danger and secured the site. The Aerodrome Manager called the National Emergency services and the UK Air Accidents Investigation Branch of the Department for Transport. Silverstone's Management Team arrived at the contest site soon after the incident and worked with the Contest Management to co-ordinate the response to the incident. Steps were taken to secure any evidence that may be needed for the investigation (ATC records, WAC pilot registration documents, video footage, QinetiQ output). Participants were asked to stay in the Briefing Tent area until the police arrived. The Judging Team were asked to return from the Southern Judging position.

Once the Police and AAIB arrived on site they took over management of the incident. Silverstone and Flying Aces co-ordinated the media interface and issued factual press statements giving situation updates.

Alan Cassidy worked with the AAIB to assist them with their enquiries. Steve Green worked with the USA Team Manager to provide him and his team with support.

An announcement was made in the Briefing Tent to inform participants that a fatal accident had occurred involving Vicki Cruse and to express condolences to Vicki's family and friends. It was confirmed that no further flying would occur that day and that participants who were not required for interview by the Police or the AAIB should leave the site and return to the contest hotel.

During the afternoon of the 22nd, Silverstone's Management Team discussed options for the continuance of the event and agreed to make operational and scheduling changes required to

enable the Championships to continue to completion, should the WAC Organisers wish to do so.

A briefing meeting was held at the Contest Hotel in the evening of the 22nd where Alan Cassidy and Mike Heuer expressed condolences on behalf of the Organisers and CIVA respectively. A two minute silence was observed in memory of Vicki. The Contest Director added his condolences and outlined the options for continuing the Championships and announced that there would be no flying on Sunday 23rd August as a mark of respect for Vicki and to provide everyone with a period of quiet reflection.

A Team Managers' Meeting was held on the morning of the 23rd and all of the teams expressed the view that the Championships should continue, in honour of Vicki Cruse. Contest flying of the Q Programme resumed on Monday 24th August, with operating hours extended by Silverstone to include the lunchtime and evening periods whenever possible. Silverstone rearranged their schedules on a daily basis to enable as much flying to happen as possible during the remainder of the event. No additional flying time was lost due to operational restrictions – any further delays resulted from bad weather.

The Q Programme was completed mid-afternoon on the 25th August. Medal Winners were:

Q Programme:

- | | | |
|---|------------------|--------|
| 1 | Renaud Ecalle | France |
| 2 | Francois Le Vot | France |
| 3 | Alexander Krotov | Russia |

Q Programme - Women:

- | | | |
|---|-------------------|--------|
| 1 | Elena Klimovich | Russia |
| 2 | Svetlana Kapanina | Russia |
| 3 | Kathel Boulanger | France |

Full results are available at: <http://www.civa-results.com/2009/WAC09/indexpage.htm>

Tue 25th to Friday 28th August: Free Programme

Once the Q Programme had been completed, the flying order for the Free Programme was compiled and flying of the next sequence started late afternoon on Tuesday 25th August. The weather was out of limits all day on Wednesday and Thursday morning. Flying recommenced at 1400 on Thursday 27th and the Free Programme was completed by early afternoon on Friday 28th. Medal winners were:

Free Programme:

- | | | |
|---|-------------------|--------|
| 1 | Renaud Ecalle | France |
| 2 | Mikhail Mamistov | Russia |
| 3 | Oleg Shpolyanskiy | Russia |



Free Programme – Women:

- | | | |
|---|-------------------|--------|
| 1 | Svetlana Kapanina | Russia |
| 2 | Elena Klimovich | Russia |
| 3 | Kathel Boulanger | France |

The First Unknown Programme was started late afternoon on Friday, but the weather deteriorated with high winds and low cloud, which curtailed flying for the day. In a meeting between the Jury and the Organisers it was decided, with regret, that there was insufficient time available on Saturday to fly the whole of the first block of pilots through the Unknown Programme, which was the minimum proportion of pilots that were required to complete the Unknown Programme before the sequence results would count towards the World Championships. Even if the number of pilots flying the 4 Minute Freestyle had been cut to the minimum (10 pilots) there still would have been insufficient time to complete the Unknown Programme. Therefore, the results of the 25th FAI World Aerobatic Championships were declared based on the Qualification and Free Programmes. The Medal Winners and World Champions were:

Overall World Champion – Combined Classic Sequences:

- | | | |
|---|------------------|--------|
| 1 | Renaud Ecalle | France |
| 2 | Alexander Krotov | Russia |
| 3 | Francois Le Vot | France |

Overall World Champion, Women - Combined Classic Sequences:

- | | | |
|---|-------------------|--------|
| 1 | Elena Klimovich | Russia |
| 2 | Svetlana Kapanina | Russia |
| 3 | Kathel Boulanger | France |

The Team Medallists and World Champions were:

World Champion Team – Combined Classic Sequences:

- | | | |
|---|--------|--|
| 1 | France | Renaud Ecalle, Francois Le Vot, Pierre Varloteaux
Trainer: Coco Bessiere |
| 2 | Russia | Alexander Krotov, Mikhail Mamistov, Oleg Shpolyanskiy
Team Manager: Victor Smolin |
| 3 | USA | Jeff Boerboon, Michael Racy, David Martin.
Team Manager: Norm DeWitt |

Saturday 29th August: 4 Minute Freestyle Programme

The event schedule for the 29th August included the 4 Minute Freestyle Championship, an Airshow and the British Touring Car Championship (practice and qualification). The Jury, in discussion with the Contest Organisers, decided that only pilots who scored more than 60% in the Classic Aresti Championship would be allowed to participate in the Freestyle

Championship. Countries which had more than one pilot appropriately qualified were allowed to enter a second participant. This resulted in 15 pilots contesting the 4 Minute Freestyle Championship. The World Champion and medal winners were:

World Champion in the Four Minute Freestyle Programme:

1	Renaud Ecalle	France
2	Jurgis Kairys	Lithuania
3	Eric Vazeille	United Kingdom

The World Championship Medals and trophies were awarded in a public podium ceremony during the airshow at Silverstone. The remaining medals and awards were presented at the Closing Ceremony at the Staverton Park Hotel.

Learnings:

1. Major Incident Response

It is critical that all CIVA contests have documented plans and procedures for handling a major incident. This must include risk assessment documents, major incident procedures and records of persons to be contacted in the event of illness or injury. CIVA's plans for future contests must be informed by the incident that happened at WAC, with risk assessments and operating procedures updated appropriately.

2. Safety Officer

CIVA should consider appointing a Safety Officer (perhaps one of the Vice Presidents) who advises contest organisers about safety procedures and requirements that must be implemented before and during future events.

3. Sign-off Procedure for 4 Minute Freestyle Participants

CIVA should reconsider the pilot qualification and entry procedures for participants wishing to enter the 4 Minute Freestyle. A sign-off procedure by CIVA approved Check Pilots that supplements the usual NAC entry process may give additional validation of pilot capabilities ahead of the event. Alternatively, audited results of recent International or National Freestyle contests might be taken as evidence of qualification. Failing agreement on this sign-off procedure, the Regulations should formalize the requirement that competitors progressing from the Aresti contest to the Freestyle should attain a minimum of 60% in the Qualifying Programme.

4. International Co-operation – Core Contest Operations Group

CIVA should consider encouraging future Championship Organisers to extend invitations to experienced individuals from other countries to help run contests. This would build an experienced team who are used to running contests, would standardise the way that contests are run and should ensure that contests are run efficiently. This would be very similar to the operational model used by Formula 1 Motorsport, where the local organisers provide the



venue and a core F1 Team of experienced staff work with the local organisers to deliver the event. QinetiQ Line Judging could be included as part of the core operational group.

5. Time Constraints: Classic vs 4 Minute Freestyle

Organisers regularly face pressure to reduce the scope of the 4 Minute Freestyle if additional time is needed to complete the Classic contest. It may be worth considering separating the 4 Minute Freestyle into a stand-alone event in the future, so that more pilots can participate and adequate time can be given to both contests.

6. Minimum Number of Completed Programmes required to declare a Championship

The minimum number of Programmes that have to be flown by all competitors before a Championship can be considered valid should be clarified. At present the rules can be interpreted a number of ways, but if a Championship result was declared based on the Q Programme, plus the Programme 1 for the top block of pilots (i.e. those ranked highest in the Q Programme) alone, the majority of competitors would only have flown the Q programme.

7. CIVA Contest Organisation Information Website

CIVA should establish a website which collates useful documents, drawings and software that contest organisers could use when planning future events. A contest budget outline should be included which lists the main items of expenditure that need to be provided for a contest. This would be helpful to contest organisers, since it would give a useful reminder of the various costs that have to be paid for by event organisers.

Thank You

Very many people worked extremely hard, before, during and after WAC to ensure that the contest was supported with appropriate infrastructure and an efficient, experienced and motivated group of volunteers. A tremendous team worked on the project and I thank everyone that helped with the WAC for their support and hard work. Support from the pilots and participants was also excellent and this ensured that competition flights were launched quickly and that we made best use of the good weather. Thank you all for your dedication, hard work and commitment to the Championships.

Three Individual World Championship titles were awarded at Silverstone to two immensely talented pilots, Renaud Ecalle and Elena Klimovich and one Team Championship, won by the world beating French Team. The completion of these Championships is dedicated to the memory of Vicki Cruse.

Stephen Green
3rd September 2009