Free Flight news

FFn

CONTENTS

FFn	142
BMFA Free Flight Forum	142
LORD FLASH3, F1A by PER FINDAHL	143
CIAM Bureau Meeting	144
2007 FAI Competition calendar	146
Where there is a will …	149
F1E French National Championship, Tourtenay, Oct 27-28	150
Correspondence	150
News from BMFA FF Tech committee	151
Books 'N' Brooklands	152
Found	152
UK Competition News	152
Thermiksense	152
Lord Thomson	152
World Cup 2006	153

DIARY

February 5 Chobham	Chobham Tree Chop. See FFn 0609. Meet at Clump car park at 10am.
February 12 Chobham	Chobham Tree Chop. See FFn 0609. Meet at Clump car park at 10am.
February 14 Lost Hills, California USA	California Cup. F1E. World Cup event. Entry fees: US$25. Contact: Jim Parker, 9524 Ruffner Ave, Sepulveda, CA 91343, USA, tel: +1 818 892 4110
February 16 to 19 Lost Hills, California USA	Maxmen International. F1A, F1B, F1C, F1Q, F1P. World Cup event. Entry fees: US$25 per event. Contact: George Batiuk, 2221 King Street # 2, San Luis Obispo, USA, tel: +1 805 546 8231, fax: +805 546 0700, email: slogb@charter.net
February 24 Viabon France	Philippe Lepage. F1B. World Cup event. Entry fees: €30. Contact: Jean-Pierre Challine, 13, chemin des Chêneaux, 91220 Bretigny sur Orge, France, tel: +33 1 69 88 89 12, email: mjp.challine@tele2.fr, web: http://www.paris-air-modele.com
March 3 Pori Finland	Bear Cup. F1A, F1B, F1C. World Cup event. Entry fees: €25. Contact: Kari Lindgren, Muonamiehentie 5, 28610 Pori, Finland, tel: +358 50 309 5852, fax: +358 2 6324 988, email: pipo.lindgren@dnainternet.net
March 4 Area Venues.	BMFA 1st Area. C/P (White), F1A (K&MAA/Plugge), F1G, Vintage (Plugge), HLG/CLG.
March 17 to 18 Gjovik Norway	Holiday on Ice. F1A,F1B, F1C. World Cup event. Contact: Tor Bortne, Jernbanev. 28, 2840 Reinsvoll, Norway, tel: +47 611 974 63 or +47 920 95 329, fax: +47 611 52 606, email: tobortne@bbnett.no, web: http://home.online.no/~vnereng/
March 17 -18 Hranice Czech Republic	17th: Winter Cup I F1E; 18th: Winter Cup II F1E. World Cup events. Entry fees: Senior €30 / Junior €15. Contact: Vojtech Zima, Smetanovo nab. 1840, 75301 Hranice, Czech Republic, tel: +420 581 661 620 or +420 601 589 792
March 23 Crivelle, Italy	8th Trofeo. F1K.
March 24 to 25 Matfors Sweden	Matfors VT International. F1A, F1B, F1C. World Cup event. Entry €30. Contact: Mikael Holmbom, Österlo 140, 860 13 Stöde, Sweden, tel: +46 70 399 18 13, email: mikael.holmbom@matforsmfk.se, web: http://www.matforsmfk.se/matforsvt
March 25 Area Venues.	BMFA 2nd Area. C/G, F1B (Weston/Plugge), Mini Vintage (Plugge), F1J/BMFA1/2A, P30.
April 1 to 2 Saray, Turkey	Istanbul Cup. F1A, F1B, F1H, P30. World Cup event.
April 6 (Good Friday) Church Fenton	BMFA Northern Gala. B/G (CMA), B/R (Caton), B/P (Hamley), O/E, SLOP (Falcons), F1G, F1H, F1J/BMFA1/2A, Mini-vintage, HLG, CLG. Contact and CD:Denis Davitt, 0113 2675433.
April 6 to 9 Narrandera, NSW Australia	Australian Free Flight Society Championships. F1A, F1B, F1C. World Cup event. Contact : Phil Mitchell, PO Box 44, Terrigal, NSW, Australia, tel : +61 24384 3217, fax : +61 24367 8316, Email: filnoels@bigpond.net.au
April 10 to 11 Narrandera, NSW Australia	Southern Cross Cup. F1A, F1B, F1C. World Cup event. Than Stowe, PO Box 138, Winmalee, NSW, Australia, tel/fax: +61 247541334 stowes@ozemail.com.au

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Compiled and produced by Ian Kaynes, Paul Masterman and Michael Warren

FFn

Please remember the subscription form which was included with the November FFn. For most readers, apart from those noted in that issue, their subscription expires after this issue. If you have not already done so (and thanks to everyone who has) please return it promptly to continue supply in January.

The demand for the Winning Indoor Designs has just equalled the relatively small number that I had ordered. I will order more copies, but please be prepared to wait until the end of January before these arrive. NFFS 2006 Symposium Report is still available from stock.

BMFA FREE FLIGHT FORUM

Held at Coventry, November 26th. Report by Ian Kaynes.

Attendance was possibly a little lower this year than previous, at least one potential attendee lost as a result of the traffic caused by M1 being closed near its lower end. Despite earlier worries by the organisers, there was no shortage of papers to over-fill the day

Phil Ball opened the day with "New Rules for Open Rubber ", the first of a number of papers on this subject. Phil said that open rubber was still popular, but fewer flyers than 5 years ago, and it had been considered to be the class that could not be changed, but now it has. He had been surprised to find that there were events specifically for the new open rubber class and not just combined rubber. In the combined class mini vintage could do well and classic rubber on 75g was likely to perform better than vintage on 100g. In an FFF paper in the early nineties Phil had shown a 400 sq in model with optimum performance on a rubber weight equal to airframe weight, giving a time of 8:50. Halving the rubber would reduce the duration to 6:45. Phil showed how he would modify a design to have a shorter nose and a stretched 28 strand motor, retaining the same overall model length. There was a question of what gadgets would be appropriate, Phil remarking that he would have banned them. He will be running the Open Rubber League in 2007, extended to include Area events and with points system modified.

Nick Aikman and Mark Benns jointly presented "An Indoor Initiation by F1D – A beginner's approach to FAI indoor flying". Nick started by explaining that the paper described Mark's experiences on taking up F1D. There are currently about 8 to 10 F1D flyers in the country, compared to 20 at most in the past. Mark explained that he had been introduced to the technicalities of F1D by talking to Bob Bailey on a transatlantic flight and he was convinced that he could fly F1D.Bob has mentored him and in return Mark has introduced Bob to discus launch gliders. Mark said that a key element had been this mentoring and the help from others in the helpful group of flyers. Also he had concentrated on the single class and had stuck to a proven design. He is in the team for the 2007 European Championships. Discussion of the paper included comments on the communication of news and techniques and there were remarks on the previous lack of competitive element in the domestic contest programme.

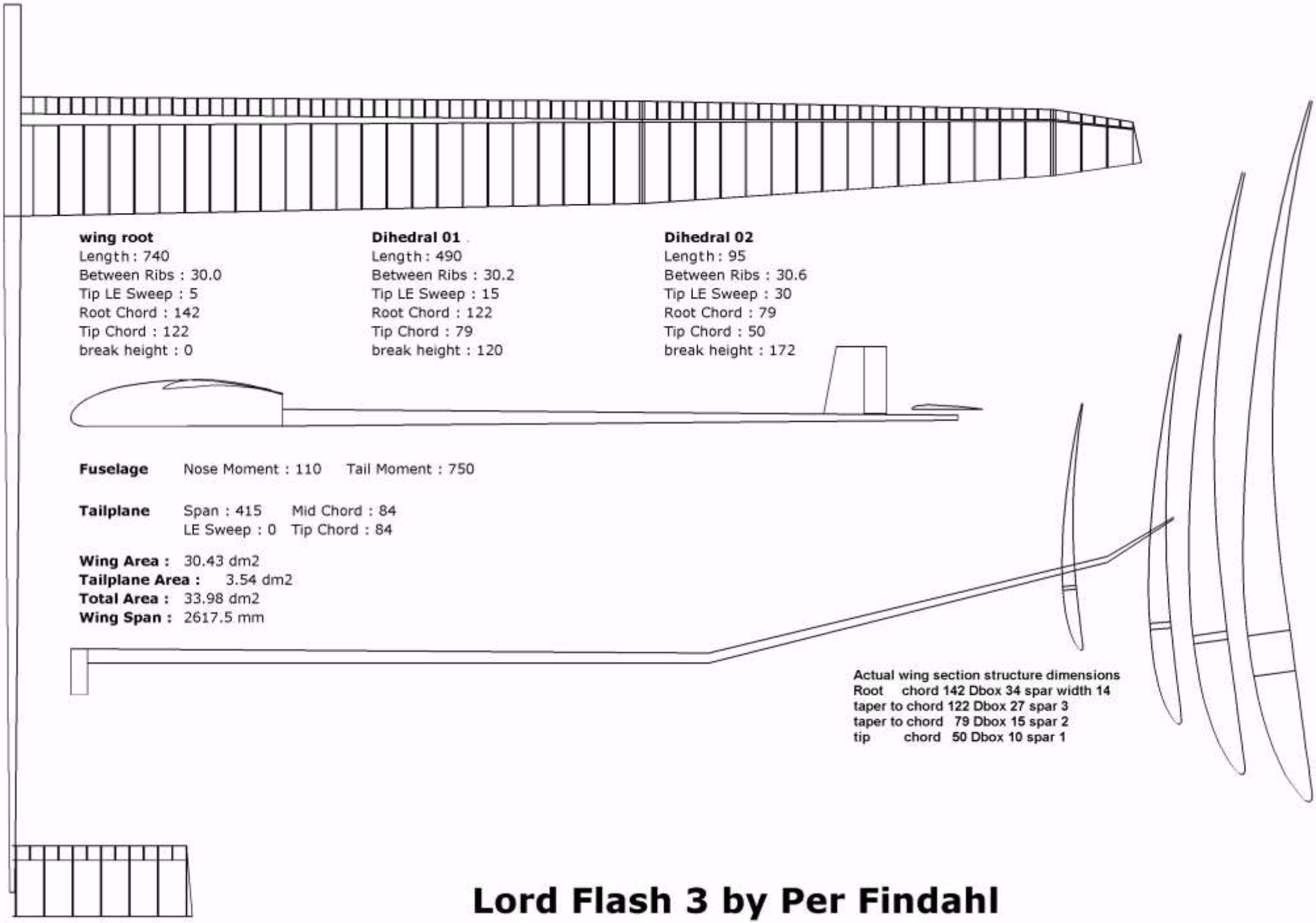
George Seyfang, not active in free flight, spoke about Gurney flaps. He explained how these small protrusions below the trailing edge can increase lift at the cost of only a small increase in drag. He suggested that adding these to a glider wing could improve performance by a few seconds, but didn't compare this with the benefit of an equivalent slight redesign of the basic wing section. He then went on to suggest that performance could be increased further by using a Gurney flap on the tailplane. Questions were not taken after this paper so he did not present further justification of this, which appears to go against general principles that a tailplane is not operating at maximum lift coefficient like a wing.

Martin Dilly then described an adjustable D-box press, subtitled "A precise means of pushing fish-bones into taco shells". His jig uses screws to apply pressure to force the rib structure forward into the D-box. Vertical pressure is applied independently.

Mike Evatt presented a paper by Ron Pollard on the new rules for open rubber. If a rubber:airframe ratio of 2:1 was desired then the airframe weight would be only 25g for 50g of rubber. At equal rubber and airframe weight then the model would be rather small, e.g. 40" span. A 40:60 ratio would increase this to a 50" size and a potential performance of 6 min. F1B are potent performers on 30g but would need new tubes for 50g of rubber. so that a new model design is required. This is where Peter King's help was requested with analysis, which is reported here for subject continuity rather than later in the meeting as given on the day.

Peter King's analysis of "50 Gram Open Rubber" was, like Ron's, presented by Mike Evatt in the absence of the author. Pete noted that he had always been impressed by open rubber flyoff flights, but on the other hand F1Bs are now very efficient. If the standard F1B analysis is applied to open rubber the performance predictions are much higher than expected from practical experience. Peter had tuned his analysis to give a 5 minute duration for an F1B with 30g rubber and aspect ratio of 17. For two sample open rubber models the simulation was tuned to give a realistic performance: Dave Greaves' 230 sq ins model flying 5:30 and Phil Ball's 600 sq in model making a time of 10 minutes. The tuning was by changing the variation of profile drag with Reynolds number. The tuned simulation was then used to compare eight different sizes of 50g open rubber model and two F1B based models. The open rubber models had predicted times of around 6 minutes, while the 50g F1Bs flew for 7 or 8 minutes. The best open rubber model was the smallest (300 sq ins) using a 540 diameter prop while larger models benefited from 600mm diameter (Ed: reporting Peter's mixed units). Motor runs were of the order of 1:40 to 2:00. It should be able to keep the F1B model to 190 or 200g even with a VP prop. With a 32 strand motor driving a 600mm VP prop the climb reached 440 ft and gave a total time of 7:20. In the discussion of the results, John Barker appeared to criticise the simulation on the ground that it should have given a one hour duration like indoor models achieve, despite the simulation not having been asked to predict this grossly-unrealistic sort of model for outdoor flying.

Mike Woodhouse, Clive King and Mike Evatt jointly spoke about Rubber Testing. Mike Woodhouse had brought his rubber stretching equipment, based on Fred Pearce's original ideas. It consisted of a long aluminium beam with a winch at one end connected to a cable round a pulley. Stretching and winding give equivalent results for rubber testing, but Mike explained that it was also necessary to run in motors and stretching did this with much less damage to the rubber than winding. He demonstrated his technique: attach a motor (26 strands of 3mm) to the cable and a spring balance, measure length, pull to 80 lb, hold for a minute, stretch further to re-establish the tension, then release and measure tension for length reducing in 10" steps. This was repeated for three different motors and the results plotted, but not quite as Mike expected, found to be as a result of having changed the position of the measuring tape when reassembling the equipment after bringing it to Coventry. Clive King then compared Mike's F1B technique with his system for indoor motor testing. He stretches the motor, leaves it for a few minutes and makes a close check for imperfections. With the limited rubber F1D models both torque and tension in the motor are important to the trim of the model, because of the effect via the fuselage bending and twisting.



wing root
Length : 740
Between Ribs : 30.0
Tip LE Sweep : 5
Root Chord : 142
Tip Chord : 122
break height : 0

Dihedral 01
Length : 490
Between Ribs : 30.2
Tip LE Sweep : 15
Root Chord : 122
Tip Chord : 79
break height : 120

Dihedral 02
Length : 95
Between Ribs : 30.6
Tip LE Sweep : 30
Root Chord : 79
Tip Chord : 50
break height : 172

Fuselage Nose Moment : 110 Tail Moment : 750

Tailplane Span : 415 Mid Chord : 84
LE Sweep : 0 Tip Chord : 84

Wing Area : 30.43 dm2
Tailplane Area : 3.54 dm2
Total Area : 33.98 dm2
Wing Span : 2617.5 mm

Actual wing section structure dimensions
Root chord 142 Dbox 34 spar width 14
taper to chord 122 Dbox 27 spar 3
taper to chord 79 Dbox 15 spar 2
tip chord 50 Dbox 10 spar 1

Lord Flash 3 by Per Findahl

George Seyfang was on again, this time talking about "Outboard Horizontal Stabilisers". This is an aircraft configuration developed by John Kentfield in Canada based on reducing induced drag by interference between lifting surfaces. An example of the benefit of this is seen in the V-formations flown by flocks of geese and has also been demonstrated by NASA flying two F-18s in close proximity and measuring reduced drag. A pair of tailplanes operating in the upwash region outboard of each wing tip trailing vortex provides a forward component of lift (i.e. reduced drag) compared to the lift being angled backwards (increased drag) on a conventional tailplane operating in downwash. George estimated that an F1A using this layout could increase duration by 40 seconds, but with various issues of the structure, the need to stiffen the wing, effect of inertia and the need for duplicated rudders and DTs.

Stuart Darmon was pleased to offset the rubber bias with his paper "BMFA Combined Glider Contests – One man's approach to a "truly inclusive glider class" ?" The new combined class balances line length against age and function. Against modern F1A on 50m, a vintage model would be struggling to do 4 min even on the 100m line. By contrast the classic glider, much more like a modern glider, could do well on the allowed 75m line. Particularly in windy weather, classic designs such as Inchworm could do well, while the more continental style classic gliders could be tricky to fly except in calm weather. Straight tow models - without circle or bunt functions - need further definition on what is meant by permanently disabling such features if they were on the model. There is a challenge to develop new models, such as a large glider which might have two alternate fuselages, for straight tow or circle to.

Bob Bailey then described "Variable Pitch Propellers for Indoor Models – The technology for producing v.p. mechanisms that weigh milligrams". With the limited rubber in F1D, VP is now more advantageous that it used to be. Generally, there is an advantage in using VP whenever the model has the potential to outclimb the site, that might have been controlled previously by backing off a significant number of turns. It was first used by Bernhard Hunt and Dave Pymm in 1980, but at that time there was a problem if the mechanism was jammed by a collision. The mechanism was developed in the USA and was well established by 1990. Bob showed a schematic of a typical prop and explained its operation. The preload spring has a powerful effect on the characteristics: a soft preload gives a rapid switch from high to low pitch, but rubber torque curves are smoother than that and it is better to have a stronger spring to give change over a wider torque range. Building and assembly jigs were shown - Bob checks settings at the start of each flying session - and also photos of a number of flyers props added to the appreciation of the mechanisms. Low ceiling flying is challenging for the UK, used to Cardington, while Bob noted that Lutz had set a record of 31 min under a 8m ceiling - which must have used VP to the full.

The chairman Mike Evatt then turned presenter with "Take the Tension Out of Winding – Keeping the blood pressure down while putting the turns on". He described the half-tube method of loading and winding motors which he had evaluated for both F1B and F1G. He noted that with the full tube loading tube method the motor could still be damaged by rubbing on the edge of the tube, apart from not allowing any shortcut in fixing the prop. The half tube, which is hinged out of the way of the motor during winding, could be plastic for F1G but must be metal to get adequate stiffness for F1B motors. He uses a winding rod to provide some distance between himself and the motor, while noting that now Andrjukov uses a blast protector on his winder as a similar safety feature. Mike now uses the Piserchio type bayonet rear fixing in preference to a loose tube, although more difficult to make. Note Bob Piserchio's article about the whole system in the NFFS 2006 Sympo special awards section. If the motor breaks in the model then a conventional motor removing tool is still needed. There is an advantage in having two stooges, one for winding and the other for loading the motor into the model - the second one also provides a convenient means to hold the model during winding. At first Mike found it rather disconcerting to be able to see the entire motor as the turns are applied up to maximum torque, but now appreciates the advantage of being able to see the knots, and reckons that this gives a 2% increase in the number of turns.

Martin Gregorie's "Effects of Changing Towline Glider Tailplane Airfoils – What happens to the launch when you change the tailplane section" addressed the effect of tailplane section on glider launch characteristics. After starting with a B8403B section, he had observed a surprising change in launch behaviour when he had simply ground down the bottom of his template when making a new tailplane. This needed a harder launch but was much more consistent. Next he reduced camber further by using an 8% Clark Y section and this changed behaviour further in the same direction, with a 2^{o} difference in trim setting. Next he tried the Wobbeking, using a D-box extending back to the forward high point of this section, but this performed very similarly to the 8% Clark Y. He noted that this could be explained in terms of the aerodynamic chord angle and the zero lift angle (obtained from the KPL software estimate). In the discussion Mike Woodhouse noted that his Wobbeking section looked different from that shown by Martin. John Carter noted that a Wobbeking section performed better on his M&K models than the original M&K cambered section tailplane, and also Per Findahl uses Wobbeking tail sections.

The final technical paper was by Dave Greaves on oven-baked propeller blades. Dave described how he makes his props, noting that they are from solid balsa and not laminated as announced in the Forum publicity. For F1G he starts with 1/8" quarter grain 6 lb balsa sheet, matching the grain for the two blades. After cutting to blade outline a hardwood strip edge is stuck on using any glue that can withstand 20 minutes in water (e.g. waterproof wood glue). The blank is then planed and sanded to section - a flat slope from the high point to the trailing edge, then sand the forward part. It is necessary to re-mark the high point location when this is sanded away. Station positions are marked on the lower surface to help make vernier measurements of thickness. The blade is then soaked in water and then strapped to a former with tissue each side of the blade and a piece of 1/16 balsa on top. This was bound together with tape, not rubber, and then cooked for 40 minutes at 110^{o}.The former was made by the Maxwell method. After this the blade is doped (non-shrinking dope) then bound back to the former when touch dry and left in the airing cupboard overnight. A similar process is used for F1B except that three layers of cloth and some Kevlar reinforcing is added down the centre of the blade. Two moulds are required so that a pair of blades can be made at the same time . These are made from casting resin surrounded by MDF, moulded from a single balsa master to help to ensure two identical moulds.

The final activity was Mike Woodhouse and Chris Strachan giving the free flight technical committee's rationale for the FF rule changes for 2007. Apologies that we haven't reported on this item, but I made my exit at this stage of a long day.

CIAM BUREAU MEETING

As a departure from usual practice, the December 2006 CIAM Bureau meeting was hosted by the AMA at their headquarters in Muncie, Indiana. On the one hand this served to emphasise that CIAM is a worldwide body and also balanced the travelling that has been done for so many years by all the USA and other outside-Europe representatives.

It also served to amaze newcomers to Muncie with the scale of the facilities that the AMA have built up. There are flying facilities for radio control and control line and also a fair sized area for free flight. While not exactly Lost Hills, it is an area which looks good compared to many European free flight sites. There is a large aeromodelling museum, library and plans supply operation. The CIAM meeting was held in the meeting room, very well equipped and spacious by comparison to the usual Lausanne venues, which is in the administration building where also has the offices and work areas for the management and secretarial staff. The total number of staff is over 50 and this is augmented by contracting out most of the maintainence of the flying site.

Proposals for 2007 Plenary meeting.

Russia have proposed changing the definition of free flight (1.3.1) to remove the sentence that forbids closed loop control systems. In the reasons it is stated that the presence of closed loop control systems with active sensors does not contradict the spirit of free flight. Checking the presence of such systems is a technical challenge and as electronic system develop it will be almost impossible to define the check for the presence of active sensors and control systems. As supporting information it is said that the interesting development task will bring new people into free flight, but on the other hand a flight control system, will not provide 100% certainty of victory.

There are also the proposals from Russia deferred from last year to reduce F1A line length to 40m, F1B motor weight to 25g and F1C motor run to 4 sec.

Germany propose changing the F1H glider rules from having the minimum weight of 220g to having a minimum loading of 12 g/dm^2. The stated reason is that there are simple F1H models which are smaller than 18 dm^2 and it is unfair to demand a minimum weight of 220g of them.

The Free Flight Subcommittee (FFSC) have proposed to reduce the run from 7 to 5 sec for F1J.

Changes affecting F1P are that the FFSC propose reducing the run from 10 sec to 7sec, Germany propose requiring a minimum propeller diameter of 180mm (to reduce performance). Germany also propose that the World Cup rules are amended to allow F1P models to compete alongside F1C. The reasons include sharing competitors in one class, and awaking interest by "old" F1C flyers to build and fly F1P models.

Great Britain have proposed banning thermal detection devices.

Other FFSC proposals are:

To allow radio DT in F1Q.

To change the duration of flight definitions (3.1.7, etc) to allow the maximum to be changed to suit meteorological conditions (i.e. more clearly to allow it to be increased in appropriate weather instead of just reducing it in the event of problems).

To remove the rule that flying order must be A B C. This will allow variation in order so that F1A are not always on first after the minimum of preparation time.

To change the number of starting positions moved between rounds to be "the number of starting poles divided by the number of official flights"" so that during the flights each team will move about the full extent of the line.

To define that during the rounds test flying is not allowed near the starting line or upwind of the starting line.

In F1E the starting line is defined to be a straight line facing into the wind, and that launching takes place only on the downhill side of the line.

That FAI stickers should no longer be required on FF models.

All the above are PROPOSALS which will be subject to national voting at the Plenary meeting in March.

Championships News

The 2006 Championships jury reports were reviewed at the meeting. For free flight the most notable was to note the lessons learnt at Odessa with regard to the 2007 World Champs at the same venue. It would seem that our problems were relatively minor compared to the space model championships which was organised by Russia at its space facilities in Kazakhstan. Lack of communication, little English, chaotic delayed charter flights to take competitors from Europe. And Borat was not listed as an organiser!

F1A F1B F1C 2007 World Championships will be held at Odessa, Ukraine, on the same field as the European Championships 2006. The schedule is:

Sunday	June 24	Arrival, registration, model processing, practice, opening
Monday	June 25	Arrival, registration, model porcessing, practice
Tuesday	June 26	F1A
Wednesday	June 27	F1B
Thursday	June 28	Early morning flyoff for F1A, F1B, reserve day
Friday	June 29	F1C
Saturday	June 30	Early morning flyoff for F1C, reserve day, tour, awards, banquet
Sunday	July 1	Departure

The schedule on the contest days will have the start at 7.00, with breakfast serve din the hotels before then. Round duration will be 55 minutes with 5 or 15 minute gaps. Lunch will be from 14.00 to 16.00 and flyoffs will start from 19.00. Early morning flyoffs will start at 6.00. The Black Sea World Cup event will be from June 21 to 24 directly before the championships.

Entry fees are €225 for competitors, €150 for team managers, and €30 for supporters. Accommodation options with full board include the Chabanka (like this year) with costs from €47-64 per person per day. There are cheaper options with only breakfast provided and there is the on-field camp site.

This year there is no discount deal with Ukrainian Airlines; there was only one such deal available per year and it was chosen to use the discount for the Scale championships, with the potential for saving on the travel bill for the judges. It is promised to help check on car hire arrangements if details of reservations are provided to the organisers, who will then confirm with the local franchise that they do have the cars that were ordered.

F1E 2007 World Championships for Seniors and Juniors will be held in Romania at the well known Turda region. The schedule for the event is:

Monday	Aug 27	Arrival, registration
Tuesday	Aug 28	Model checking, training, opening ceremony, technical meeting
Wednesday	Aug 29	World championships
Thursday	Aug 30	reserve day, trip
Friday	Aug 31	World Cup Turda Cup, prize-giving, closing ceremony, banquet
Saturday	Sept 1	Reserve day for Turda Cup, departure

There will also be the World Cup Memorial Popa Cringu on August 25-26.

Entry fees will be €230 for senior competitors and team managers, €150 for junior competitors, and €45 for supporters. Board and lodging in Turda will cost €32 to 40 per day and the banquet €30 for seniors, €25 for juniors. There is a 10% surcharge if fees are paid later than June 15th. Preliminary entries are requested by February 1.

There are two European Championships in 2007, both in Serbia and for both of them I do not have programmes to hand. The preferred operation of the CIAM Bureau meeting is to have the FFSC Chairman provided with the draft bulletins in advance for checking. Serbia did not provide details of either of these Championships to me in advance, they were distributed as paper documents at Muncie, and I cannot find my copies even now that I have been reunited with my suitcase.

The European Junior Championships are at Zrenjanin from August 3rd to 8th with a conventional schedule of three days flying the three classes F1A F1B F1P. The Indoor championships are from August 26 to September 1, and so clash with the F1E World Championships. There also have a conventional schedule, with two rounds on each of three days. Detailed information will follow next month.

2007 FAI COMPETITION CALENDAR

The following is the provisional 2007 calendar for free flight championships, World Cup events and other international events. Some events are in doubt because the registration fees may not have been paid in time, and in particular there was a problem with the Italian events. The final version will be published by FAI soon. Note that the correct dates for Holiday on Ice are March 17-18, as shown below, and not the ones given in FFn last month.

First is a summary of World Cup events, see the calendar below for full details of each event

World Cup summary F1A, F1B, F1C

All F1A F1B F1C unless stated

16-19 Feb	Lost Hills	USA	Maxmen F1ABCQ
24 Feb	Viabon	FRA	Philippe Lepage F1B
3 Mar	Pori	FIN	Bear Cup
17-18 Mar	Gjovik	NOR	Holiday on Ice
24-25 Mar	Matfors	SWE	Matfors VT
1-2 Apr	Saray	TUR	Istanbul Cup F1AB
6-9 Apr	Narrandera	AUS	Australian FFS Champs
10-11 Apr	Narrandera	AUS	Southern Cross Cup
14 Apr	Lucenec	SVK	City Cup of Lucenec
27-30 Apr	Embalse	ARG	World Cup
28 Apr	Madziunai	LTU	Baltic Cup
29-30 Apr	Madziunai	LTU	Estonian FF Cup
11-13 May	Zrenjanin	SRB	24th Srem Cup
12-13 May	Andover	GBR	Stonehenge F1ABCQ
17-20 May	Rinkaby	SWE	Swedish Cup
18-20 May	Vsechov	CZE	22nd Jihocesky Pohar
19-20 May	Rinkeby	SWE	Nordic Cup of Denmark
24-26 May	Pazardzik	BUL	Sofia Cup
25-27 May	Kharkiv	UKR	Idea Cup - Belarus
2-3 Jun	Bjelopolje	CRO	5th Vilima Kmocha
2-3 Jun	Tass	HUN	23rd Puszta Cup
16 Jun	Zrenjanin	SRB	WC Djordje Zigic
21-24 Jun	Odesa	UKR	Black Sea Cup
30 Jun-1 Jul	Prilep	MKD	Prilep - Brand Cup
1 Jul	Gliwice	POL	17th Black Cup F1A
6-9 Jul	Kyiv	UKR	Antonov Cup
14-15 Jul	Borden	CAN	Huron Cup
14 Jul	Tass	HUN	Voros Jeno
31 Jul	Muncie	USA	FAI Electric FF F1Q
2-4 Aug	Noizé	FRA	Poitou
10-12 Aug	Salonta	ROM	Cupa Salonta
12 Aug	Mostar	BIH	Mostar Cup
12 Aug	Bosanski P	BIH	Izet Kurtalic
18-19 Aug	Stalowa Wola	POL	Summer Cup
24-25 Aug	Ofakim	ISR	Israeli FF Champs
24-26 Aug	Hakeborn	GER	4th Salzland Cup
30 Aug-2 Sep	Zülpich	GER	38th Eifel Pokal
7-9 Sep	Sisak	CRO	Siscia Cup
7-9 Sep	Evora	POR	Von Hafe Cup
13-16 Sep	Orel	RUS	Aviaprom Cup
15-16 Sep	Borden	CAN	Canada Cup
20-22 Sep	Pazardzik	BUL	Bulgaria Cup
22-23 Sep	Capannori	ITA	3rd FAVLI
29 Sep	Bosanski P	BIH	Una Cup
13-14 Oct	Lost Hills	USA	Sierra Cup
13-14 Oct	Ankara	TUR	Anatolian FF Cup F1AB
19-21 Oct	Novo Mesto	SLO	Krka Cup
27-28 Oct	Mühlenthurnen	SUI	Eurofly

World Cup summary F1E

14 Feb	Lost Hills	USA	California Cup
17 Mar	Hranice	CZE	Winter Cup I
18 Mar	Hranice	CZE	Winter Cup II
21 Apr	Oberkotzau	GER	Föhrlberg Cup
22 Apr	Oberkotzau	GER	World Cup F1E
4-5 May	Gallio	ITA	2 Coppa Primavera
5-6 May	Gallio	ITA	7 Coppa Monte Sisemol
19 May	Liptovsky	SVK	Mikulas Cup
20 May	Liptovsky	SVK	Cavalloni Cup
25-26 Aug	Turda	ROM	Memorial Popa Crangu
30-31 Aug	Turda	ROM	Turda Cup
15 Sep	Liptovsky	SVK	Liptov Cup
16 Sep	Liptovsky	SVK	Memorial Peter Nosko
22 Sep	Raçibórz	POL	8th Governor's Cup
23 Sep	Toszek	POL	2nd Toszek Cup
29 Sep	Tourtenay	FRA	1st Poitou Charentes
30 Sep	Tourtenay	FRA	Poitou F1E

Full listing of provisional FAI calendar

February 14 Lost Hills, California USA	California Cup. F1E. World Cup event. Entry fees: US$25. Contact: Jim Parker, 9524 Ruffner Ave, Sepulveda, CA 91343, USA, tel: +1 818 892 4110
February 16 to 19 Lost Hills, California USA	Maxmen International. F1A, F1B, F1C, F1Q, F1P. World Cup event. Entry fees: US$25 per event. Contact: George Batiuk, 2221 King Street # 2, San Luis Obispo, USA, tel: +1 805 546 8231, fax: +805 546 0700, email: slogb@charter.net
February 24 Viabon France	Philippe Lepage. F1B. World Cup event. Entry fees: €30. Contact: Jean-Pierre Challine, 13, chemin des Chêneaux, 91220 Bretigny sur Orge, France, tel: +33 1 69 88 89 12, email: mjp.challine@tele2.fr, web: http://www.paris-air-modele.com
March 3 Pori Finland	Bear Cup. F1A, F1B, F1C. World Cup event. Entry fees: €25. Contact: Kari Lindgren, Muonamiehentie 5, 28610 Pori, Finland, tel: +358 50 309 5852, fax: +358 2 6324 988, pipo.lindgren@dnainternet.net
March 17 to 18 Gjovik Norway	Holiday on Ice. F1A, F1B, F1C. World Cup event. Entry fees: €35. Contact: Tor Bortne, Jernbanev. 28, 2840 Reinsvoll, Norway, tel: +47 611 974 63 or +47 920 95 329, fax: +47 611 52 606, email: tobortne@bbnett.no, web: http://home.online.no/~vnereng/
March 17 Hranice Czech Republic	Winter Cup I. F1E. World Cup event. Entry fees: Senior €30 / Junior €15 / Team €. Contact: Vojtech Zima, Smetanovo nab. 1840, 75301 Hranice, Czech Republic, tel: +420 581 661 620 or +420 601 589 792
March 18 Hranice Czech Republic	Winter Cup II. F1E. World Cup event. Entry fees: Senior €30 / Junior €15 / Team €. Contact: Vojtech Zima, Smetanovo nab. 1840, 75301 Hranice, Czech Republic, tel: +420 581 661 620 or +420 601 589 792
March 23 Crivelle, Italy	8.Trofeo. F1K. --. --

March 24 to 25 Matfors Sweden	Matfors VT International. F1A, F1B, F1C. World Cup Event. Entry fees: €30. Contact: Mikael Holmbom, Österlo 140, 860 13 Stöde, Sweden, tel: +46 70 399 18 13, mikael.holmbom@matforsmfk.se, web: http://www.matforsmfk.se/matforsvt
April 1 to 2 Saray, Turkey	Istanbul Cup. F1A, F1B, F1H, P30. World Cup event.(date also given as 21-22 April)
April 6 to 9 Narrandera, NSW Australia	Australian Free Flight Society Championships. F1A, F1B, F1C. World Cup event. Entry fees: AUS$20. Contact : Phil Mitchell, PO Box 44, Terrigal, NSW, Australia, tel : +61 24384 3217, fax : +61 24367 8316, filnoels@bigpond.net.au
April 10 to 11 Narrandera, NSW Australia	Southern Cross Cup. F1A, F1B, F1C. World Cup event. Entry fees: AUS$10. Contact : Than Stowe, PO Box 138, Winmalee, NSW, Australia, tel/fax : +61 247541334, stowes@ozemail.com.au
April 14 Lucenec-Bolkovice Slovak Republic	City Cup of Lucenec. F1A, F1B, F1C. World Cup event. Entry fees: Senior: €30 / Junior: €15. Contact: Stefan Hubert, Malinovskeho 5, 984 03 Lucenec, Slovak Republic, tel: +421 47 433 0213, email: butorova@stonline.sk
April 21 Oberkotzau Germany	Föhrlberg Cup. F1E. World Cup event. Entry fees: €30 (2x WC €40). Contact: Peter Kuttler, Schneebergstr. 26, 95145 Oberkotzau, Germany, tel: +49 9286 61 87 or +49 160 945 16 469, email: peter-kuttler@web.de
April 22 Oberkotzau Germany	World Cup. F1E. World Cup event. Entry fees: €30 (2x WC €40). Contact: Peter Kuttler, Schneebergstr. 26, 95145 Oberkotzau, Germany, tel: +49 9286 61 87 or +49 160 945 164 69, email: peter-kuttler@web.de
April 27 to 30 Embalse Argentina	World Cup. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Mario Korman, Calderon de la Barca 939, Buenos Aires, Argentina, tel/fax: +11 4636 3045, aeromodelismo@infovia.com.ar, web: http://www.faa.org
April 28 Madziunai Lithuania	Baltic Cup. F1A, F1B, F1C. World Cup event. Entry fees: €25. Contact: Rolandas Mackus, Taikos 19-20, 28158 Utena, Lithuania, tel: +370 687 260 02, fax: +370 389 691 81, rolandasmackus@vytrolma.lt, web: http//www.aeromodelling.lt
April 29 to 30 Madziunai Lithuania	Estonian Free Flight Cup. F1A, F1B, F1C. World Cup event. Entry fees: €25. Contact: Aavo Koppel, Kreegipuu Puiestee 4, Maardu 74117, Estonia, tel: +372 50 48 886, fax: +372 64 05 701, email: aavo.koppel@suprema.ee, web: http://www.mudellend.ee
May 4 to 5 Gallio, Italy	2 Coppa Primavera. F1E. World Cup event.
May 5 to 6 Gallio, Italy	7 Coppa Monte Sisemol. F1E. World Cup event.
May 11 to 13 Aradac - Zrenjanin Serbia	24th Srem Cup. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Radoje Blagojevic, Pinkijeva 10, 22330 Nova Pazova, Serbia, tel: +381 63 35 22 92 or +381 63 252 064, email: aknovapazova@yahoo.com, web: http://www.aknovapazova.com
May 12 to 13 Salisbury Plain UK	Stonehenge Cup. F1A, F1B, F1C, F1Q. World Cup event. Entry fees: €35. Contact: P. Williams, Old Coach House, Hunts Common, Hartley Wintney, Hook, Hants, RG27 8AA, England, tel: +44 1252 84 2120, email: peter.f1a@virgin.net
May 17 to 20 Rinkaby Sweden	Swedish Cup. F1A, F1B, F1C. World Cup event. Entry fees: Junior: €15 Senior: €30. Contact: Lars-G Olofsson & Per Findahl, Bronsaldersgatan 66, 42163 Vastra Frolunda, Sweden, tel: +46 31 473560 or +46 705 656513 or +46 223 22957, email: friflyg@comhem.se
May 18 to 20 Vsechov Czech Republic	22nd Jihocesky Pohar. F1A, F1B, F1C. World Cup event. Entry fees: €35. Contact: Rostislav Kvasnicka, Svepomoc 694, 391 02 Sezimovo Usti, Czech Republic, tel: +420 608 059 803, fax: +420 381 276 579, r.kvasnicka@seznam.cz
May 19 to 20 Rinkeby Sweden	Nordic Cup of Denmark. F1A, F1B, F1C. World Cup event. Entry fees: Senior €30 / Junior €15. Contact: Bo Nyhegn, Birkevenget 2, Gadevang, 3400 Hillerod, Denmark, tel: +45 4826 7306, fax: +45 4824 1069, email: henning@nyhegn.com, web: http://www.ffu.dk
May 19 to 20 Valencia Spain	9th Open Internacional Copa Tabarca. F1D, F1L, F1M, F1N. Entry fees: €40. Contact: Luis Font Bellot, c/ Tucumán 28, 03005 Alicante, Spain, tel: +34 67 53 94 369, fax: +34 965 12 06 19, email: clubsaf15@hotmail.com, web: http://Www.geocities.com/clubsaf15
May 19 Liptovsky Mikulas Slovak Republic	Mikulas Cup. F1E. World Cup event. Entry fees: €30. Contact: György Pinkert, Pf 16, 1625, Hungary, tel/fax: +36 1 221 40 71, email: info@cavalloni.hu, web: http://www.cavalloni.hu
May 20 Liptovsky Mikulas Slovak Republic	Cavalloni Cup. F1E. World Cup event. Entry fees: €30. Contact: György Pinkert, see details for May 19.
May 24 to 26 Pazardzik Bulgaria	Sofia Cup. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Valentin Savov, 5 Bratia Benderevi str., 5100 Gorna Oriahovitza, Bulgaria, tel: +359 888 408 940, fax: +359 618 607 72, email: valio@dir.bg, web: http://www.f1abc.com
May 25 to 27 Kharkiv Ukraine	Idea Cup - Belarus. F1A, F1B, F1C. World Cup event. Entry fees: €20. Contact: Nikolay Kovalenko, Belarusian Federation of Air Sport Firm "Idea", Nesterova Str. 2, Kharkiv 61031, Ukraine, tel: +380 57 775 44 99 or +380 50 595 82 24, fax: +380 57 775 44 98, email: ideainfo@ukr.net
June 2 to 3 Bjelopolje Croatia	5th Memorijal Vilima Kmocha. F1A, F1B, F1C, F1H. World Cup event. Entry fees: €30. Contact: Robert Lesko, Matije Gupca 4, 10290 Zapresic, Croatia, tel/fax: +385 133 10 403, email: mkz@mk-z.hr
June 2 to 3 Tass Hungary	23rd Puszta Cup. F1A, F1B, F1C, F1G, F1H, F1J, F1P. World Cup event. Entry fees: €30. Contact: György Pinkert, Pf 16, 1625, Hungary, tel/fax: +36 1 221 40 71, info@cavalloni.hu, web: http://www.cavalloni.hu

June 16 Aradac - Zrenjanin Serbia	WC Djordje Zigic. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Nikola Borovac, Cara Dusana 57, 11080 Zemun, Serbia, tel: +381 11 61 91 64 or +381 64 195 18 70, fax: +381 11 61 91 64, email: nborovac@eunet.yu
June 21 to 24 Odesa, Ukraine	Black Sea Cup. F1A, F1B, F1C. World Cup event. Entry fees: €45. Contact: Viktor Stamov, Simirenko str. 34, app 127, Kyiv 03134, Ukraine, tel: +380 44 402 79 32 or +380 97 987 42 80, fax: +380 44 496 07 40, email: f1a@voliacable.com, web: http://www.blackseacup.odessa.ua
June 24 to July 1 Odesa, Ukraine	World Championships. F1A, F1B, F1C. .
June 30 to July 1 Prilep Former Yugoslav Rep. of Macedonia	Prilep Brand Cup. F1A, F1B, F1C, F1H. World Cup event. Entry €25. Contact: Todoroski Zdravko, Kej 4th July l/5, 7500 Prilep, Former Yugoslav Rep. of Macedonia, tel:+389 48 422 828 or tel/fax +389 48 411 770 zdravkot@mt.net.mk
July 1 Gliwice Poland	17th Black Cup. F1A. World Cup event. Entry fees: €30. Contact: Stanislaw Kubit, ul. Rybnicka 84, 44-100 Gliwice, Poland, tel: +48 32 232 18 22 or +48 601 420 383, email: qbit@digi.pl
July 6 to 9 Kyiv Ukraine	Antonov Cup. F1A, F1B, F1C, F1G, F1H, F1J. World Cup event. Entry fees: €25. Contact: Sergiy Skalko, Av. Peremogi 12, of. 160, 01135 Kyiv, Ukraine, tel/fax: +380 44 496 0740 info@aviamodel.org.ua web: http://www.aviamodel.org.ua
July 14 to 15 Borden, ON Canada	Huron Cup. F1A, F1B, F1C. World Cup event. Entry fees: CAN$30. Contact: Jerry McGlashan, RR1, 372 6th Conc.Rd, Clear Creek, BOE1CO, Canada, tel: +1519 875 2734, email: rgmcg@sympatico.ca
July 14 Tass Hungary	Voros Jeno Memorial Contest. F1A, F1B, F1C, F1H. World Cup event. Entry fees: €30. Contact: Jenö Voros, Tarogato str. 63, 6726 Szeged, Hungary, tel: +36 20 9 136 463, email: vorosjeno@freemail.hu
July 27 to 29 Beauvoir-sur-Niort France	Azay le Brule International. F1A, F1B, F1C, F1G, F1H, F1J, F1K. Entry fees: €14. Contact: André Trachez, 20, rue du Grand Port, 79000 Niort, France, tel: +33 6 08 57 35 50, andre.trachez@laposte.net
July 31 Muncie, Indiana USA	FAI Electric Free Flight. F1Q. World Cup event. Entry fees: US$20. Contact: Aram Schlosberg, 7902 212 Street, Oakland Gardens, , NY 11364, USA, tel: +1 718 479 0478, aram.schlosberg1@verizon.net
August 1 to 2 Aradac - Zrenjanin Serbia	Open Int. Luxor Cup. F1A, F1B, F1C. Entry fees: €15. Contact: Ljubomir Radosavljevic, Prvomajska 67, 11080 Zemun, Serbia, tel/fax: +381 11 397 65 57 or tel +381 64 138 86 11 aerolux@sezampro.yu, web: http://www.akaerolux.com
August 2 to 4 Noizé (Thouars) France	Poitou. F1A, F1B, F1C, F1G, F1H, F1J. World Cup event. Entry fees: Junior €12 / Senior €30. Contact: Michel Reverault, BP 36, 79101 Thouars Cedex, France, tel: +33 5 49 68 01 55, fax: +33 5 49 96 13 37, email: poitou-aero@noos.fr, web: http://www.poitou-aero.com
August 3 to 8 Zrenjanin, Serbia	Junior European Championships. F1A, F1B, F1P.
August 10 to 12 Salonta Romania	Cupa Salonta. F1A, F1B, F1C. World Cup event. Entry fees: €25. Contact: Vincze Sandor, Str. Mihai Eminescu nr 35, 475550 Salonta, jud. Bihor, Romania, tel: +40 259 373 557, fax: +40 259 406 206 or +40 259 373 231, uamsal@Artelecom.net
August 10 to 12 Belgrade - Fair Serbia	15th Dorcol Cup. F1D . Entry fees: €40. Contact: Vojislav Stojkovic, Kralja Petra 70, 11000 Beograd, Serbia, tel: +381 11 21 89 627, fax: +381 11 21 86 443, email: aviomodeli55@yahoo.com, web: http://www.modelar.org.yu
August 12 Bosanski Petrovac Bosnia and Herzegovina	Memorijal Izet Kurtalic. F1A, F1B, F1C, F1H. World Cup event. Entry fees: €25. Contact: Kenan Mandra, Kemala Kapetanovica 25, 71000 Sarajevo, Bosnia and Herzegovina, tel: +387 61 611 566 or +387 61 508 064, fax: +387 32 738 209, email: sak@bosnia.ba, web: http:// www.memoizetkurtalic.egn.ba
August 18 to 19 Stalowa Wola Poland	Summer Cup. F1A, F1B, F1C. World Cup event. Entry fees: €25 / Junior €15. Contact: Robert Radwanski, Ul. Dmowskiego 7 m 19, 37450 Stalowa Wola, Poland, tel: +48 15 844 45 15 or +48 600 466 624, fax: +48 15 844 01 18, email: rradwand@wp.pl
August 24 to 25 Ofakim Israel	Negev Open - Israeli Free Flight Championship. F1A, F1B, F1C, F1G, F1H, F1P. World Cup event. Entry fees: €15. Contact: Michael Furman, 67 Hayarkon Street, Tel Aviv, Israel, tel: +972 3 51 75 038, fax: +972 3 51 77 280, email: office@aeroclub.org.il, web: http://www.aeroclub.org.il
August 24 to 25 Szentes Hungary	Cup of Szentes. F1A, F1B, F1C, F1P . Entry fees: €30. Contact: Gabor Zsengeller, PO Box 207, 6701 Szeged, Hungary, tel: +36 30 95 32 100, fax: 36 623 10 006, email: gabez@eastcom.hu
August 24 to 26 Hakeborn Germany	4th Salzland Cup. F1A, F1B, F1C. World Cup event. Entry fees: Senior €30 / Junior €15. Contact: Michael Thoma, Hermann Blenk str. 28, 38108 Braunschweig, Germany, tel: +49 531 235 40 56, fax: +49 531 235 4011, email: m.thoma#daec.de, web: http://www.modellflug-im-daec.de
August 25 to 26 Turda Romania	Memorial Popa Crangu. F1E. World Cup event. Entry fees: Senior: €30 / Junior: €25. Contact: Zanciu Mihail & Conu Marius, Federatia Romana de Modelism, OP 6 - Cp 56 Bucuresti, Romania, tel/fax: +40 213 162 454 or +40 318 057 471, email: mzanciu@rdsmail.ro, web: http://www.frmd.ro
August 25 to 26 Belgrade - Fair Serbia	International Beograd Indoor Models F1D. Entry fees: €25. Contact: Ljubomir Radosavljevic, Prvomajska 67, 11080 Zemun, Serbia, tel/fax: +381 11 397 65 57 or tel: +381 64 138 86 11, email: aerolux@sezampro.yu, web: http://www.akaerolux.com
Aug 26 to Sept 1 Belgrade, Serbia	European Championships. F1D Senior and Junior.
Aug 27 to Sept 1 Turda, Romania	World Championships. F1E Senior and Junior.

August 30 to September 2 Zülpich Germany	38th Internationaler Eifel Pokal. F1A, F1B, F1C. World Cup event. Entry fees: Senior €30 / Junior €15 / second Contact: Peter Mönninghoff, Friedrich Ebert Str. 41, 58332 Schwelm, Germany, email: info@eifelpokal.de web: http://www.eifelpokal.de
August 30 to 31 Turda Romania	Turda Cup. F1E. World Cup event. Entry fees: Senior €30 / Junior €25. Contact: Zanciu Mihail & Conu Marius, Romanian Modelling Federation, OP6 - Cp56 Bucuresti, Romania, tel/fax: +40213 16 24 54 or +40 31 80 57 471, email: mzanciu@rdsmail.ro http://www.frmd.ro
September 7 to 9 Sisak Croatia	Siscia Cup. F1A, F1B, F1C. World Cup event. Entry fees: €25. Contact: Zoran Zechner, S.i A. Radica 3, Sisak, Croatia, tel: +385 98 90 55 2888, email: zoran.zechner@sk.t-com.hr, web: http://www.amks.hr
September 7 to 9 Evora Portugal	Von Hafe Cup. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Jorge Gustavo, Praça Carlos Alberto no 63-3, 4050 157 Porto, Portugal, tel: +351 960 359 514, fax: +351 223 393 749, email: jorge.gustavo@tvtel.pt
Sept 13 to 16 Orel Russia	Aviaprom Cup. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Nadezhda Snegovaya, 88-8 Volokolamskoye Sh., 125424 Moscow, Russia, tel: +7 495 491 97 47, fax: +7 495 491 97 47, email: fasrus@rambler.ru
Sept 15 to 16 Borden, ON Canada	Canada Cup. F1A, F1B, F1C. World Cup event. Entry fees: CAN$30. Contact: Leslie Farkas, 21, Misty Moore Dr,, Richmond Hill, ON L4C 6P9, Canada, tel: +1 905 886 69 59, fax: +1 905 886 3025, email: aljolie@sympatico.ca
September 15 Liptovsky Mikulas Slovak Republic	Liptov Cup. F1E. World Cup event. Entry fees: €30. Contact: Milan Valastiak, Vrbická 1869, 031 01 Liptovský Mikulás, Slovak Republic, tel: +420 908 530 339, email: peton24@zoznam.sk
September 16 Liptovsky Mikulas Slovak Republic	Memorial of Peter Nosko. F1E. World Cup event. Entry fees: €30. Contact: Peter Nosko, Nábrezie D/1, 031 01 Liptovský Mikulás, Slovak Republic, email: peton24@zoznam.sk
Sept 20 to 22 Pazardzik Bulgaria	Bulgaria Cup. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Valentin Savov, 5 Bratia Benderevi str., 5100 Gorna Oriahovitza, Bulgaria, tel: +359 888 408 940, fax: +359 618 607 72, email: valio@dir.bg, web: http://www.f1abc.com
Sept 22 to 23 Capannori, Italy	3rd FAVLI . F1A, F1B, F1C. World Cup event.
September 22 Raçibórz Poland	8th Governor's Cup. F1E. World Cup event. Entry fees: €30. Contact: Marek Lysakowski, Ul.Sienkiewicza 8 m 10, 47400 Raciborz, Poland, tel: +48 32 419 27 41, email: mlysakowski@poczta.onet.pl
September 23 Toszek Poland	2nd Toszek Cup. F1E. World Cup event. Entry fees: €30. Contact: Roman Sowa, Ul. Gliwicka 6, 44160 Rudziniec, Poland, tel: +48 32 230 38 43, email: qbit@digi.pl
September 29 Tass Hungary	Arva Janos Memorijal Contest. F1A, F1B, F1C. Entry: €20. Contact: Janos Arva, Scherer Ferenc str 7, 5700 Gyula, Hungary, tel: +36 66 464 160, email: miklost@hu.inter.net
September 29 Bosanski Petrovac Bosnia and Herzegovina	Una Cup. F1A, F1B, F1C, F1H. World Cup event. Entry fees: €25. Contact: Haris Hadzihajdarevic, Skendera Kulenovica 21, Bihac, Bosnia and Herzegovina, tel: +387 33 220 387 or +387 61 790 183, fax: +387 37 333 652, email: hari_h@bih.net.tf, web: http://www.leewave.net.tf
September 29 Tourtenay France	1st Poitou Charentes. F1E. World Cup event. Entry fees: €30. Contact: André Trachez, 20, rue du Grand Port, 79000 Niort, France, tel: +33 6 08 57 35 50, email: andre.trachez@laposte.net
September 30 Tourtenay France	Poitou. F1E. World Cup event. Entry fees: €30. Contact: Michel Reverault, Poitou 2007 F1E, BP 36, 79101 Thouars Cedex, France, tel: +33 5 49 68 01 55, fax: +33 5 49 96 13 37, email: poitou-aero@noos.fr, web: http://www.poitou-aero.com
October 6 to 7 Martin Slovak Republic	Martin Cup. F1E. Entry fees: €30. Contact: Jaroslav Kostan, Zaturcianska 47, 036 01 Martin, Slovak Republic, tel: +420 907 217 539, email: jaro@kostanmodel.sk
October 13 to 14 Lost Hills, California USA	Sierra Cup. F1A, F1B, F1C, F1P. World Cup event. Entry fees: US$45 per event. Contact: Mike McKeever, 4252 Mockingbird St, Fair Oaks, CA, 95628-6355, USA, tel: +1 916 967 84 74, email: vamckeever@aol.com
October 13 to 14 Ankara, Turkey	Anatolian Free Flight Cup. F1A, F1B. World Cup event.
October 19 to 21 Novo Mesto, Sent Jernej Slovenia	Krka Cup. F1A, F1B, F1C. World Cup event. Entry fees: €30. Contact: Damjan Zulic, Nahtigalova 5, 8000 Novo Mesto, Slovenia, tel: +386 41 610 737, fax: +386 7 33 75 701 or +386 7 33 78 444, email: damian@insert.si, web: www.freeweb.siol.net/zulicbor/krkacup
October 27 to 28 Mühlenthurnen Switzerland	Eurofly. F1A, F1B, F1C, F1G. World Cup event. Entry fees: €35. Contact: Walter Eggimann, Seftigenstrasse 125, 3123 Belp, Switzerland, tel: +41 31 819 17 84, email: eurofly@belponline.ch, web: http://www.freiflug.ch

WHERE THERE IS A WILL …

From Klaus Salzer

Prof. Dr. Horst Wagner won 6th place at the Austrian national championships 2006! What is so special about this? On the way back from the World Championships in Argentina 2005 Horst had an accident which nearly broke his neck. Nearly totally immobilized from the neck downwards a healing process had to start, which was never sure to re-enable Horst to move, even while head and mind were not affected.

But only a few month after his return he mentioned that he could – even if not in complete control of his hands, and sitting in a wheelchair – assemble his model airplane, and only hooking up the timer was not yet possible. And as soon as he could move a couple of steps with crutches he went back to work at Leoben University.

His hands, however, still refused to cooperate fully. Still, stopping to fly his model airplanes never came to his mind.

First tries were discouraging: Instead of throwing the plane like a spear after some steps he could only do an overarm throw from the wheelchair, and found out that his hand would not correctly follow the command "release plane".

No reason for quitting. The planes were modified from DPR to IPR and for a different release lever to allow a lighter grip which was easier to release. A broomstick was used simulating the fuselage and thrown through the garden.

In Judenburg on October 21 2006 he flew the 7 rounds of the national championships, sitting in his wheelchair, and supported by his family and his modelling friends. Preparing for the launch needs special help: crutches and rubber winding do not really mix well – a helper was needed to move the wheelchair appropriate to the turns put in.

Even if during the first flights the planes were not fully trimmed to the new launch technique, and thus Horst's flights were below his usual performance, it got better, and especially the last flight was a beautiful Max!

Standing ovations greeted Horst when he finally walked in on his crutches at the prizegiving!

You need help even when assembling a plane when you sit in a wheelchair.

While winding the rubber the distance to the plane must be adjusted continuously by the helper.

F1E FRENCH NATIONAL CHAMPIONSHIP, TOURTENAY, OCT 27-28

By Pierre Chaussebourg

Last weekend we had our first F1E National Championship, Tourtenay.

Saturday, we had to wait until 12h30 to see the fog going away, and then we got a nice afternoon, sunny, warm, with a very light wind. We flew the first round on the south east slope, with a front wind, and asked for a two minutes max which was easy and that everybody made. Then, the wind turned to south west and we moved to the traditional place. We put the max to three minutes, but only two competitors made it. Then, the wind stopped completely and we flew two more rounds with a three minutes max, but nobody could make it. We had a nice dinner in the Pigeonnier, with soup and "pot au feu", and the usual good wine from Mr Pichot!

On the Sunday, we waited until noon because of the fog, and flew from 01h00 to 02h00 for a three minutes max that several competitors made with the help of very tricky thermals. Jean-Luc Drapeau took that opportunity to make a long flight (DT at 4'30, still high!) which gave him the first place and the first title of "Champion de France F1E"!

We had a nice contest, much better than at the beginning of the month, and I hope that next year we'll have that kind of weather and more people for our World cup contests.

F1E 18 flew

1	J L Drapeau	476.7
2	A Roux	464.2
3	P Chaussebourg	460.8
4	A Trachez	451.8
5	S Trachez	445.0
6	J M Chabot	428.3

Junior F1E 3 flew

1	Alex. Trachez	425.4
2	Aurelie Trachez	385.2
3	G Vaucelles	298.0

CORRESPONDENCE

FAI rules and the like, by John O'Donnell

The Russian rule change proposals, and the subsequent meeting at Odessa to discuss them, have produced predictable opposition – as reported in both FFN and SEN.

First of all it needs to be appreciated that people fly an event because they like it as it is – and hence will oppose any suggestion that will significantly change the event and/or devalue their models, equipment, or expertise.

The notion that rule proposals should only be voted on by those who fly the event is superficially plausible, but effectively means that the rules will remain "set in stone".

The proposals in question are little more than mere tinkering with the rules. The UK proposal to restrict thermal detection devices is little better. These ideas are perceived solutions, which are then debated on the basis of their appeal and/or possible effect.

This is all "cart before horse" – as it is more meaningful to start with the problem, rather than a suggested answer.

It is appropriate to first consider just what the contests are intended to determine – which is the "best" model or who is the "best" flier – or a mix of the two ?"

We should realise that "the best model" concept is hardly applicable any more, especially when a number of competitors could have brought nearly identical models – maybe from the same supplier. Are small differences in the models' performance still significant ? Are they anything to do with the customer ?

FAI competition free flight is in a difficult situation. The models have far too much performance, and their operators are too good at air-picking, for the facilities (flying sites) that are generally available – unless it is unusually calm.

Unfortunately there is no simple, and acceptable, solution to this situation. Suggestions intended to reduce performance have produced immediate and vociferous complaints. This is hardly surprising, even though the proposed changes are comparatively minor. To cut performance sufficiently a complete rewrite of the specifications is logically necessary. Minor revisions are not going to produce a two-minute model – which is about what we need (rather than want)

We have got good at "picking lift." and thermal flying in general. Such knowledge will not disappear even if restrictions are imposed on the aids allowed. Some people are sensitive to warmth and draughts and hence can "feel" lift. Experience is also valuable – and harder to buy than electronics. Others will merely watch everyone else and wait to be shown a thermal. "Tactical flying" is what it was called.

Flying sites are harder to find and obtain, even for those willing to travel. Big sites are scarcer than small ones. A flight of several minutes in anything like wind will travel a long way. The implications are obvious and unappealing. The participants

are getting old(er) and fewer in number. The survivors are reluctant to accept arduous conditions. Most would settle for an easy life – meaning pleasant calm weather, a large field with no obstacles, trouble-free retrieving, high scores, and the model back in one piece. Competition success is secondary to many.

Attention has therefore centred on attempting to manipulate the weather by arranging flying when the wind strength is (hopefully) low. Measures suggested include flying early or late in the day, applying a wind-speed limit, postponements to the next day (or whenever). Some implications seem to have been overlooked. The weather may not be cooperative, necessitating a curtailed contest or finishing on another day. Whilst the latter has obvious drawbacks, the former may be worse in that some competitors may lobby the CD to either stop or continue - as suits them personally. Those "on top" will wish to stay there, and a premature finish may ensure this. Others still in contention may want to fly regardless of the conditions. It would be naive to suppose that this scenario will never happen ! Pity the poor CD. He will need to be hard-of-hearing and have a very thick skin.

If the flier is considered to be all-important (rather than his model) then adverse conditions should separate "the men from the boys" more convincingly than the alternative. I am not saying that it is pleasant to fly in bad weather. I am saying that it gives better discrimination

It might be instructive to review what we actually do in the UK. Here we have a relatively healthy domestic scene – relative that is to interest in the FAI contests that are also held. Many of the FAI specialists really are "Continental Gadabouts" – some flying abroad more than at home.

We live on a wet and windy island - so our domestic contests usually have a max set to suit the field, rather than the potential of the models The contests have a starting time and a preset finish. Rounds are rarely employed, and three flights are usual. Predictably max-outs are common, and sometimes large. Flyoffs are a single unlimited flight, held in a quarter-hour "slot" after the close of the preliminary flights. It is normal (and accepted) that winning flights will outfly the site – often by considerable distances.

Yes, the flyoffs can be determined by wind, visibility, timer's ability, downwind obstacles, and other factors. Nevertheless it works for us. Whilst the purists might argue that a single flyoff is unsatisfactory it does have considerable advantages. Everyone knows what to expect, and more-or-less when. The contest can and will be concluded that day. The CD has little to decide except for scheduling the sequence of flyoffs for several events. Such flyoffs are real contests -often strongly contested with participants being prepared to do what they consider necessary in the circumstances. The flyoff may not be what performance fliers like, but it is still a very real contest. Certainly it puts emphasis on the flier doing the right things at the right time,

Adopting FAI procedures "across the board" would have serious consequences over here. Possible postponements, even cancellations, would be expected if the weather forecast were bad. Who would cross the country in such circumstances ? Who wants to witness "the opposition" pressurising the CD to do what they want ?

We still suffer from dwindling numbers – another problem with no apparent solution –as the participants inevitably become older and tired. Few want any changes. "Enjoy it while we can for as long as it lasts" seems to be the philosophy. This is depressing – but may well be realistic.

Regrettably I cannot suggest a simple answer to the problems besetting Free Flight at FAI (or other) levels - or at least not one acceptable to those presently involved. Who would welcome changes sufficiently drastic to halve present-day performance ? Who would dare propose them ?

Ref the item "Thermal Detection" on page 129 of FFn November 2006. From David Limbert

Browsing through old NFFS Digests I came across the letter below, published in March 1994.

How appropriate! Probably now too late for such reactionary ideas to be seriously considered for adoption - but just imagine how F1C, etc, could have developed over the last 12 years if these ideas had been adopted!

I believe that F1C, particularly, would now be a flourishing, popular discipline, certainly in this country if not worldwide, but I speak as a "non-gadget" power flyer.

Limit Functions

I thought you might like to hear my solution to the excess performance of the FAI classes. Timer or otherwise actuated functions should be severely limited in the following ways:

F1A - DT & auto rudder

F1B - DT & propeller stop

F1C - DT & engine shut off

No other programmed functions would be permitted. This approach would minimise the obsolescence of current models, cut costs, encourage clever design solutions, and reduce performance. All thermal detection devices should also be banned.

These steps would cut performance and make entry to the sport easier.

Tom loerger

NEWS FROM BMFA FF TECH COMMITTEE

2007 Committee

A number of the 2006 posts on the committee were due for re-election in 2007. Voting for these has taken place, and following the AGM confirmed. The result is that the committee for 2007 has the same members as for 2006 – Mike Woodhouse (Chairman), Chris Strachan, John Carter, Trevor Grey, Dave Clarkson and Steve Philpott.

Free Flight Change 2007

The 2007 rule book has now been finalised, and has gone for printing, it will be available early in the new year. Make sure that you order your copy from the BMFA office so that you're up to date on the precise detail of the changes. In the meantime if you want to check the changes the full wording is currently available on the FFTC web site: www.vengi.demon.co.uk/ .

There is an addition to the calendar of a 6th (reserve) date for the F1E meetings. However, the date given in the previous issue of this news, September 30th, is incorrect. The date is now October 21st. Also in the previous issue there was a mention of the team selection process being reconsidered and a request for views. We had suggested a change to a single meeting with a reserve date. A number of comments have now been received, a few positive but mostly negative. As a result the proposed change will not take place and the originally published number of meetings and dates will stand. The committee will fully consider the suggestions received and make proposals for any changes for the 2008 season in due course.

Following an amount of confusion on the possibilities for 'interpretation' of the specifications for the BMFA (Open) Power and Glider Classes, there is now in the new rule book a clarifying 'explanation' after each of these specifications. Though the wording of the specifications are clear, these explanations are intended to help CDs make clear decisions on any disputes.

Results Coordinator

Ian Davitt has now resigned from this post after two years of providing an excellent service. His place has now been filled by Mike Evatt. All area comp secretaries should now send their Area Centralised contest returns to Mike at 6 Armley Close, Long Buckby, Northampton, NN6 7YG, e-mail mikeevatt@hotmail.com . Please note that CDs of Centralised meetings should also send Mike a copy of the results as soon as possible after the meeting.

International Teams

Following the completion of this years team selection process teams for the 2007 World Championships will be:

F1A Glider – Chris Edge, John Carter, Bill Colledge; Reserve Anthony Ball.

F1B Rubber – Mike Woolner, Mike Woodhouse, Russell Peers; Reserve Brian Martin.

F1C Power – Neil Allen, Stafford Screen; Reserve/3rd place yet to be resolved between Peter Watson and Alan Jack.

The team manager will be Mike Woodhouse and assistant team manager Bob Cheesley. If any supporters want to join the official trip, please contact Mike as soon as possible.

There is no team for the Junior European Championships.

Contest Entry Fees

Three is a change to the pricing structure for 2007. Centralised meetings will cost £5 for the first event and £1 for subsequent events (2006 was £5 and £3). For Area Centralised meetings there will be a single fee of £3 covering ***all*** events, that is ***one*** fee for as many events as you care to enter (2006 was £3 ***per*** event). Please note though that you must still 'enter' and obtain a flight card for each event before flying. Team Selection meetings are now £15 per meeting (2006 was £10).

Senior Championship

A reminder: There are no changes to the basic format for 2007 – a maximum of two events from each meeting to count. However, Team Selection meetings no longer qualify for points.

RC DT

Those with an interest in using Radio Control DT mechanisms will have noticed that the 2007 rule changes originally permitted use of these for FAI class events. This was in an effort to keep in line with the overall FAI rules where possible. Having since examined the specifications of equipment used for this function it became apparent that none of the equipment available was legally useable in the UK. Such equipment did not carry the legally required 'Type Approval'. As there is no immediate way round this problem the rule change permitting its use has now been cancelled. This doesn't mean that such use is being ruled out in the future, just that it is not permitted until the problems can be resolved.

Distribution

If you normally receive this 'news' via e-mail but are having problems please make sure your correct e-mail address is logged with the distributor: e-mail to Trevorgrey@AOL.com .

BOOKS 'N' BROOKLANDS

By Michael Warren

As the present-giving (and present-receiving) season approaches, a couple of thoughts for those that are interested in full-size aircraft as well as models…

Penguin Books have recently re-published a facsimile of R.A Saville-Sneath's 1941 title 'Aircraft Recognition'. It's fascinating, with silhouette three-views of dozens of aircraft, many now unfamiliar, plus hints on how to identify them, including by engine noise. It occurs to me that the book dealt with aircraft the way field guides deal with birds, detailing the key points of identification, at a time when aircraft identification really mattered. An interesting sidelight on wartime and great value for £5.99.

It's difficult to believe that we need any more books on the Spitfire but Jonathan Glancey's recently-published 'Spitfire: The Biography' has had excellent reviews. Glancey is primarily an architectural writer but is also a pilot. The book is enormously varied, exploring the aircraft's painful gestation, its place in the war and its current role, not least as a symbol, rightly or wrongly, of our finest hour. There's technical stuff here but also anecdotes and insights into the designers, the politicians who so often got in the way, and of course the pilots. Whether or not full-sized aircraft press your buttons, surely the Spitfire is indeed, as somebody said, aerial totty.

Finally, some of you know Mike Beach, aircraft builder and restorer, model builder, glider pilot and a great deal more. (And also, by coincidence, a near-neighbour of mine.) I mention him because several of the historic aircraft which he has built or restored over the years are now on display at Brooklands, near Weybridge in Surrey. They include a Slingsby T15 Gull III, a Manuel Willow Wren 162, a replica Bleriot XI, a Flying Flea, a Kronfeld Drone De Luxe, an Abott-Baines Scud and, the oldest of the designs, a Roe I Biplane. It's hoped that over the next 12 months or thereabouts, some of the models that Mike has restored over the years, including examples of the brilliantly-engineered flying scale models of Rupert Moore, will also be put on display. More on this in due course.

And for those that don't know Brooklands, it's well worth a visit. The collections of racing cars and aircraft aren't large but they are of great interest, and the site's place in the history of British motor sport and aviation is extraordinary. Large sections of the steeply banked race track, built in 1907 and thus the world's first purpose-built circuit, are still there and are massively impressive.

FOUND

A folding chair was left at Barkston at the third team trials. The owner is invited to contact Peter Watson on 01926 421028.

UK COMPETITION NEWS

SPRING GALA at Odiham will be on May 20. This is subject to confirmation and further details will follow early in 2007.

THERMIKSENSE

Correction to the item last month: fax number has changed to +49 32 / 2210 314 5

LORD THOMSON

From Peter Allnutt

On June 12th aeromodelling lost a true friend and enthusiast with the untimely passing of Lord Thomson of Lord Thomson of Fleet at the age of 82.

His interest in model aviation was kindled early in his youth in Ontario, Canada, where many avid young model flyers including Roy Nelder and John Dilly were among his acquaintances

. Such was their friendship that at age 16 Ken travelled with them to New Jersey for the 1939 Free Flight World Championships. The journey was made by car which carried most of the team, their models and luggage! Ken talked many times of this thrill of a lifetime trip, especially watching Korda's winning flight and Canadian Fred Bower's second place in virtually the same thermal.

Ken's family business kept him from many of his interests (which included aeromodelling) but he was always up to date on what was happening. This was really apparent when he heard of the plans for a World Cup for free flight models in the FAI classes (F1A, F1B, F1C). Realising the need for top quality trophies for such a prestigious event he had Birk's (the renowned Canadian jewellers) make three impressive silver cups. These were formally presented to the Federation Aeronautique Internationale in Paris in 1989 and were to be competed for annually.

Ken's art collection is renowned worldwide but perhaps the things that gave him so much pleasure were his Korda Wakefield, Roy Nelder's Moffet and Fred Bowers second place from 1939.

To all who knew him he was just Ken Thomson, a true gentleman who will be missed. Our sympathies are extended to his wife Marilyn and the family on their great loss.

WORLD CUP 2006

The total number of competitions in the 2006 Free Flight World Cup was the greatest ever. The numbers in F1A F1B and F1C were the same as the previous record year of 2004 but with this was combined further expansion of F1E to a record 17 events. On the other hand the total number of participants was 3634 which represented a very slight drop from last year.

F1A was won by Roland Koglot from Slovenia, a country that has not previously had a World Cup winner. Roland won with victories in three competitions, beating the two firsts and a second place by each of Attila Szekelyhidi (Hungary) and Robert Wallace (New Zealand) in second and third places.

F1A Junior was won by Gabriela Domokova of Slovakia, also the 2006 Junior World Champion in F1A. Second place went to Janis Zarins of Latvia and third place to a familiar name in World Cup results Findahl, this time Per's young boy Daniel. All three had achieved three wins, the places decided on bonus points and also, in Daniel's case, by splitting points for a tied first place.

Bernd Silz (Germany) won the F1B World Cup for the third time. Bonus points determined the placing of the top four and then best fourth event was needed to split Ivan Kolic and Vladislav Urban into second and third places.

In parallel with F1A, F1C also saw a victory for Slovenia with Damjan Zulic beating Reinhard Truppe (Austria) and Roy Summersby (Australia) on bonus points. There was some dedicated flying from these flyers, Truppe scoring points in a record 15 F1C competitions while Zulic also placed 21st in the F1A World Cup.

At the end of the season there was a long wait for results from the Von Hafe competition in Portugal. After repeated prompting I was told that the event had been cancelled, not at all satisfactory particularly in view of the late submission of the event to the calendar in the first place!

	F1A	F1A-J	F1B	F1C	F1E	F1E-J
Number of contests	41	32	41	38	17	16
Total no entries	1533	275	845	384	532	114
Total number of competitors scoring World Cup points	340	82	204	102	107	28

Contests included in the F1A F1B F1C results

			F1A	F1AJ	F1B	F1C
MM	Maxmen International	USA	47	6	44	28
PL	Philippe Lepage	FRA	0	0	24	0
BC	Bear Cup	FIN	54	12	19	5
HL	Holiday on Ice	NOR	50	3	35	5
ME	Matfors ME	SWE	20	2	13	0
IC	Istanbul FF Cup	TUR	10	1	7	0
AC	Australian FF Champs	AUS	18	0	27	4
SC	Southern Cross Cup	AUS	17	0	21	2
LC	City Cup of Lucenec	SVK	43	10	9	11
KU	Kotuku Cup	NZL	17	0	15	5
OM	Omarama Cup	NZL	17	0	13	7
ES	Estonian FF Cup	EST	43	14	18	11
BL	Baltic Cup	LTU	38	14	15	6
SH	Stonehenge Cup	GBR	32	2	27	5
SM	23rd Srem Cup	SCG	25	2	12	10
VS	Open International	CZE	66	13	30	11
SF	Sofia Cup	BUL	16	0	11	7
KH	Kharkiv Cup	UKR	22	5	14	13
SE	Swedish Cup	SWE	46	5	24	11
DZ	Djordje Zigic	SCG	8	0	7	5
DK	Nordic Cup of Denmark	DEN	38	4	19	4
VK	Mem. Vilima Kmocha	CRO	19	7	8	13
RU	Open Champs Russia	RUS	29	5	26	12
AN	Antonov Cup	UKR	29	5	17	16
VJ	Vörös Jenö Memorial	HUN	51	14	11	8
NC	Novohrad Cup	SVK	37	10	7	7
BS	Black Sea Cup Belarus	BLR	100	12	59	30
PT	Poitou	FRA	82	9	36	16
SW	Summer Cup	POL	24	6	11	10
MK	Mostar Kup	BIH	9	1	10	2
SZ	Salzland Cup	GER	118	40	66	15
EF	37th Eifel Pokal	GER	81	17	46	10
CC	Canada Cup	CAN	7	0	0	6
SA	Siscia Cup	CRO	35	8	11	9
AV	Aviaprom Cup	RUS	35	3	24	15
FV	2nd Favli World Cup	ITA	37	2	11	11
BU	Bulgaria Cup	BUL	10	0	9	6
PZ	21st Puszta Cup	HUN	49	13	13	12
AL	Anatolian FF Cup	TUR	11	0	4	0
AR	Arava Open	ISR	64	22	21	5
SR	30th Sierra Cup	USA	30	1	29	19
KC	Krka Cup	SLO	49	7	22	12

World Cup 2006 F1A-Junior

1	Gabriela Domokova	SVK	153	VJ-1	LC-1	SM-1	VK-3	SZ-9	PZ-3										
2	Janis Zarins	LAT	152	PZ-1	SE-1	FV-1	DK-1	HL-1	BL-2	KC-3	BC-4	SZ-8							
3	Daniel Findahl	SWE	145	ME-1	SH-1	HL-1	VJ-4									9	Max Herwig	GER	98
4	Anton Zaseka	RUS	126	KH-1	AV-1	BS-4										10	Olexsandr Sychev	UKR	92
5	Mihaly Eros	HUN	109	SZ-2	LC-2	PZ-5	NC-5									11	Martin Bohus	SVK	89
6	Richard Kulcsar	HUN	108	NC-1	VJ-3	KC-4										12	Tamas Horvath	HUN	88
7	Willi Herwig	GER	106	ES-1	BL-3	EF-5										13	Jozef Rogovsky	SVK	82
8	Logan Tetrick	USA	101	MM-1	SR-1											14	Anton Zhelobaev	RUS	82

World Cup 2006 F1A

1	Roland Koglot	SLO	153	LC-1	SM-1	SF-1	VK-1	AV-3	KC-6	HL-9	PZ-20	SA-10						
2	Attila Szekelyhidi	HUN	144	VJ-1	DZ-1	KC-2	NC-1	SA-8	FV-18	PZ-7								
3	Robert Wallace	NZL	140	OM-1	KU-1	SC-2	AC-7											
4	Henning Nyhegn	DEN	131	SC-1	SR-2	OM-2	AN-4	SZ-7										
5	Thomas Weimer	GER	127	BL-1	VJ-2	NC-1	SZ-4	DK-4	HL-7	SA-7	SE-19	ES-22						
6	Gerhard Aringer	AUT	126	PT-2	DK-2	SM-2	PZ-3	KC-9	EF-15	SE-14								
7	Rudolf Holzleitner	AUT	126	SA-1	EF-2	KC-3	PZ-9	VS-23	VJ-16	VK-2			29	Helmut Fuss	AUT	83		
8	Yuriy Titov	RUS	124	BS-1	KC-1	AV-8	RU-13						30	K Kulmakko	FIN	83		
9	Janis Zarins (J)	LAT	120	SE-1	FV-2	PZ-4	DK-7	BL-12	SZ-17				31	Chris Lenartowicz	CAN	82		
10	Matti Lihtamo	FIN	120	ES-1	BL-2	HL-4	BC-8	PZ-24					32	Craig King	NZL	78		
11	Milos Bordjoski	SCG	117	PZ-1	BU-2	DZ-4	KC-23	SM-11	SF-4	VJ-24			33	Anton van Eldik	NED	77		
12	Robert Lesko	CRO	113	MK-1	SA-2	HL-5	LC-10	KC-10										
13	Per Findahl	SWE	112	BC-1	NC-1	ES-4	SZ-5	BS-10	BL-7	VJ-9	SH-8	HL-11	DK-12	SE-13				
14	Maarten van Dijk	NED	107	EF-1	SE-3	DK-5	VS-8											
15	Vasily Bezchasny	UKR	102	KH-1	SR-1								34	Mico Tica	SCG	73		
16	Phil Mitchell	AUS	101	AC-1	OM-3	AN-5	SC-5	KU-6					35	Andrew Barron	USA	72		
17	Robert Hellgren	SWE	101	DK-1	BC-3	SE-8	HL-10						36	Alan Jack	GBR	71		
18	Radoje Blagojevic	SCG	101	SF-2	MK-2	LC-5	VJ-11	KC-12	SA-16	BU-4			37	Dirk Halbmeier	GER	71		
19	Victor Stamov	UKR	100	IC-1	AN-3	HL-8	MM-10	BS-18	SR-15	KH-7			38	V Lazarevich	UKR	71		
20	Ferenc Kerner	HUN	99	PZ-2	SM-3	SA-4	KC-5	SZ-12	LC-8	NC-15	VJ-3		39	John Carter	GBR	70		
21	Damjan Zulic	SLO	97	FV-1	SF-3	KC-10	VK-10						40	Mikael Holmbom	SWE	70		
22	Nikolay Nikolov	AUS	96	BU-1	DZ-3	AC-9							41	Mikhail Kochkarev	RUS	68		
23	Brian van Nest	USA	95	AC-2	KU-3	SC-4	MM-8	SR-7	HL-20				42	Goran Trogen	SWE	66		
24	Ivan Bezak	SVK	94	VS-1	VJ-5	NC-7	LC-17						43	Max Herwig	GER	63		
25	Igor Yablonovsky	UKR	93	AL-1	BS-6	KH-5	AN-7						44	Jari Valo	FIN	62		
26	Mikhail Kosonozkhin	RUS	88	SH-1	KC-8	ME-7	FV-14	HL-14					45	Timo Pajunen	FIN	62		
27	Ivo Kreetz	NED	86	EF-3	SE-4	FV-4	VS-6	PT-12	DK-16				46	Mike Cook	GBR	61		
28	Andrey Naloev	RUS	85	RU-1	BS-7	AN-13	SZ-19	AV-9					47	Frederic Aberlenc	FRA	60		

World Cup 2006 F1B

1	Bernd Silz	GER	158	HL-1	PT-1	VS-1	KC-1	SZ-2	BS-2	EF-5	PL-1		23	Blake Jensen	USA	86		
2	Ivan Kolic	SCG	152	SF-1	VJ-1	DZ-1	VS-2	LC-4	SM-3				24	Wim Feijth	NED	84		
3	Vladislav Urban	CZE	152	SA-1	PZ-1	LC-1	VS-4						25	Bror Eimar	SWE	83		
4	Radoje Blagojevic	SCG	151	SM-1	MK-1	BU-1	SA-4	VJ-5	SF-4				26	Paul Squires	NZL	82		
5	Anselmo Zeri	NED	146	OM-1	DK-1	EF-2	PT-3	SE-6	PL-3	SZ-17			27	Roger Morrell	USA	81		
6	Michael Seifert	GER	133	MM-1	SC-1	AC-4	EF-6	SR-8	SH-12				28	Michael Dahlin	SWE	80		
7	Michael Woolner	GBR	131	SH-1	BL-1	HL-4	BS-12						29	Leigh Morgan	AUS	78		
8	Igor Vivchar	UKR	125	HL-2	SM-2	KH-2	AV-3	SR-6	BS-14	EF-16			30	Peter Sikora	AUS	73		
9	Victor Rosonoks	LAT	123	FV-1	DK-2	SZ-4	BC-3	SE-4	KC-9	HL-12	BS-24		31	Valery Afanasjev	RUS	71		
10	Vladimir Vivchar	UKR	123	SH-2	AN-2	SW-2	BS-5	HL-7	EF-8	PZ-6			32	Peter Windisch	GER	70		
11	Henk van Hoorn	NED	120	SE-1	SZ-3	SH-3	EF-19						33	S Molchanov	UKR	70		
12	Ismet Yurtseven	TUR	116	AL-1	BU-2	DK-4	SE-9	SF-2					34	Janne Isotalo	FIN	70		
13	Yrjo Waltonen	FIN	114	BC-1	SR-3	ES-3	ME-3	PT-9	EF-12	DK-10	MM-13		35	David Thorsen	SWE	70		
14	Nenad Banjac	CRO	108	VK-1	MK-2	KC-8							36	Bosko Lacimic	SCG	70		
15	Rolandas Mackus	LTU	98	LC-2	SE-3	BL-4	BC-5						37	Valentin Savov	BUL	70		
16	Vinko Tomljanovic	CRO	97	SA-2	PZ-3	KC-4	VK-4						38	William Jones	AUS	68		
17	Alexander Andriukov	USA	96	EF-1	HL-6	MM-7	SR-7						39	Magnus Soderling	SWE	68		
18	Vlad. Romanchenko	UKR	96	NC-2	BL-3	VJ-4	PZ-5						40	Gerard Willemsen	NED	66		
19	Oleg Kulakovsky	UKR	95	AN-1	MM-5	EF-7	KH-7						41	H Meusburger	AUT	66		
20	Terry Bond	AUS	94	AC-1	KU-5	SC-5	OM-6						42	P Monninghoff	GER	63		
21	Russell Peers	GBR	93	ME-2	BC-4	ES-4	PL-6	EF-14					43	Hadar Golan (J)	ISR	63		
22	Eugeniusz Cofalik	POL	92	SW-1	PZ-2								44	Klaus Salzer	AUT	62		

World Cup 2006 F1C

1	Damjan Zulic	SLO	158	MM-1	VK-1	SF-1	DZ-2	KC-4	SM-4	SA-1			17	Franco Gradi	ITA	94		
2	Reinhard Truppe	AUT	155	VS-1	SZ-1	NC-1	PZ-2	SM-2	AV-3	FV-3	KC-3		18	Artem Babenko	UKR	93		
				SA-4	MM-7	BS-9	VK-5	VJ-3	LC-3	EF-4			19	Gerhard Aringer	AUT	83		
3	Roy Summersby	AUS	150	KU-1	AC-1	SC-1	OM-3						20	Eugene Verbitsky	UKR	79		
4	Juri Roots	EST	144	SE-1	BL-1	ES-2	HL-2	DK-2	BC-2				21	Victor Semenyaga	UKR	78		
5	Gabor Zsengeller	HUN	144	LC-1	SM-1	SA-1	SZ-6						22	Mario Rocca	ITA	78		
6	Janos Szecsenyi	HUN	135	PZ-1	KC-2	LC-2	NC-3						23	Sergey Katiba	UKR	76		
7	Laszlo Patocs	HUN	131	DZ-1	MK-1	VS-3	PZ-3	VJ-4					24	Pieter De Boer	NED	73		
8	John Cuthbert	GBR	131	DK-1	SE-2	SH-2	ES-6						25	Dario Jermol	CRO	73		
9	Claus-Peter Wachtler	GER	124	SZ-2	VJ-2	VS-2							26	Giorgio Venuti	ITA	72		
10	Volodymyr Sychov	UKR	121	HL-1	BL-2	ES-3	EF-3	PZ-4	BS-6				27	Peter Watson	GBR	68		
11	Maris Voits	LAT	113	ES-1	SE-3	BL-3	BS-8						28	Raimond Naaber	EST	68		
12	Mike Roberts	USA	113	OM-1	KU-2	SR-5							29	V Makhovykh	RUS	67		
13	Balasz Bauer	HUN	112	VJ-1	NC-2	VK-6							30	Yuriy Opevalov	RUS	64		
14	Levente Magyari	HUN	98	SA-1	SM-3	LC-4	PZ-6	NC-4	DZ-3				31	Yury Perchuk	RUS	63		
15	Igor Andriushenko	UKR	97	BS-1	KH-2	AN-6							32	Kaarle Kuukka	FIN	60		
16	Edward Carroll	USA	94	OM-2	KU-3	MM-6	SR-7						33	Matt Gewain	USA	54		