



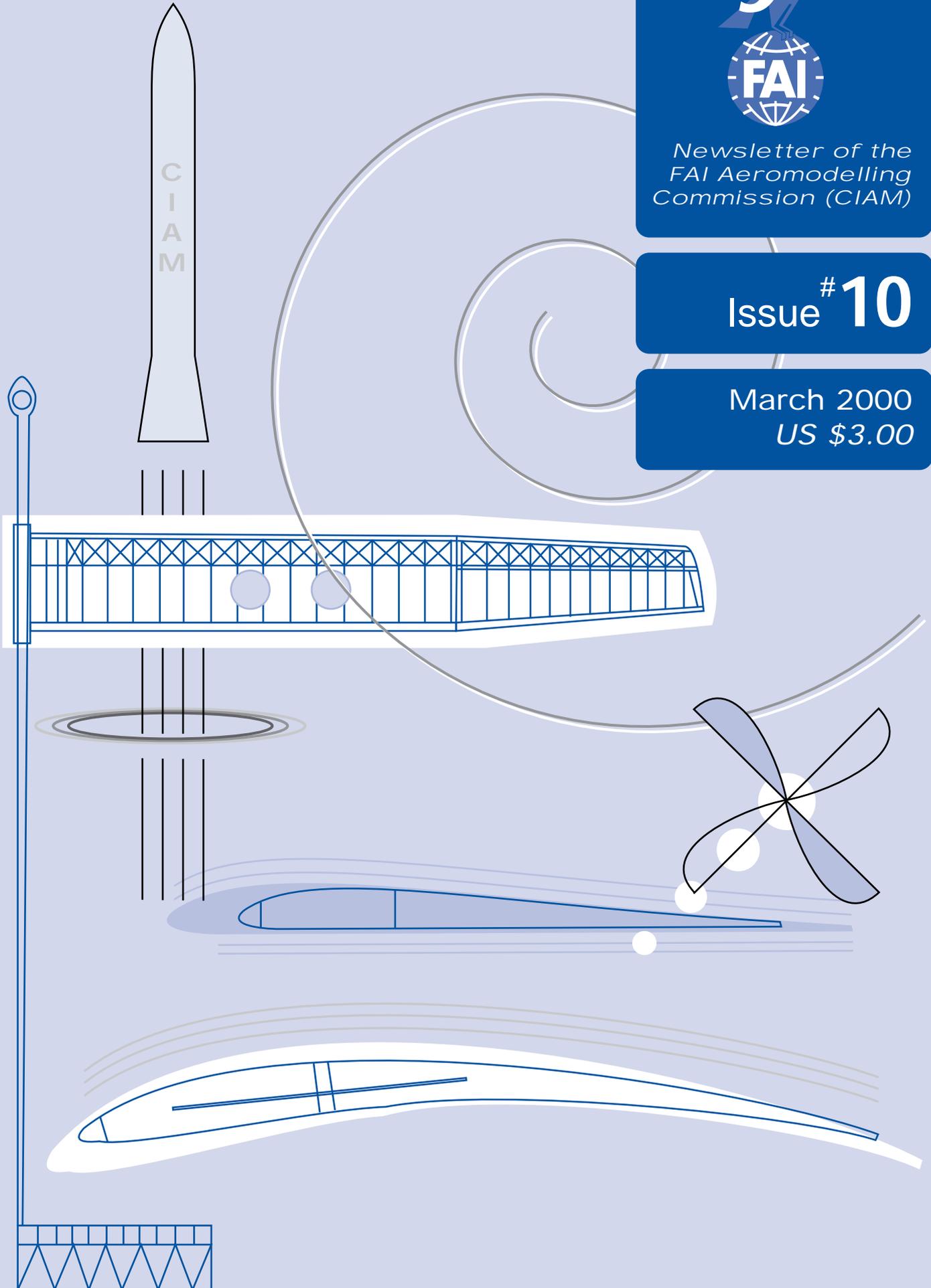
CIAM *Flyer*



Newsletter of the
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Commission (CIAM)

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Editorial

Issue 10! As 'they' say time flies when you are having fun. It really is exciting reading all about International Aeromodelling. So much seems to be happening around the world and as you will read, more is planned for the new millennium.



Many thanks go to those who contributed to this issue. As usual it's your input that keeps things moving and advertises your discipline. Many of our readers look forward to hearing about Championship events and I would encourage you to report your activities as early as possible to insure inclusion in the Flyer.

Discussion is currently going on in the Bureau regarding the use of a web site. Whether the Internet is the vehicle of the future for our organization remains to be debated. Your input of course will be valuable in any discussion about the Flyer. So we look forward to hearing from you on this subject.

Jack

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President's Corner

QUO VADIS, CIAM?

International aeromodelling, as governed and supervised by CIAM, has enjoyed steady success over many years now. World and Continental Championships are organised globally in a growing number of categories. We have active members in some 80 countries. World Cups are staged in five categories with more to come, and the FAI International Sporting Calendar has logged a new record of aeromodelling contests every year. This development has certainly been very positive, something the aeromodelling community can be justly proud of.

We have also seen many new categories and classes of models, specifications, contest rules and above all a never ending stream of amendments to existing regulations.

The pace of this flood of rules and changes has unfortunately lead to a situation which we no longer have adequate control of. It is an embarrassing fact that we today cannot present a Sporting Code entirely up to date, neither do we have an

up to date amendment list that with certainty, is complete and correct.

For newcomers to our sport this can be very confusing, and can take away a great deal of the attractiveness of our activities. Even worse, in spite of our efforts the rules have not always offered the stability that developing aeromodelling individuals, groups, and indeed nations require to make good progress.

While catering for the elite we must also remember the young, the learners, the not so expert. We must create an environment that attracts them, because they are our future.

The 2000 Plenary meeting will address these questions, with the aim of creating decisions that safeguard our achievements, and give us the basis for further growth. This calls for both new ideas, the right action and a reasonable amount of self-discipline in our production of rules and regulations. I believe we can achieve this, and together build a still larger international aeromodelling community, in which we will enjoy the number 1 hobby-sport of the planet even more.

I wish you all a Happy New Millennium!

Sandy Pimenoff,
CIAM President

NOTE

To CIAM delegates, modelling editors, columnists, record holders, modelling instructors and other modellers.

CIAM Flyer is compiled from **YOUR** contributions.
Closing date for the next issue is January 14, 2001

Your help will be greatly appreciated.



*FAI
Aero-
Modelling
Gold Medal
1999
Tony Aarts*

Peter Keim

Ton Aarts (Tony abroad) must be one of the best known aeromodelling officials in the CIAM world. After years of being CIAM Technical Secretary, Tony travelled all over the world and met

many people during many occasions. What happened before this period was that most readers did not know him. Why did the Netherlands Aeroclub nominate him for this award? Because now that Tony is so well known, in all probability, most of the CIAM delegates would vote for him!

Born in 1924 Tony started aeromodelling just before the second world war, of course with free flight models. First were gliders, and later with rubber models. In that period, Tony's interest, already was excited by scale models. After the war Tony was one of the promoters of control line in the Netherlands. He flew speed, aerobatic and scale models.

His latest flying activities have been free flight sport models.

As a young man, Tony studied aeronautical engineering. He joined Fokker in 1946 and became a product support engineer in the Technical Publications Department. He retired in 1989 and lives with his wife Mieke in the town of Breda.

At Fokker Tony had the opportunity to study German technical reports; techniques which he applied to his model building. Sometimes with the opposite desired results! Because of his interest in technical matters he became a member of the Technical Committee of the

*Alphonse Penaud Diploma
Hideyo Enomoto*

I am highly honoured to be awarded the Alphonse Penaud Diploma of the year 1999 as an F1D modeller in Japan. I was born in Tokyo in 1955. It was almost 30 years ago that I read an article on Indoor Planes for the first time in a magazine. I think it was about the time of the dawn of indoor planes in Japan. I was attracted by its delicate beauty and its light weight pushed almost to its limit. I wanted

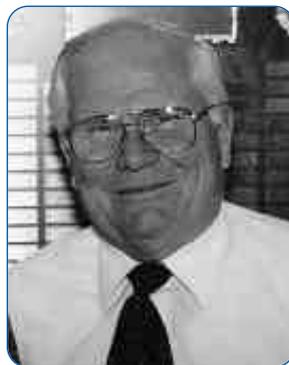
to build it myself. In the meantime I met Mr. Sigeyoshi Nonaka, pioneer of indoor planes in Japan, and now and then received instruction from him. I started my career as a F1D modeller. It was in 1973 at the age of 18 that I built my first F1D model. We hold F1D National Championships every year since December 1976. I was national champion in 1978, 1983, 1985, 1986, 1988, 1989, 1990, 1991,

1992, 1996, 1997, 1998 and 1999. I am the only F1D modeller that continuously entered the national championships since 1976. It was in 1981 that I established a F1D cat.1 world record.

I entered the F1D world championships in 1976 (Cardington UK), 1982 (Slanic-Prahova ROM), 1984 (Nagoya JPN), 1986 (Cardington UK), 1988 (Johnson city USA), 1990 (Johnson city USA), 1992 (Wrockaw POL), 1994 (Slanic Prahova ROM), 1996 (Moscow USA), 1998 (Slanic Prahova

*On
Miniature
Wings*

Bob Underwood



Aeromodelling as a hobby / sport is an important educational and recreational activity that reaches hundreds of thousands of individuals from the very young to senior citizens. In virtually every case, those individuals who have

shaped the history of aviation were (or still are) modellers. More often than not, pilots, astronauts, designers and dreamers first tasted the thrill of flight through the world of aeromodelling. They first were pilots with their feet on the ground!

In the United States, aeromodellers have been given a unique opportunity to share in the thrill of promoting aviation. The National Air and Space Museum (NASM), working through the Smithsonian Institution Travelling Exhibition Service (SITES) has placed a display of 25 model aircraft on tour throughout the United States. The Academy of Model Aeronautics (AMA) is collaborating with the Smithsonian in this endeavour.

As the display moves about the country over a period of two and one-half years, AMA is enlisting the aid of clubs in various areas.



aeromodelling section of the Netherlands Aeroclub. He was chairman from 1960-1994. As member of the board Tony became the delegate to the CIAM. In 1973 he became Technical Secretary as successor to Ron Moulton. He filled this position for 25 years. When possible his modelling interest has been focussed on scale models.

Some of his activities:

15 times judge on a WC or a CC

35 times FAI-jury member -
on a WC or a CC.

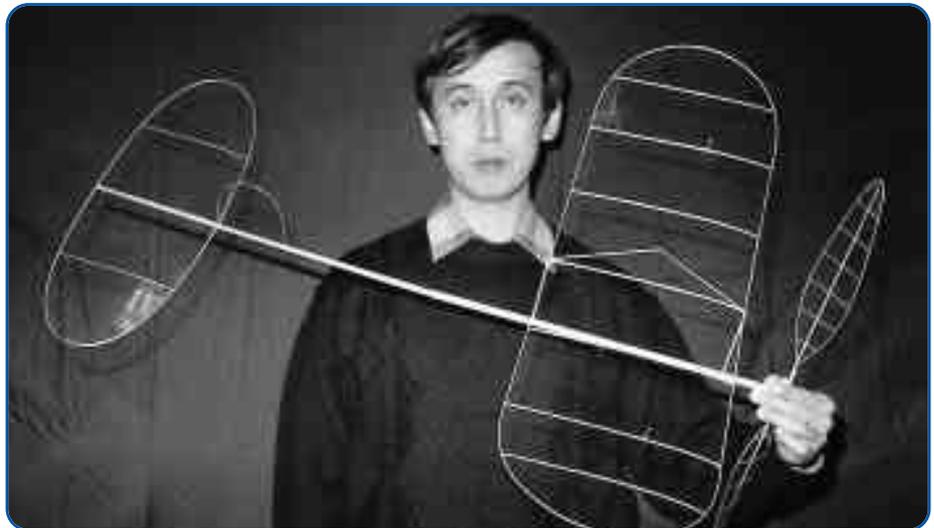
In Holland Tony still acts as judge for aerobatic and scale contests. *CIAM flyer*



Tony Aarts receives the Gold medal certificate from Sandy Pimenoff

ROM). 7th place in 1990 WCH, USA, was my best. There I used my original design variable-pitch propeller. I majored in mechanical engineering at university and I have been working in aircraft equipment manufacture in Tokyo. I am now sub chairman of the indoor committee of the Japan model aeronautic association.

The number of F1D modellers in Japan is becoming smaller and smaller. I would like to do my best to activate indoor modelling in Japan in the year 2000. *CIAM flyer*



Hideyo Enomoto holding a F1D model

Programs of various types are occurring, ranging from demonstrations involving the flying of models to providing documents to lead visitors to a better understanding of the world of aeromodelling. Of particular significance are the model building sessions which are occurring. School groups, community agencies, and teachers are becoming involved through the expertise provided by AMA modelling groups. In many cases, the touring displays are supplemented with additional models from the local area.

Included in the display are models created for various reasons, such as those used in wind tunnel testing, commercial promotion, historical and recreational purposes. There is, for instance, a reproduction of the Good Brothers "Guff," the first successful radio control model, originally flown in 1937. These wonderful models are supported with a well developed resource kit to teach visitors about aeromodelling and the principles of flight. A fully illustrated book, written by Thomas Dietz, of the National Air and Space Museum, accompanies the exhibition.

The AMA, through its member clubs, is pleased to be working with thousands of individuals in a number of cities throughout the United States. The sharing of meaningful education programs regarding flight and recreational experiences does much to promote the hobby/sport. Currently being considered is a second collaboration between the Smithsonian and AMA as we approach 2003 and the celebration of the 100th anniversary of the Wright brothers' powered flight. Aeromodelling truly is aviation's inspirational parent! *CIAM flyer*

Why Have an Education Programme?

Mike Colling



CIAM Education Resources File send £15 along with your name and address to :- Mike Colling, 403 Mossy Lea Road, Wrightington, Wigan, Lancs., WN6 9SB, England.

How can you help CIAM?

At the present time the CIAM Information and Education subcommittee has two projects running. The Education Resources File I have mentioned above and the CIAM Model Aircraft Publication Register. This Register provides a database of model aircraft magazines and newsletters so that if CIAM requires information to be sent out to the general sports flyer it will be able to do so with greater ease and efficiency. We require your help with both the Education Resources File and the Model Aircraft Publication Register.

If you have any good educational designs or material to pass on to others please send them for inclusion in to the Education Resources File. To make copying simple please ensure that all items to be included in the file are printed on A4 or A3 paper and sent to the address above. The main language used in the file is English.

The Model Aircraft Publication Register has only just started with only a small number of titles shown outside the UK. The type of information I require is the publications title, postal address, topics covered and in what language. The cost, number of editions published per year, telephone and fax numbers along with their e-mail address is all useful information.

To give recognition to those modellers, who have given their time and energy to the promotion of model aviation to youngsters, CIAM has now created the Frank Ehling Diploma, which can be awarded annually. Nominations for this award can be sent on the relevant form to the FAI office.

For our airsport to grow we must attract the young. To attract the young they must be subjected to the FUN and SATISFACTION of building and flying their own models. To do this we must put effort into an education programme. If we do not try, we will die. So, HAVE YOU HELPED A YOUNGSTER TODAY?

CIAM flyer

That is a question that I have been asked more than once and the answer is for a number of reasons. Building and flying model aircraft is a most enjoyable thing to do, I would not do it if I did not enjoy it and I would like more young people to take up the sport. However with fewer Model Shops in towns and the emergence of more mail order stores, a youngster has less of an opportunity to come across models. Model aircraft flying is probably unique in the airsports in having no age limit. It can cost less than any other airsports and can be carried out in just about any reasonable free space both indoors and out. It can be carried out at whatever level you wish from club flying on a Sunday to competing in World Championships.

Model building and flying can be much, much more. For a youngster it can open many new doors to the large world of aviation and technology. In Britain, the BMFA in collaboration with British Aerospace uses a model building and flying contest in schools as a way to promote interest in Engineering and Technology through flight. The BMFA also promotes model design building and flying with its University Challenge. A large number of Universities are realising the value of using a model design and building project as a good low cost method to train students in how to problem solve and manage a project. Colleges of Further education are using models to tempt some young students, about to leave school, to look at a career in aircraft management as an option. Model building and flying can stimulate a youngster's mind and help to keep their desire to enter their chosen airsport when finances allow and the correct age is attained.

Model aircraft education programmes are being run in many countries in the world, such as the United States of America, France, Germany, New Zealand, Australia and Britain. The type

of model used is varied from project to project and there is not a single design of model that is best for the task. In Britain it was decided to aim our programme mainly at the upper end of primary school and the lower end of secondary school, that is between 9 and 13 year olds. By encouraging teachers to use simple models as a teaching aid for such subjects as Science and Craft Design Technology it is hoped that teachers will carry out the work of initially introducing aviation through models to a large number of youngsters. We do not expect all the students introduced to model aircraft will take it up as a sport but if only one percent does, all our efforts will be worthwhile. It may be the case that someone only takes up an airsport long after they have left school but the influence at school made them consider participating in that type of sport. It can be hard to quantify the success of an education programme but most certainly without it model flying in particular and airsports in general will decline.

How CIAM can help you.

OK so the reason for an Education Programme is good but how do you start. Education systems very throughout the world, and so I am not able to state what is the best method of running a model aircraft education programme in your area. But the CIAM Information and Education subcommittee can help, in that we can provide you with designs and teaching material that we know works. We have available an Education Resources File that contains a large number of successful designs, teaching plans and information in a handy binder. Once you have the file you will be able to choose the material that fits in best with your requirements. The resources file is updated when new information becomes available, usually about twice a year and we are constantly looking for new material. To obtain your copy of the



Deva, Romania, July 1999. The 2nd European F3J Championships were a great success for everyone who attended. It would be very difficult to choose a better venue with acres of unrestricted flying area than Deva. The flying site was located on a private airfield and far from any uninterested persons, thus leaving the entire area to the organizers and participants. Campers used the facilities of the airports administration offices which were complete with several showers and wash rooms. Meals were provided on the field and appreciated by all the competitors and helpers.



Dieter Koehler, F3J European Champion, receives his award from Thomas Bartovsky

European F3J Thermal Soaring Championships

Jack Sile

it his all but could only finish 2nd to Dieter. At this championship the organizers had the option to use 4 rounds in the flyoff and it proved to be very interesting. Each round in the seniors had a different type of weather condition and it was to be a real test for Europe's best thermal soarers. This was one of the best thermal soaring contests I had seen and no doubt it is indicative how good the competition will be in Corfu in July 2000.

Individual Results

Seniors

1. Dieter Koehler, Germany
2. Alex Hoekstra, Netherlands
3. Jan Kohout, Czech Republic
4. Michal Wagner, Czech Republic
5. Jos Kleucsens, Netherlands

Juniors

1. Markus Zucker, Germany
2. Adam Koteles, Hungary
3. Jan Vacha, Czech Republic
4. Martin Gregor, Czech Republic
5. Vit Cernak, Slovak Republic

Team Results:

Seniors

1. Czech Republic
2. Hungary
3. Netherlands

Juniors

1. Germany
2. Czech Republic
3. Slovak Republic

The championships were flown in perfect weather conditions and were only interrupted once by a thunderstorm. The competition was keen and coming to the forefront of European F3J hopefuls were the Hungarians, who finished second in team placings. But it was a German, Dieter Koehler, who finished first in the Individual Senior category and also a German Junior, Markus Zucker, that won the Junior contest. Alex Hoekstra, the current European champion, gave



The top F3J Juniors



The best senior team were from the Czech Republic

It must be said that the Romanian hospitality was second to none and Marius Conu worked extremely hard to deal with the needs of the competitors. Although there were the inevitable hiccups, the organization headed by Mikhail Zanciu was superb and it was capped by a fine evening of celebrations and prizegiving. A truly great place to have a thermal soaring contest. CIAM flyer

F3B World Championships

John Lightfoot

Photos: by Thomas Bartovsky

I have to say that I approached the recent F3B World Champs with very mixed feelings - on the one hand, I looked forward keenly to seeing the top radio control glider flyers in action, but on the other hand, there was my scoring spreadsheet which was going to be put to the severest test at the highest level - and I would be less than truthful if I claimed that I wasn't a little nervous.

The field was a positively huge ex-sunflower field belonging to a local farmer, Rainer Lypke, who had obligingly ploughed, levelled and smoothed it, to give a surface which, while it definitely wasn't grass, was firm and fairly smooth. Eight grass patches, each about eight metres square, had been laid for landing spots and to make landings a little easier. They seemed to work quite well, although the lip at the edge of the grass caught many sliding models which would normally have reached the spot.

Many people and organisations had supported the event in various ways and I make no pretence at a complete list - that was covered at the closing banquet - but the two most obvious ones were farmer Rainer and Frans Spamer of Willards, the latter providing no fewer than forty batteries for the event - two for each team and a couple for the scoreboard, and if that wasn't enough, the whole gathering was treated to an evening at Willards.

Sunday was "Round Zero" and thank goodness for it! It is an unofficial round which allows the pilots to get

into contest gear and the officials to get their acts together. The latter was a vital part of the show, as the distance / speed computer scoreboard had only been completed a few days earlier, and its operation had to be understood first. Considering that the board had been partly built by one man, then abandoned and finished by another, who was very competent electronically but had no idea whatever of the operation of an F3B contest and had to design the electronic programme purely from what he was told, it was very effective and did exactly what it was supposed to, once the operators learned how to talk to it. One of the operations was even changed - minor reprogramming on the field - to make things a little easier.

There were five different electronic tones, each associated with a flashing coloured light, to tell pilots when they crossed the line - the bedlam of hoots, yells, squeals, sirens and shouts during a distance task had to be heard to be believed - it took a bit of getting used to, to see a pilot and two helpers gazing in one direction (at the plane) while a fourth faced in exactly the opposite direction, shouting a single word - "Turn!" - at more or less regular intervals, in response to the flashing light.

Each team had four (or more) winches, and two were laid out in

each direction, so that there was usually some 28 km of line spread out across the field. From time to time a line would be declared no longer reliable, stripped off the winch and discarded. When there was about 5 or 6 km of the stuff in the dustbin, Andrew (my son) hit on the idea of asking the teams to wind it onto an empty reel, of which there were plenty lying about, so he brought home about 4 km of usable line!

The Duration task had to be described as a bit unexciting - if you didn't reach at least six and a half minutes you were dead meat! There were probably fewer than ten flights of less than six minutes in the whole contest, which is why the task goes up to ten minutes from this event. Imagine scoring 990 out of a possible 1000 and placing 23rd out of 53! Landings were the most interesting part and there were two clear schools of thought - one was to come in as slow and low as possible and dump on the spot after clearing the edge of the grass, while the other was to come in nicely above the stall at about one metre and spear the spot at 45deg! The grass made the surface just acceptably soft enough for the purpose and modern F3B models are definitely tough enough to take the impact.

The fun started with Distance. Five models, sometimes going at speed-run speed, back and forth between base-A and base-B - always



Ready Box





accompanied by several frantic shouts of "No Signal!" (oddly, often in a Dutch accent!). We discovered that, because of the design of the computer software, if a pilot missed his first turn into the course he would appear to miss two turn signals, get two apparently right in between and then have everything work correctly - resulting in total confusion, through which the base-A crew sat stoney-faced and said, "You missed the entry!" This didn't go down at all well, since the teams were surprisingly impractical in terms of understanding technicalities. One, who I knew had been in the game for at least fifteen years, even started a debate about what part of the model was used for deciding whether a base had been crossed or not! Everyone knows it's the nose!

Distances of 22 to 26 laps have been considered pretty good, the World Record being 31. Denis Duchesne raised this to 32 but only reigned for about half-an-hour before Espen Torp of Sweden set a new World Record of 35 in the four-minute working time. To put this in perspective means doing each lap in a shade under seven seconds - or imagine it as doing nine consecutive 27-second speed-runs! True, he was blessed with truly awesome conditions, but one comment overheard was, "Spare a thought for the guy who flew 33 laps, bettering the old World Record, and only scored 940 points!"

The majority of pilots returned times of between 17 and 22 seconds in the Speed task. Even a missed turn only pushed the time up to about 26 seconds. A couple of the Swedish models were incredibly quiet - at full speed they made less noise than some of our models cruising! Daryl Perkins set a new World Record with a time of 14,07 seconds. There was a theory doing the rounds that Daryl had done a deal with the devil, although it was unclear just what was offered in exchange for thermals during his speed tasks. Just for the record, his speed times were - 19,91 18,80 15,01 14,07 15,02 16,91 giving an average over all six of 16,62 while Dieter Perlick, his closest rival recorded - 16,73 18,30 15,30 15,54 15,64 16,63 giving an average of 16,36 seconds. How's that for consistency? . . . at top level! It was interesting to see that several pilots were a little wobbly on the speed course - their models looked as if they were on a roller-coaster, as elevator was applied rather unevenly. With modern radios I would have thought that this was a classic case for exponential elevator . . . gentle

close to centre but strong at the extremes. I doubt if the body-language used by the US team actually helped that much, but Gordon Jennings was the prime exponent of this technique. He never improved on the wonderful pose he struck in round two, before I had a camera ready. At the opposite end of the scale was Dave Charles of the UK, who could hardly be said to be feeling much stress as he exits the speed course.

The highlight of the contest, for me at any rate, would have to be the Australian team performance for Gregg Voak in Speed. He didn't like the height he got the first time and so he landed for a relaunch . . . the zoom from the second launch resulted in the 'chute getting caught in his planes V-tail and it would have yanked him out of the sky if he'd tried flying it, so he let it fall . . . straight down with crow-brakes out . . . if he'd pulled out normally to touch down he'd have landed in the safety area and incurred a penalty, so he pushed in down at the last minute and landed gently on wingtips and V-tail - without

TEAM RESULT WORLD CHAMPS - 1999									
				TOTAL	pos	Gross	discard	penalty	
1	SWI	Switzerland		43022	1	49726	6704	0	
2	GER	Germany		42084	2	49423	7339	0	
3	FRA	France		41825	3	48112	6288	0	
4	USA	United States		41649	4	47888	6139	100	
5	AUT	Austria		41498	5	47251	5753	0	

FINAL RESULT WORLD CHAMPS - 1999														
		TOTAL		Duration			Distance			Speed			penalty	
				best 5	pos	worst	best 5	pos	worst	best 5	pos	worst		
PERKINS	Daryl	97	14552	1	4990	2	971	4867	12	690	4695	1	779	
PERLICK	Dieter	GER	14529	2	4940	26	981	4898	8	929	4691	2	814	
HOFMANN	Roland	SWI	14442	3	4942	25	969	5000	1	400	4500	3	844	
BOEHLEN	Stefan	SWI	14320	4	4882	36	873	4957	3	667	4481	5	570	
KNECHTLE	Stefan	SWI	14260	5	4955	19	665	5000	1	941	4305	13	775	
WURTS	Joe	USA	14251	6	4988	3	987	4885	10	792	4478	6	717	100
HALEY	Steve	GBR	14120	7	4931	28	969	4929	5	500	4261	14	708	
DONKER DUYVIS	Frits	NED	14105	8	4979	7	859	4642	25	619	4484	4	802	
LEGOU	Franck	FRA	14094	9	4843	41	815	4803	14	737	4448	9	799	
HOFFMANN	Peter	AUT	14054	10	4859	40	689	4797	15	889	4398	10	670	



Free Flight World Championship in ISRAEL

Pierre Chaussebourg



Daryl Perkins after his last flight

The last Free Flight Championship of the second Millennium was held in Israel. The teams were accommodated in Ashkelon in a hotel situated on the sea side, near the beach.

The flying site was on the northern end of the Negev desert about a one hour drive from the Mediterranean sea side. This distance from the flying field as well as the weather conditions dictated that the start of the flying was as soon as the visibility was sufficient to time the models. So, it was necessary to get up at least two hours before sunrise.

The weather was the same everyday; light wind at sunrise with a little thermal activity, then dead calm with no wind and no thermals. This usually occurred during the end of the second round and the third round, then thermals got stronger, with very turbulent air and strong winds in the two last rounds.

After 13.30 It was quite impossible to fly a model. With such weather, there was no possibility of having a fly-off in the late afternoon because the turbulence and the wind continued for a long time after sunset.

The organisers who knew what it is like in this place (it has been the same for thousands of years) had scheduled all fly-offs for the following morning of each class day, with a ten minute round for ten minutes max.

Everything started with a world cup contest, which provided the opportunity for testing the field and for the organisers to warm up timekeepers and to try field organisation.

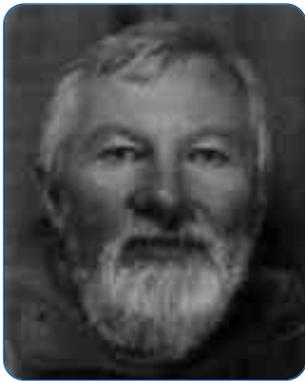
damage . . . Peter Abell ran out the 150m to the landing point . . . ran the 150m back with the model . . . collapsed in an asthmatic heap as it was taken from him and hooked up with just 35 seconds of working time left! Gregg flew up the line and straight into the course with only 24 seconds on the clock. The whole field could be felt and heard encouraging his model over the last leg, which he completed with one-and-a-half seconds to spare!

The contest was directed overall by Dion Liebenberg in his usual quiet, laid-back manner, although woe betide anyone who transgressed - he soon discovered the other side of Dion. I should know . . . I didn't quite follow procedure on the first day and was (quite rightly) severely chewed for my pains! The Flight Line was controlled in rather more kragdadige fashion by Gert Immelmann. I'm not sure just what a 747 captain should look like, but Gert somehow just doesn't . . . John Godwin impounded Transmitters and with various assistants saw to the ready box area, when it found its logical place between Tx Control and the Flight Line itself. Probably the most thankless tasks of all were those of the base-A and base-B controllers, Mike Summers and Dave Greer, and their operators, one of whom was clubmate Andre . . . sitting out in the

sun . . . often gazing straight into the sun . . . trying to separate/follow identical silhouettes as they crossed . . . abused by callers, pilots and Team Managers . . . always in the wrong and unable to defend themselves . . . who'd be a base-caller?

Andrew (my son) was described as "the voice which will be remembered for years" . . . calling pilots to the ready box . . . calling them to the flight line . . . telling them that they shouldn't be at the flight line yet . . . demanding the return of transmitters to the pound. It was said that if anyone from this event met him at a later one, the response would surely be "Hey, weren't you the announcer in '99?" "Working time for Slot three Duration starts on the tone!", is a sentence he hopes never to hear again!

The show finished with a top-class Banquet, at which the awards were made, and although the Official Guests appeared to have got lost, the food was A-1! Perhaps they should have doubled the Starters and omitted the Main Course! Trevor Austin and his Committee put in an incredible amount of time in planning and arranging the event and its undoubted success earns them sincere congratulations. CIAM flyer



On the day following the official opening ceremony which took place in an antique Greek theatre, we started with the F1A (glider) class. The aero club of Israel, who have a very important junior activity, organised a European Championship for Juniors, which ran together with the World Championship. In order to make the organisation of the two competitions easier, the juniors flew F1J (junior power class) on the 1st day.

Considering the weather conditions, we arrived at the end of the day with 39 competitors remaining in the Fly-Off for the next morning. So, we started the second day with a large F1A Fly-Off: Dariusz Stezalski from Poland won 1st place, and two flyers tied for second place. It was decided that they would have another fly-off on the next morning.

We had already had several dramas: one model was found to have too large a flying area. Then, during the fly-off another one used a towline which was longer than the allowed 50 meters: both competitors had to be disqualified.

During the F1B day, another dramatic situation happened during the sixth round when defending champion Alex Andriukov got in trouble. Alex waited for



Defending F1B World Champion:
Alexander Andriukov

a long time to make the decision to launch his model, when he decided to remove the rubber motor, about 20 minutes before the end of the round. He broke his 1st motor when winding, and damaged his model. Then he took another model and the same thing happened. Time was running out and less than ten minutes was remaining in the round: it is always in this kind of situation that the watches seem to accelerate... Well, it appeared that Alex broke six motors before winding some rubber at about 70% of his rubber power and rushed to his starting pole to finally launch his model some 20 seconds before the end of the round. Unfortunately, the model which seemed in a good position, was not in good air and missed the max for 14 seconds: it was the end of his title defence...

The next morning we started the F1B fly-off at 6.35 with 43 competitors for a 10 minute flight. Kulakovsky of the Ukraine won, followed at 11 seconds by Bror Eimar from Sweden who took second place for the second time in a row...Anselmo Zeri from the Netherlands took 3rd place.

Then we had the Fly-off for the second F1A place between Peter de Boer from the Netherlands and Namo Takahashi from Japan. Peter de Boer had a model with an electronic timer, giving him extra height at launch. So his strategy was to watch his opponent and release his model in the same patch of air. He did so, but the model died at launch... landing within a fatal 20 seconds. He started for a second attempt, but the same thing happened again, giving Peter the bronze medal.

That was on the third day, and we started F1C a little later than scheduled. As a consequence, we had terrible weather in the 6th and 7th round, with a lot of turbulence, and several dust devils crossed the starting line... Despite these difficulties, 12 competitors made a full score and had to come back on the next morning for the fly-off

The defending champion, Evgueny Verbitsky was in the fly-off and everybody was watching him . Unfortunately, the timer of his geared model got too much dust and stopped,

which was followed by a crash. Evgueny was forced to use a back up model in the fly-off and finished a disappointing ninth.

The winner was Kennan Jusufbasic from Bosnia, followed by Ed Keck from the USA and Edin Sahinovic also from Bosnia.

Bosnia took the first team place, for the second time, as they had already won the team trophy in the F1B class. Kennan Jusufbasic who had already won the silver medal in France in 1987 behind the great Bob White, was the hero of the day, winning three gold medals: F1B team, F1C team and F1C individual!

In conclusion, these championships in ISRAEL were very successful. The main problem was the dust and the heat... At this moment, at the end of January 2000 all participants must have a smile, thinking about Jerusalem with 30cm of snow, and snow in the Negev desert... which had not happened for about 50 years!

The organisers did beautifully, running two competitions together, which made a 500 meter long starting line... They were very efficient. Erik Sinai and Eran Engel must be congratulated along with all their staff: secretaries, timekeepers, interpreters, officials etc... All of them knew exactly what to do in any circumstance, and so, contributed to the success of this magnificent event. CIAM flyer



F1A Flyer: Mikhail Kochkarev (RUS)

F1E World Championships

LIPTOVSKY-MIKULAS
SLOVAKIA

Pierre
Chaussebourg

What is F1E? Free Flight Slope Soaring gliders with magnet steering! So, it is a Free Flight class: after the flyer has launched his model, there is no more connection between him and his glider. The models are only gliders and they are hand launched into the wind from slopes.

The magnet steering gives the possibility for the flyer to decide, before each flight, which heading the glider takes during its flight. The magnet keeps the south-north direction, whatever happens to the model during its flight. A rudder is connected to this magnet in the front of the fuselage, and maintains the model on a constant heading during its flight. The big difference between Radio Controlled gliders and Magnet Steering gliders is that the RC gliders are flying along the slope, most of the time with a side wind, and the magnet steering gliders are flying down to the bottom



Juraj Uhrin (SVK)
1999 World Champion

of the slope, against the wind. It means that their ground speed is slow, and so, they can take the best advantage of the smallest lift.

The result is that it is not necessary to go to high mountains for flying, and a small hill with no trees, no power lines and no roads is a perfect site. As for other free flight classes, the aim is to make duration flights. This year, the World Championships were held in Slovakia, near the city of Liptovsky-Mikulas. It is a beautiful place, between High and Low Tatra mountains. The starting area was on the top of a hill, giving the competitors the opportunity to launch their models against the wind, over meadows, without any obstacle, and flying down to harvested fields in the valley, with some trees and a lake at quite a distance.

The weather was superb; temperature well over 20°C with low wind. The competition is flown over five rounds, and before each flight, the jury has to decide both the duration of the maximum flight, and the duration of the round, according to the wind speed, the difficulty for retrieving models etc...

The maximum duration of the flight can be from 2 to 5 minutes, and in order not to give any advantage to competitors, with short flights (2 minutes) and long flights (5 minutes), the scores are calculated in percentages.

Nine teams and the defending World Champion were competing. At the end of the fifth round, only three competitors had a maximum score. For F1A,B,C free flight classes, in order to obtain the final classification, competitors take part in a Fly-Off, where the maximum duration of the flight is increased. In F1E, we just move the starting area down to the valley, and give a new start for the tied competitors for a five minute flight.



The three competitors involved were Gringu Popa from Romania, Franticek Douprovec from the Czech Republic and the local Juraj Uhrin, already winner of the 1998 F1E World Cup.

Gringu Popa was flying a large glider using a bunt system: the same as used in F1A. This makes it possible to launch the model vertically. The timer starts at the moment the model is launched, and all the functions work the same as for an F1A glider when the tow line is released. When the model starts to fly normally, it is at least five meters higher than a normal one. As Gringu was the only one using this system, his strategy was to launch his model at the same time as the others in a way to fly in the same patch of air. So he did and it clearly appeared that he was the highest. Nevertheless, after a while, the directions followed by the models differed by about 30°, Uhrin's and Douprovec's models went to the left where the slope was going down to the lake and Popa's went to the right where there were some trees and the end of the slope.



Alexandru Popa (ROM)
1999 Junior World Champion

Juraj Uhrin landed after five minutes 4 seconds taking first place, Douprovec won second with 4'42" and Popa took the bronze medal with 3'42". The Slovak team won 1st



place, and it must be noted for history that the Slovak F1A team had also won the 1st place in Israel. Milan Valastiak was a member of both teams, and the Junior Miroslav Polonec was a member of the F1A team in Israel, but in the Junior team for F1E, winning second team place.

In the Junior classification, Alexandru Popa (Gringu Popa's son) won 1st place with a very good score, missing the last max by only 25 seconds, followed by the young Romanian Adrian Draghici and the Slovak Pavol Nosko. Romania took first team place.



Herbert Shmidt (GER) launching his model

These championships had started with a rather unusual opening ceremony as it took place in a cave, in a huge room with beautiful concretions. The Slovak anthem was sang by a chorus. In such a place, it was just magnificent.

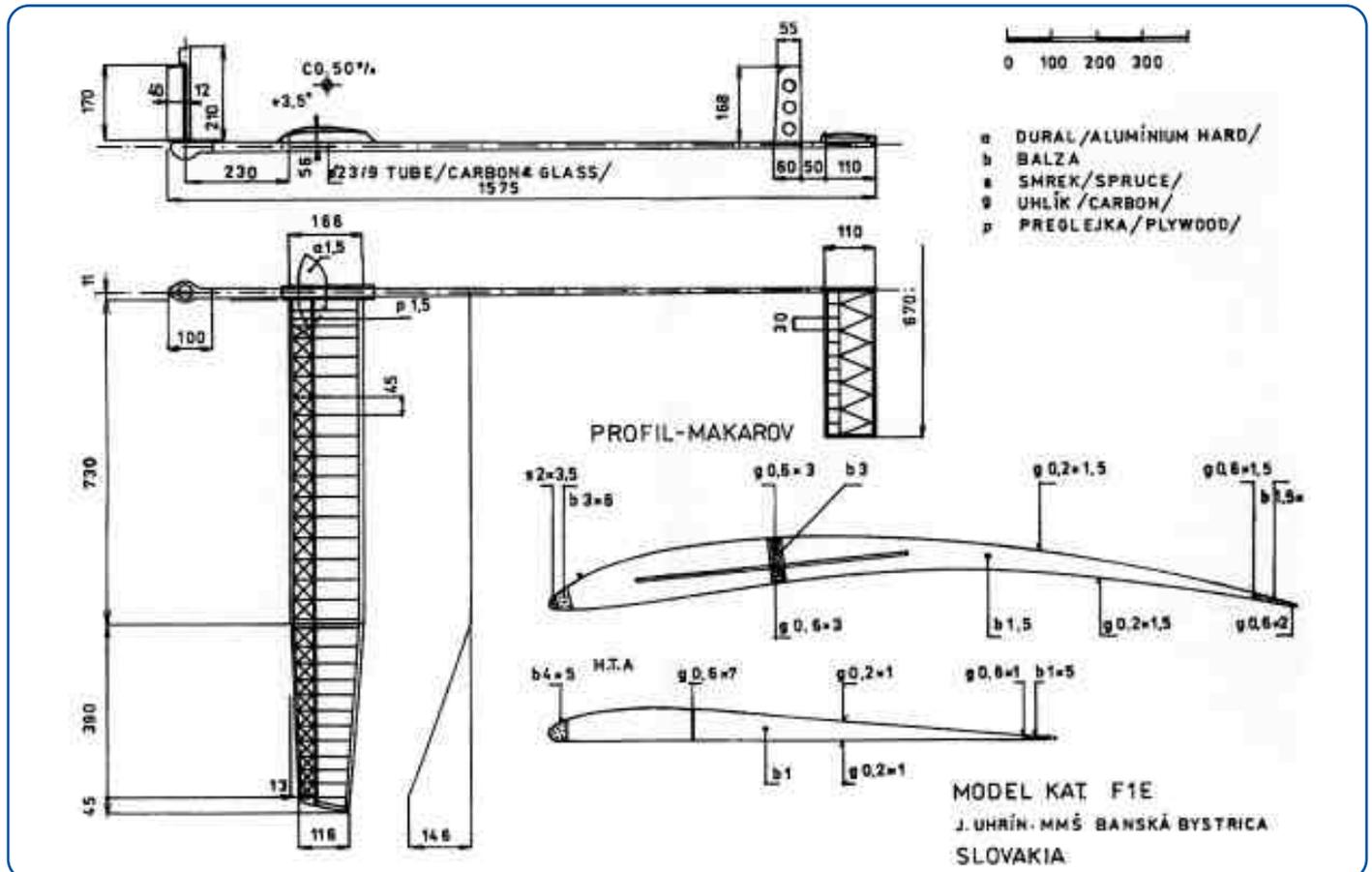
Another interesting moment was the "night swimming session" in a hot

natural water swimming pool. There was also a nice tour in the Tatra mountains, with a visit to a traditional Slovak village, and a lunch in a skiing resort (no snow. . . unfortunately!) In the evening, we had a party with folk songs and dances. On the last day we had a world cup contest and in the evening

a banquet, with the traditional prize giving; all that in a warm atmosphere.

The organiser, M. Farkas, his wife and all his team must be congratulated for their efforts and a very well run World Championship.

CIAM flyer



Plan of Juraj Uhrin's Winning F1E Model

To the Sun, With the Sun

Guy Revel

August 1, 1998. The location: Neuhardenberg airfield, some 40 miles East of Berlin and just a walk away from the Elbe river marking the border between Poland and what was, just a few years ago, East Germany. The now disused airfield used to be the base of several fighter squadrons in addition to the official government fleet. An enormous piece of land with aircraft hangars built under the main runway and forty feet of concrete, for fear of Western bomb attack.



"Ready for flight"

The time: One day before the official opening of the Electric Flight World championships. It was the day of the famous traditional "Sunrise-Sunset" competition, in which teams of four try completing a full day of flying with the minimum number of flights while always keeping one electric-powered model aloft. At 8:50 p.m. a horn signaled the end of the longest day, as the teams had launched their first models at 8:29 a.m.

The winning team was team Markdorf from Germany (Markdorf is a small town near Constance which borders Switzerland), headed by Wolfgang Schäper, a renowned electric flight expert. The team filled the day with only two flights. Their second flight had been so short that the battery had not even been discharged by one third!

Not surprising, once you know their first flight lasted over twelve hours, landing at 5:34 p.m. from a launch at 5:29 a.m! Twelve hours of motor run, thanks to a carefully optimized power system and energy management. All four models of the team (of which only two actually flew) were slightly enlarged versions of the Excel, a very popular Simprop electric glider designed by Wolfgang Schäper.

This was but the latest of the many remarkable feats making Wolfgang Schäper a very special modeller. Just a few weeks earlier, he had established three World records for a special kind of electric power: solar power.

On June 17, 1998, it was the closed circuit records: distance (190.00 km) and speed (62.15 km/h). If you think such speed cannot compare with other speed records, just think of the very limited power available (around 40 W or roughly equivalent to what we get from a Mabuchi 380 motor), the drag penalty resulting from the exposed flat cells on the upper side of the wing also inhibiting any real airfoil optimisation and, finally, the necessary large wing area (for a speed model) resulting from the necessity to find place for the solar cells. Of course the major goal on that day was the distance record, speed coming as a by-product.



"The Start"

Then, less than one week later, on 21 June he established a new speed (in a straight line; this time, that is with two passes in opposite directions through a 200 metre trap), achieving 80.63 km/h. Quite remarkable indeed.

This was just his latest feat. One year earlier, on July 13, 1997, he had already captured two other World

records for solar power, namely duration (11h 34min 18s) and distance in a straight line (48.21 km). Of the six existing World record classes for solar power only one was missing : altitude. On 18 August, 1998, it became American property when Dave Beck reached 1,283 metres.

Special models, special methods

May 30, 1999, on Wolfgang Schäper's club flying field in Markdorf. After several weeks of bad weather, everything was set for an attempt at the last missing World record in Wolfgang's golden book. He was to use his Mini-Solar-Excel, a mere variation from the standard model designed already several years earlier and produced in kit form by Simprop.

The plan was to start from the model airfield and have the flight above the city of Markdorf controlled and followed from a hot air balloon, sponsored by the regional newspaper. One special requirement resulting from this arrangement was that the team absolutely needed calm air, so as not to drift too far away with the balloon from the take-off point.

Let Wolfgang Schäper himself tell of his experience: "Since the record height in solar flight had been pushed to 1,283 m in last August, it was no longer possible to reach a higher altitude without following the model by any technical means. I thought that a hot air balloon was well suited because of its smooth and silent climb at zero horizontal speed relative to the ambient air. Climb and sink rates of the balloon exceed those of my solar models, so that no problems to follow the model were anticipated. The only severe drawback is the impossibility to determine the landing point of the balloon (one of the requirements of the Records Section of the FAI Sporting Code is that the take-off and landing points be identical within a small margin). This means that I had to return by ground transport, such as a car or bicycle, from any possible balloon landing point within an expected range of 12 to 15 km."





"I started the preparation in March by investigating return routes to two alternative starting places. A balloon team was contacted and a sponsor for the balloon expenses was found.

"I needed about ten weeks to have ideal weather conditions, i.e. calm air to minimize the balloon offset and sufficient sunshine for a fast climb. Relying on German and Swiss Internet weather forecasts I finally organised my team (3 judges, 1 auxiliary pilot, the balloon team, car drivers, and last but not least my family) for Sunday 30th of May.

"We met at 7 a.m. at the Markdorf glider airfield and decided to start from the nearby model airfield. The balloon was prepared and filled. At nine o'clock I launched my model and made it climb to 200m. Illumination was rather poor; 47% of nominal light only. Climb rate was less than 1 m/s. Additionally, high temperature (23°C) lowered the power output of the solar generator.

"I stepped aboard the balloon together with the balloon pilot plus Andreas Sommer and Richard Gessler as judges. The third judge, Hans-Peter Gollin, observed the flight from the ground as the balloon could only lift four people.

"After take-off of the balloon, we joined the model and followed it as it climbed higher. No problems occurred. The horizontal drift was extremely low. First we drifted to the East, then North-West, always flying above the city of Markdorf or in close proximity. At 1800 m over ground the climb rate of the model became almost nil because of



The Balloon

cloud coverage in front of the sun. This period lasted 5 to 6 minutes and was the only critical one because the model flew lower than the balloon.

"We recovered from this situation under good sunshine and continued the climb until southern wind made us drift North. As the return routes from this region were all but ideal (hills, forests) we decided to descend. At this moment the model was flying 20 to 30 meters higher than the balloon. This was important because the flight altitude was recorded in the balloon and not in the model itself.

"For the descent, the balloon and the models were set to sink rates of 2.5 m/s. We drifted back toward the South and landed the balloon on a field, North-West of Markdorf, after a flight time of 67 min. The offset was only 2.9 km.

"To be able to leave the balloon comfortably, I made use of my auxiliary pilot Bernhard Barlage who piloted my model for not more than 5 minutes after 73 min of model flight time.

"To return to the model airfield, I used a cabriolet together with the three judges. I had no problems to control my model over the city. The landing of the model was routine and not more than 20 m away from the starting point."

All six records !

Pending confirmation of the official altitude gain (2,156 m according to the barograph presently officially checked) this would be the sixth World record by Wolfgang Schäper, everyone related with solar flight.

This is the result of careful optimization of all parameters, as you could guess, but it is also interesting to note that the model itself is nothing but a well-designed and well-built "normal" sports model mainly built out of balsawood.

Of special interest, probably, is the means used to record the performance. Here, again, nothing really special based on sophisticated military equipment, but a plain, normal hot-air balloon as we could find at many places. You will certainly note

that this is next to the ideal equipment as a balloon moves and climbs slowly. It does not disturb the surrounding atmosphere (the model always flies in "clean" air) and can usually fly long enough without needing any special equipment.

True, hot-air balloon flights are relatively expensive, but certainly less than similar helicopter flights. Airplanes are out of the question as they fly much faster than a solar-powered model and the task of the pilot would have been much more difficult.

Just the beginning

Is this the ultimate? Certainly not, and, in fact, this altitude record should prove the easiest of the six to better under good lighting conditions, as would be possible in desert areas nearer to the Equator. One immediately thinks of well-known places in California, Arizona or Mexico where the higher available light energy would enable a better rate of climb, which you can translate into higher theoretical height ceiling.

Technical data:

Model:	Mini-Solar-Excel <i>(designer & builder Wolfgang Schäper)</i>
Wing span:	2.10 m
Length:	1.02 m
Wing area:	34.5 dm ²
Mass:	724 g
Solar Generator:	4 strings of 24 monocrystalline cells Telefunken ASE ML- BSFR-66 x 36 mm
Motor:	Maxon coreless NdFeB, model RE 025-055
Reduction Gear:	Marx "Pile" 6:1
Propeller:	Schöberl Mosquito
Controller:	Schäper Maximum Power Point Controller
RC Set:	Simprop SAM,
Receiver:	Simprop Piko 2000
Receiver Power:	Lithium (LiMnO ₂), 6 V, 1300 mAh

CIAM flyer



Champagne



The Varied World of Electric Flight

Emil Giezendanner

Nearly all types of model aircraft can now be powered electrically

Progress in RC electric flight is no longer as spectacular as it was a few years ago. Batteries are improving constantly, meaning that they are able to store more and more energy at almost the same weight. Currently NiCd cells are still mainly used, however metal hybrid cells are catching up rapidly. These cells have the advantage of not using heavy metals, unfortunately they also have a disadvantage in that the gases produced when they are heavily overloaded can cause a risk of explosion in sealed enclosures. Due to miniaturisation in electronics, significant progress regarding motors has been achieved in recent years. Collectors subject to wear are increasingly replaced by commutation electronics. Under normal operating conditions these brush-less motors last almost forever - even without maintenance.

Popular Electric Glider Models

The first electric powered flight models were gliders. Today there is no denying that they are one of the favourites on the electric flight scene. Gliding was also the first world championship category in electric flight. Glider models are built in all sizes, with wing-spans of between 120 and 500 cm and larger. They are also available as kits or finished models. Regarding battery packs, everything from 6 to 30 cells is possible as well. Competition models now climb at 45 metres per second and more. Large glider models with wing-spans between four and seven metres are very graceful and impressive. Because of their large weight and bulky fuselage, they are usually launched using a rubber cord catapult.

Racing and Aerobatic Models

Competitions with Pylon Racing models are very spectacular. Official world championships have been held for a few years. In these races, ten laps have to be flown on a triangular course with a circumference of 400 metres. Leading competitors manage this in times of around 80 seconds. Models have wing-spans of less than 120



European Champion, Urs Leodolter from Switzerland with his TWISTER 2.

cm and are neither easy to steer at these speeds nor easy for the timekeepers to track. This may be one of the reasons why the number of participants in these races has been stagnating in the last few years.

For a long time, similar requirements as for aerobatics with combustion engines were applied in electric aerobatics. It is possible to fly the most spectacular aerobatics figures with electric powered models, but motor running times are less than five minutes. Unfortunately this fact has not been taken into account sufficiently so far. Due to low noise development of the motors, electric aerobatics can easily be performed on playing fields or school courts.



Gliders with solar cells



A scale model JU 87 Stuka with two motors



Scale and Semi-Scale Models

The use of clean electric propulsion in scale models of various sizes is immensely popular. It is particularly suited to slow flying models of veteran planes. Even models with multiple motors can be easily realised. Due to a variety of commercially available transmissions it has also become possible to equip large models weighing 10 kg or more with electric propulsion where two motors can even act on one propeller shaft.

Helicopters

In approximately 10 years, electric powered helicopters have found many fans. In the early stages, helicopters designed for combustion engines were converted to electric propulsion. Due to their smoke and vibration free operation, electric motors are progressively taking over the helicopter scene. Numerous helicopter freaks own an electric helicopter along with their combustion engine helicopter and fly it in their garden or outside their garage. Smaller versions are also suitable for flying indoors. A few years ago, industry discovered the electric helicopter as an interesting market segment and has thus given this fascinating electric flight category a new boost. With the



Skillful flying



F9F-5 Panther with electric turbine

exception of a few very small types, electric powered helicopters are generally available in three sizes, the largest being powered by 30 cells and corresponding in size to the familiar competition helicopters with combustion engines.

Jet Models with Electric Turbines

Due to their small size, maintenance-free and low vibration operation and their almost unrestricted speeds, electric motors are ideal for powering turbines. Electric turbine propulsions are used mainly for replicas and individually designed jet models. The appearance of models with electric turbines is of course much more attractive than that of jet models equipped with visible common propellers. This type of arrangement is also easy to handle and virtually maintenance-free.



Electric Turbine



Indoor Flying

The Latest Trend: Indoor Flying

Progressing miniaturisation in electronics produces more and more extremely lightweight radio control components such as receivers, actuators and speed controllers. Thus it has become possible to build and fly RC models of less than 100 g in weight. The indoor scene, which so far had to make do with rubber and CO2 motors and without RC systems, has received a tremendous boost with the electric powered slow flyer. Electric flight meetings in halls and large rooms while outdoor conditions are wintry have now become a reality. CIAM flyer

Successful Organization in the European Championships for Control Line Models Valladolid'99 - Spain

Tomas Barriga Pedrosa



British pilot Gordon Isles dominated the contest up to the end, when the Spanish pilot achieved a speed of 293.5 km/h, though he didn't reach the 298 km/h speed he got in 1997 he managed to win. The British pilot's speed was 288.2 km/h. Third place went to the Russian, Sergei Kostin with a speed of 287.36 km/h.

In Aerobatics, the pilots have a maximum of 7 minutes to make an aerobatic circuit composed of 16 manoeuvres. The biggest surprise was when 7 times European Champion, Italian Luciano Compostela, went out of the finals in the first round. Remy Beringer and his father Gilbert Beringer won both the junior and senior category. This shows a revival of French aerobatic airmodelling never seen since July Delor left the sport.

The first senior position was for Gilbert Beringer with 5801 points followed by the Russian Yuri Yatsenko (5775 points) and Dutchman Henk de Jong (5768.5 points). The junior classification was as follows: the French Remy Beringer in the first position followed by the Russian A. Gafutdinov and the French Yoann Charon.

In Team Race, the Russian pilots established the standards to be followed. In this modality three pilots placed in the Flying Circle have to run 100 laps in the least possible time. They have to pit a few times, and the pilot catches the model while flying, refuels and restarts the model.

For the second consecutive time, the European Championship for Control Line Models has been held in Valladolid. The FAI asked Aerosafa to organize this European Championship when it became vacant. And once again, Aerosafa, helped by the Junta de Castilla-León and the mainhall of Valladolid, organized a high-level contest. They searched for the most qualified organizers and offered the perfect place for the contest. Terradillos Flying Field is said to be one of the best in the world.

The best 200 European pilots, from 21 different countries, met at Valladolid with the aim to get a title which only a privileged few get. The favourites were the famous Gordon Isles and Luis Parramón in Speed; Luciano Compostella and Yuri Yatsenko in Aerobatics; Pemiissi-Rossi and Titov-Yougov in Team Race and Beliaev and Faizov in Combat. But the contest surprised us all in such a way that this championship is going to become famous in Spanish Aeromodelling history.

On July 12, 1999, all competitors met at the Flying Field and the championship was officially opened. Terradillos Field was filled by the coloured uniforms of the 21 participating countries that paraded in front of the visiting public. After the parade, Mr. Antonio Rojas, president of the Organizing Committee, welcomed all the competitors. Afterwards, Mr. Andreas Réé, president of the FAI Jury in this European Championship, asked for fair play and a good contest. Then, the Territorial Delegate of the Junta de Castilla-León, Mr. Roberto Fernández de la Reguera, congratulated Aerosafa for hosting the second consecutive European Championship. Finally, Mr. Javier León de la Riva, mayor of the city, officially opened the championship

and wished both organizers and competitors good luck. The opening of the Championship was marked by the exploding of a Valencian string. Afterwards the Science Faculty Tuna sang some traditional student songs and the Dancing group "Zagalejo" delighted the public with their three traditional castilian dances. The ceremony finished with the exhibition by an Aviocar plane of the Air Forces of Villanubla.



F2B: Youth and Experience

But, what about the contest? Luis Parramón's first position in Speed is really important. In this modality, the aim is to get the highest speed. To get this, the pilots use a model with the following characteristics: a cylindrical fuselage, an asymmetrical wing, a one blade propeller and a 2.5 C.C. engine. Parramón won even while



F2C: A complete team of experts



F2A Podium

The Russian pilots didn't begin well and from the British team, Ross-Turner, got the first position. The second day of the contest the first position was still with the British team but the Russian team Andreev-Sobko got the third position and Titov-Yougov pitted in less than three seconds. The 3'15" achieved by the Italian team PemiSSI-Rossi made us think of their 1996 world champion title. But only Ross-Turner, Andreev-Sobko and the Gilbert brothers got to the final 200 laps. The French team was disqualified and bad British pitting dropped Ross-Turner to second position while the Russian Andreev-Sobko moved into first position.

In Combat the favourites were the Russian pilots as they had won the first four positions at the last European Championships. In this modality two combat wings try to cut the opposites streamer as many times as possible. The streamer is 2.5 metres long and it hangs at the back of the model which flies at 160 km/h. The contest was really exciting. We could see a pilots' ability and fast reflexes even if they crashed a few times. The mechanics were also very important for the final results as it was their job to have the models and engines ready for the air fight. Andrei Beliaev and Alesandre Gussev (both of them from Russia) reached the final, as they did 2 years ago, and once again the son of the already infamous Viacheslav Beliaev won. Third was the Spanish pilot Juan

José García. He got the best Spanish position ever in this event and he even beat the famous Loet Wakerman or Faizov.

Aerosafa organized a Promotional Championship which was important, because it gave the younger pilots an opportunity to participate in an international contest. The aim of this Promotional Championship was to promote airmodelling among European youth. The final classification was as follows:

Cadets Aerobatics: 1st. Claire Beringer from France; 2nd Joao Nogueira from Portugal, 3rd Bruno Silva from Portugal.
Youth Aerobatics 1st Miguel Marzán, 2nd Javier Holguera both of them from Aerosafa, 3rd Fco. José Rojas from "Club Fontanés de Aeromodelismo".
Cadet Combat: 1st Pablo Antonio Vicente, 2nd José Rojas both from "Club Fontanés de Aeromodelismo", 3rd Carlos Prieto from Valladolid.
Youth Combat: 1st Cesar Picado, 2nd Jonatán Capellán, both from Valladolid, 3rd Fco. José Rojas from Extremadura.

In general, the organization of this European Championship was brilliant. The infrastructure and facilities offered by Aerosafa to both jury and competitors were very good for this airmodelling week. Moreover, for the second consecutive time we had tours to Rueda, Peñafiel and Segovia. During these tours those that participated experienced Castilian



F2D Podium

culture and they tasted our really nice wines. The national and international media provided news coverage about the championships. They focused on Aerosafa's aim: 'get young pilots and spread airmodelling worldwide'. The European Championship finished with a very colourful closing ceremony. The prize giving was really joyful, as well as the farewell dinner, where more than 500 attendees (pilots, jury and organizers) enjoyed the end of the 1999 European Championship for Control Line Models.

AEROSAFSA would like to thank all Team Managers and contestants for their positive and helpful attitude. Quoting the words of the President of the Organizing Committee, we understand that "Aerosafa members are sportsmen, who also organize".

CIAM flyer



F2D: They are fighting, but they are friends too

First Control Line World Cup Event in the Americas

Claudio Chacon



The first Control Line World Cup event in the Americas was held in Rafaela City, Santa Fe province, Argentina on 12,13 and 14 February 1999.



Claudio Chacon, 2nd Place F2B

CONTEST DEVELOPMENT

F2A - SPEED

Unfortunately, this category was declared deserted due to the total absence of participants. Three specialists from Brazil had promised their presence in the event, but due to the delicate economic situation in that country, they declined to participate, having sent their apologies.

F2B - AEROBATICS

Six participants, five Argentines and one Russian, came to participate in this category. Remarkable and no less unfortunate was the absence of at least eight Argentinean pilots (Buenos Aires y Mar del Plata) who for different reasons couldn't come to the championships. The Russian representative, Evgeny Yakovlev, during the official training on day 12 and while executing the second square loop, destroyed his model in the air due to a structural failure or material fatigue in the inserts of the outer wing. He used, take apart wings in halves, using a special device. The fuselage splits in two halves thanks to a device similar to that used in the wings. The model, of 1700 grams of total weight, used a "Discovery Retro" engine in a prototype state (not available for sale yet), and made by Yuri Yatsenko. The running of the engine, and especially the 4-2-4 transition was simply perfect. The

crash let us look in detail at its excellent construction, curiously, it doesn't use any composite material, except some ultralight fibreglass in the front of the fuselage. All the hardware of the model (horns, bellcrank, etc) was hand made by exquisite workmanship. The finish of the plane, quite simple, was perfect. The wing (C-Tube construction) was covered in mylar and painted. In fifth place, was Roberto Rodriguez from Córdoba with his "Bananna 11" and ST.51. Mauro Fernández, showed up after a long lay off flying the "Mandinga II", nicknamed by friends "the light blue". A model that's been flying since 1986. This time with a ST.46. In third place was Sergio Vitale from Rosario, with a "Cardinal" and ST.51. Also with a "Cardinal" and ST.51 in second place was Claudio C. Chacon from Rafaela. And thanks to a smooth performance, Gabriel Cismondi from Rosario took first place with his "Giulia II" using a Jet-GMA piped, 50.

Congratulations Gabriel and congratulations to all participants.

F2C - TEAM RACING

The Brazilians showed a really good level of proficiency, and that says a lot about the 8th place won by the Mary team in the Ukrainian World championships. It wasn't just luck! Things like that don't exist in this category where the place is won with sacrifice, rigorous training and

model/engine set up. This team was flying in training at 17'80, 18'20 every ten laps. Similar results came from Wieck/Brietzke also from Brazil, both using Ukrainian Sosnowsky props on Mazniak engines of the same nationality. The local representatives Goddio/Giay had a similar velocity and at times some better, but the team and equipment didn't show the same reliability that the Brazilians had. They used Chajka engines with Sosnowsky props but of an older model than the Brazilians, Minetti/Perren, from Argentina and Senson/Rodrigues also with Chajka engines and Sosnowsky props but with less speed: 19'40 - 20'00

Saturday the 13th during model verification and arrangements for the first heat, line pull test, with 5 minutes to start, (which gave time for some training flights) the lines of the Goddio/Giay model broke passing near two timekeepers at a speed of 200KM/H. This made judges and timekeepers move further away and start their functions outside the perimeter protection fence.

After changing the model that was completely destroyed, the heat started and was won by Mary/Mary who also made the best time of the championships 3'24"37, against the untested model of Goddio/Giay that only scored 4'33"20. Second heat: Wieck/Brietzke showed quality and put a time of 3'26"14 followed by Senson/Rodrigues with 3'51"51 and Minetti/Perren who couldn't complete all laps. Third heat: The Brazilians Mary/Mary flew relaxed with the knowledge of their excellent times. Completing the heat Minetti/Perren and Goddio Giay used a third model from Russia that was very unstable. It started with Goddio/Giay leading and slowly gaining some advantage, followed by the Brazilians and with a deficient model. Minetti/Perren, during their laps, and using their leading model lost power and wasn't caught by the pitman. The heat ended without any change in times. Fifth heat: Between Mary/Mary, Wieck/Brietzke and Minetti/Perren, the last ones were surprising marks,



an incredible 3'27"19. Sixth heat: Goddio/Giay still had a theoretical possibility of improving their time. The model running 18" - 18"20, however in the first pit the model showed it's instability, slipped away from the pitman's hands and that was the end. In the case of Senson/Rodrigues the cronos never showed less than 19"50 so they had little chance. Unfortunately, the equipment didn't give this team a chance who in the South American championships of 1997 marked 3'24"32.

The final 200 laps. An instant start for the 3 teams showed the Brazilian team running away from the local team, but in a few laps the Wieck/Brietzke plane started to heat up so much so they had to land, so second place was in doubt. By the middle of the race Wieck/Brietzke had recovered second place, but the engine still had heat troubles so the local team still had a chance but in the pit the model slipped away, losing the last Argentinean hope. The first World Cup in America, left us with Mary/Mary from Brazil in the first position, Wieck/Brietzke also from Brazil in second, third Minetti/Perren from Argentina, fourth Senson/Rodrigues from Brazil and fifth Goddio/Giay from Argentina.

F2D - COMBAT

I'll say this was the strongest event of the championships, Because of the spectacular characteristics of the category (especially for the great spectators who came to the club) and because it is the first time FAI combat has been flown in Argentina at the best world level. The Russian delegation was made up of seven people, counting pilots, mechanics and team representatives. The pilots were Sergei Kolossov (ex world champion), Evgeny Yakovlev (who also participates in aerobatics) and 16 year old Volodymir Mescherekov, the only Junior in the contest. The mechanics were Yuri Moiseev and Sergei Borodavko. As team representative, Anton Kalinin who worked also as a translator. Doing field duties was, Elena Moiseeva,

Yuri's wife. All of them came from Naforominsk, a city of 350,000 inhabitants, located 150 Km. from Moscow and whose city hall took care of all the costs of travel and lodging. The Argentinean delegation was composed of Gabriel Cismondi and Sergio Vitale, both from Rosario as pilot and mechanic respectively, who had a monumental debut, considering that their opponents weren't exactly rookies. As a matter of fact, Gabriel had to fight against Sergei Kolossov in one of the rounds. Also, Argentina were represented by two Ukrainians, residents of Rafaela, Volodymir Grechko and Valeri Bashtanar, both of them experienced pilots and champions in their country. All models looked the same. They were simple flying wings with eight 3mm balsa ribs, trailing edges in pine, leading edges preformed in foam and covered in mylar. They are very solid and resists direct impact against the ground. Most of the wrecks were due to direct hits between models in flight. The props were made of fibreglass and resin with reinforcements in kevlar and carbon. Engines were from different brands, but all of them were Russian made of the highest quality in workmanship and parts. They were constructed in very limited series and

only the best were used competitively. They had a displacement of 2.5 cm³, with an average of 29,000 r.p.m., burning fuel made of 10% nitro, 20% castor oil and 70% methanol. To relate each of the 18 'dog fights' would be impossible. Just, say that all of them made an incredible show with a feverish rhythm that kept the adrenaline high in pilots and mechanics at 20 degrees on the Richter scale; without forgetting the 35°C that warmed up the event. In one word: OUTSTANDING.

Awards Ceremony

The award ceremony was held in the convention saloon of the Rafaela Apart Hotel (of recent construction), where the Russian delegation stayed. The ceremony had the presence of graphic, radio, and TV journalists. Also present was the Director of institutional relations of City Hall, who declared the Brazilians and Russian participants honoured guests. Flags and other souvenirs were given to foreign competitors. The banquet was held in the hotel's restaurant with everybody relaxed, we enjoyed the best Argentinean wines and meats. This was an unforgettable meeting without any doubt. A special thank you goes to all who in some way collaborated in the organization of this event.

A Special Visit

As a great surprise to everyone present, we had the unexpected visit of a personality within the aeronautical world: no less than Engineer. Juan Asmus, one of the fathers of the 'Walter Extra' the world famous aerobatic plane "Extra 300". Mr. Asmus is in charge of the structure and composite materials of the plane, about which he was asked many questions without mercy. All the answers were in perfect spanish. Mr. Asmus is a close friend of Claus Maikis and Uwe Degner, two great German F2B pilots. CIAM flyer



'Stress'



Control Line Youth Promotion in the Netherlands

Paul Rietbergen
Fly-By-Wire Coordinator



Paul Rietbergen giving a hand

balanced budget, as all the models that were produced were actually sold. Cooperation with groups outside the Aero Club took some getting used to: within Scouting in our country, modelling is more a way to keep youngsters occupied than a goal in itself. Mutual respect for each other's position was in those years not something that could be taken for granted, but that needed rather hard work.

The benefits, however, were so evident to me, that I found no real problems in working towards successful cooperation. Youngsters were available in large numbers in civic centres, youth groups and scouting, but youngsters within the Aero Club were generally restricted to the children of active modellers. Although quite acceptable as a starting point for any youth program, the obvious restrictions were when those youngsters reached puberty and started revolting against their parents, would in the Dutch situation, lead to a far too great a reduction in numbers to make any program viable.

In the early '90s the concept of building and flying a model in the same weekend was developed further. Production techniques were also developed to facilitate producing larger and larger quantities of models. By the end of 1994 a total of about 100 kits per year were produced.

The Models.

However, our first aerobatic-trainer became successful, soon the demand for additional models was required.

Popular amongst youngsters were beginner-models for goodyear-racing, combat and last but not least basic-carrier-deck flying.

These models were produced in proportion to demand. We started with an .09 combat model, with appropriate combat weekends, followed by the racing weekends with goodyear models.

The more modern the materials used, the more popular the models. Our models incorporated foam-wings from the start, because of ease of construction and mass production, but

Cooperation in the first years.

At first my production ideas were not widely supported. So I started without any financial backing from my personal budget. In order not to produce umpteen models that would remain unsold, I sought contact with model clubs and air scout-groups. They gave me a pretty good idea what kind of model was needed and how many would be required. Contacts from the summer camp volunteered to help me in my production efforts and soon the first "team" was underway. Our first model became an aerobatic-trainer. To prevent having to make a child-proof instruction booklet, we decided to assemble the kits during building-and-flying weekends. This to enable us to prevent any snags in the model-assembly and thus assuring maximum results. In 1989 my small group made 30 kits, of which 27 flew successfully during 3 weekends (many months later).

The cooperation with model clubs and scouting groups assured me of a

My first thoughts about developing a youth-program for control-line started during our national modelling summer camp. As a staff member for control line I noticed that my ideas about building models from drawings were in no way compatible with those of the visiting youngsters.

In spite of my professional training as a youth worker, the educational ideas I had, simply didn't match with the attention span of the youngsters. Building from plans, cutting your own materials and starting at square-one, were all ideas that I grew up with and enjoyed, but they didn't result in large numbers of flying models.

The kids at the summer camp simply wanted results fast, wanted to fly more than to build and were looking for Almost Ready To Fly-kits, that were at that time gaining in popularity in the Radio-Control trade. As the target-group for control-line was simply too small, no such kits were available in the Netherlands. So in 1989 I decided to start producing ARTF training kits.



Ideal for carrier deck



other “fancy” materials like glass-fibre reinforcing, engine shut-offs and quick-fill systems greatly enhanced junior interest.

To explain the necessity of these materials, we needed expert help. With the cooperation of the team-racing fraternity in Holland the racing weekends were a tremendous success.

Recent Cooperation.

Production of the models however, slowly proved to be too much too handle. Stocks of parts needed for all these models became too much of a burden for my personal budget.

The S.U.L. - Foundation in Utrecht, well known as organizers of the '76 World Champs, became our first sponsors and supports our team to this day. After personal support from Rob Metkemeijer, not unknown in control line circles, the Royal Dutch Aero Club decided to include our project in the Dutch Control Line Subcommittee and to fund our investments.

Also, our cooperation with Scouting Holland became more structural: more and more we came to joint activities, instead of offering two separate ones at the same venue. This not only greatly reduced organizing costs, but also the stress on man-power, though this might be a politically incorrect expression. In light of the extra burden of developing shows, this cooperation, however, was completely inevitable.

The Shows.

After 1993 the European Continent saw a terrific growth in the number of professionally organized Model - Shows. Although this phenomenon had been present in the U.K. for several decades (or more), to us on the mainland this development was totally new.

For our project, the opportunity was too good to be missed. Just imagine: an abundance of youngsters, all volunteering to come to a venue where our project will present itself!

We needed to adapt to show-circumstances, but that more or less speaks for itself.

In this light we developed hands-on-instruction. As hundreds of youngsters would be around at the same time to have their first experience of control line modelling, we had to think of a way to handle these numbers of kids properly.

Our first attempt under these circumstances took place at the 1995 World Jamboree in Holland. In two days our team managed to give 1240 youngsters their first hands-on control line flight. Evidently, flights per person were quite brief, as large queues of scouts were pressing our instructors at a tremendous rate.

Subsequent shows were attended at a more normal pace. We adapted our trainers to fly as slowly as possible, to be able to cope with indoor facilities and ceilings of around 8 metres high.

We also developed special mufflers, to relieve the strain of indoor work for the pit-crew and to facilitate verbal instruction to the youngsters. Our latest development is the shut off on our trainers. As conditions naturally vary per venue, settings aren't always predictable. In case of an adverse setting, our instructors simply shut the engine on the model and the pit-crew readjusts the settings accordingly.

Basic-Carrier-Deck and further cooperation.

FAI-classes proved to be a very hard target to pass youngsters on to. The revival of Carrier Deck, especially BCD as organized in the U.K., proved to be both an acceptable stepping stone for youngsters as well as a special interest for the team-members.

As the carrier-group in the U.K. managed by Andrew Housden was already quite organized, we gladly accepted the opportunity to work with them.

Subsequently we organized carrier events in Holland, resulting in the annual Karel Doorman Cup international competition, and helped to set up similar events in Belgium and organized them in Germany and France.

To prevent undue discussion, we accepted the existing U.K.-rules for this type of competition and worked towards general acceptance on the continent and subsequent international cooperation on adaptations when necessary.

All this from the developing philosophy amongst our team-members that contrary to common practice it is useless to re-invent the wheel and find it square and with an off-centre hole!

In '98 our team produced a series of 30 BCD-trainer models. At our last Karel Doorman Cup, 7 out of 18 participants used this model in the competition. Although our trainer is not a maximally suited competition model, 5 of these 7 models were within the top 10-placings.

Working Title.

At the end of the 90's a working title for our project was becoming more and more necessary. Control Line Youth Promotion Team of the Royal Dutch Aero Club fitted the bill, but was a bit of a mouthful.

Jokingly we came up with the name Fly-By-Wire Team, as the name rings a bell with many people and is considered quite funny in the aviation-world. This name has stuck ever since.

Logically, the next step was to be on the Internet.

Quite a few youngsters we met at the shows were active on the net and the medium seemed to suit our promotional needs.

So two of my team-members made our own home-page, which can be found on the net at www.flybywire.org and which was visited 1600 times in 1999.

E-mail facilities at our home-page greatly reduced our postal expenses, but had one adverse side-effect: I received hundreds of e-mails from all over the world from people interested in our products. Many times more requests than the amount of models we produce in a year.



Carrier deck proves popular

commercial distributor and producer. In view of the ecological awareness in western Europe, the development of viable electric power for control line is a must. Although many attempts have been made in the past, the systems power-to-weight-ratio still leaves a lot to be desired, as does the availability as a ready to use unit.

Many sites for youth clubs in Holland are in the coastal dunes area, where the use of internal combustion engines simply is not possible. Next to that some of our model shows take place in halls that are either too restricted in size or too poorly ventilated for the safe use of internal combustion engines. I'm certain that in the year 2000 our team will reach a practical solution for this problem.

Conclusion.

Our team has worked for the past decade to promote a category of modelling, that otherwise would have vanished in Holland.

We have given youngsters as good a start in an interesting hobby as humanly possible, but it's up to them whether they will continue in their development towards becoming competition pilots or not.

When they make that choice, there's a specific role for the existing competitors in the FAI-classes and a challenge as well: take a kid under your wing, however hard you may find it to cope with current normal behaviour, and enable him or her to beat you in a competition in the long run. If you don't, you'll shortly be quite sad and alone in competition circles!

CIAM flyer

Fly-By-Wire now and future developments.

In ten years of investing spare time and initially a lot of money, Fly-by-wire has grown from my own one-man-hobby-project into a totally committed ten person team of control line enthusiasts.

Together we perform our youth program of demonstrations and instruction at Model Shows all over Europe, organize events and competitions for youngsters and seniors in 1/2 A combat, beginners-stunt, goodyear-racing and Basic Carrier Deck and in the spare time that is left produce model kits for the classes above.

We sell models, engines and lots of other specialist control line parts at cost price, as we are a volunteer project from the Aero Club and not a commercial enterprise.

In general, we have a response-rate of 8 out of 1000. From every 1000 children we introduce to control line, 8 remain interested in the hobby. To us at this moment that is about our limit: from the approximately 6000 kids we reach every year, about 50 want models, which leaves only half of our normal production for the existing youth groups.

Because of these production limits, this is also the method we developed: we only supply kits to children with a genuine interest. Selling for the sake of selling would, of course, be a tremendous waste of our spare time!

Practically all the models we produce make it to the flying field and are successfully flown by youngsters. About 80% of the participants in our program is able to fly solo within two days. Internationally we work together with kindred groups and individuals in the U.K., Germany, Belgium, Luxembourg and France.

For the past few years we have looked for external producers for our model parts. Although prices are interesting in the former Soviet States, delivery is far from desirable as far as reliability is concerned.

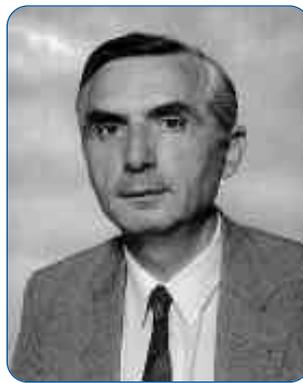
In future we will keep on looking for external producers and are quite open to offers from all over the world. Contacts via our home-page, please.

In light of the enormous international demand we are still contemplating to enlarge our production and to set up international distribution. To be quite fair: the whole project slowly is growing too large for its volunteer status.

A future step could certainly be to commercialize the production and trade part of the project or to find a



Prospective Champions



Space Models International Ranking

Srdjan D. Pelagic
Space Models S/C Chairman

Michael Zitnan from Slovakia was the most successful spacemodeller of the World in 1999 and the unofficial "test" holder of the title World Spacemodeller of the year 1999, with 718 SMIR (Space Models International Ranking) points out of seven best scores. He has entered 14 times in 5 classes and the total amount of all 14 SMIR points was 1225. Second was Stefan Mokran (SVK) with 662 (812) SMIR points, who entered 10 times in 3 classes and the third Ivan Turk (SLO) 617 (736) SMIR points, who entered 9 times in 4 classes (See Table 1 - for details of the first 16 placings).

Modellers from Poland were the most successful group of spacemodellers - 6 of them had placings in the first 16 places in test SMIR for 1999, followed by 4 spacemodellers from Slovakia and one from the UK, Italy, Lithuania, Macedonia, Slovenia and Yugoslavia.

The SMIR listing showed 261 competitor names from 20 countries. This was more than twice in the World or 2.5 times more competitors than European Spacemodelling Championships. The listing also showed interest in spacemodelling in different countries. The greatest interest was from Poland (53), Bulgaria (28) and Macedonia (23). Unfortunately, only one competitor participated from the UK, Italy and Belarus. We are also missing ladies - there were only 15: Bulgaria (5), Spain (5), Poland (3) and Yugoslavia (1). Seven classes were flown, that is the equivalent to the number of classes in World or European Championships. Open Internationals proved a good test field for promotion of new or provisional classes (S8E/P and S9A).

Further analysis showed that almost all competitors were competing in several classes - good modellers with approximately the same effectiveness. Statistics based on the first 16 competitors showed an average participation of 9 entries/competitor in 4 classes/competitor during the competition season! So SMIR proved its importance - it evaluated every score in each class, it "measured" very

precisely each score considering scores' quality, rank of the contest and competition in it (See Table 2 - review of participation in SMIR recognised contests in 1999).

My Pentium surprised me also, by throwing out the name of A. Chigak from Belarus. He was 19 in S6A in Dnepropetrovsk. He was not awarded with world cup points since he was in the lower half of the listing and Belarus was not registered there as a SM country. So, SMIR proved its importance and quality at the first step.

Spacemodellers may be really grateful to the Swedish NAC and B.O. Samuelson who proposed the rule B.2.6. International Ranking, approved by the CIAM Plenary Meeting in March 1998 and effective January, 2001. What is really International Ranking? This is a continuous classification based on results of all the open and limited international events, as well as continental and world championships and world cup contests. It may be organized by the relevant CIAM subcommittee for any of the classes recognized as world championships.

If the CIAM subcommittee chooses to run an international ranking it must; define rules and ranking formula (which must be published in the Sporting Code supplement), collect results from each competition and apply ranking formulas on them and produce and distribute updated ranking lists during the year.

The CIAM Space Models subcommittee has chosen first to run Space Models International Ranking (SMIR). It defined the rules approved by the CIAM Plenary Meeting 1999 - effective as the provisional rules for 2000. The intent of the classification is to encourage competitors to enjoy versatility of spacemodelling by flying

more than one, traditional, class and to be awarded for efforts made in the whole of spacemodelling activities during the year. All classes listed in rule 4.3 as World Championship Events for Space Models are recognised for SMIR.

All competitors in specified international contests are eligible for SMIR. All contests appearing on FAI Sporting Calendar-part Space Models, run according to FAI Sporting Code and nominated at the CIAM Bureau meeting at the end of the preceding year will be recognised for SMIR.

Points are allocated as follows:

For classes S3A, S4B, S6A and S9A:

$$B = K * \frac{(X + \log A - \log N)}{\max 10} * 100$$

For classes S1B, S5B, S7 and S8E:

$$B = K * \frac{(X = \log A - \log N)}{Y} * 100$$

- B** = points awarded to the competitor
- X** = competitor's score
- Y** = winners score
- A** = number of competitors
- N** = placing of the competitor
- K** = ranking factor of a contest where for;

- World Championships K=2
- Continental Championships K=1,5
- World Cup contests K=1
- Open International non World Cup K=0.75



The following ranking formula will be used for SMIR:

a) Points will be awarded only to competitors completing at least one flight in the contest.

b) Only one competition of the same rank for the same class may be counted from each country in Europe (taking the better score for each European country where a competitor had scored in two competitions).

c) To determine the total score up to seven events of at least two different classes will be counted by selecting a competitor's best results during the year.

d) In the event of a tie, the winner will be determined by increasing the number of events counted, one at a time until a winner is decided.

The SMIR winner earns the title World Spacemodeller of the Year. Certificates, medals or trophies, if available, may be awarded by the sub committee. Organization, communication and classification supervision will be as per World Cup contests. That means the Space Models S/C will nominate a responsible person to administer the event. Each organizer is obliged to send results of his contest to the Chairman of Space Models S/C and to the SMIR coordinator within three days after the contest has ended (e-mail

and/or fax is good for that). The current SMIR positions shall be calculated and distributed within the next seven days.

To illustrate SMIR calculations see Tables 3 and 4. Table 3 is an ordinary score list for a class with a column added for SMIR points calculated according to the formula given above. The input table must be sent to the SMIR coordinator urgently after each international contest. Table 4 is the core of the whole SMIR with scores of each entry for each competitor who made even a single official flight. Each record contains: identification number, name of the competitor, country, total points per entry, score points per entry, SMIR points per entry, placing in the class, class and contest venue. This table is a real X-ray snap shot of each and of all competitors competitors participating in international contests. It also contains total SMIR points and SMIR points for 7 best scores.

I made many tests of the SMIR procedure starting with an ancient 386 and lotus 1-2-3 as the on-field computer for making placings and SMIR input data of Table 3. I continued calculation using Excell 97 on Pentiums with Windows 95 and 98, switched to MS Access and finally concluded with a self-developed SMIR database. I hope all these versions will be available for CIAM Plenary Meeting in Lausanne, March 2000. The intention of all this work was to allow organizers and competitors to get and check SMIR on different computers

SPACE MODELS INTERNATIONAL RANKING - 1999

Test Calculation - FINAL PLACINGS of the first 16 competitors out of 261

Placing	NAME OF COMPETITOR	COUNTRY	Up to 7 Scores	SMIR Pts	Entries	Classes
1	Zitnan Michal	SVK	718,75	1225,67	14	5
2	Mokran Stefan	SVK	662,81	812,59	10	3
3	Turk Ivan	SLO	617,8	735,77	9	4
4	Pienkowski Leszek	POL	591,4	709,24	9	3
5	Mosin Vladimir	LTU	558,55	598,19	8	3
6	Kolodziej Jerzy	POL	557,21	866,45	13	4
7	Boniecki Bartosz	POL	541,18	1092,81	16	5
8	Katanic Zoran	YUG	534,87	574,64	8	4
9	Pieczka Marian	POL	525,53	526,53	7	3
10	Boniecki Jerzy	POL	511,32	516,34	8	4
11	Przybytek Krzysztof	POL	479,68	761,70	13	4
12	Mazzarachio Antonio	ITA	467,27	467,27	5	3
13	Szabo Mikulas	SVK	466,3	466,30	6	2
14	Pavljuk Vasil	SVK	441,95	475,56	8	3
15	Spasov Ilija	MKD	429,07	429,07	6	4
16	Lodge Stuart	GBR	417,02	417,02	7	4

Table 1

REVIEW OF PARTICIPATION IN SMIR RECOGNIZED CONTESTS IN 1999

(SMIR Test Calculation 1999)

VENUE	Country	Date	WORLD CUP CLASSES K=1.0			OPEN INTERNATIONAL- NON WORLD CUP CLASSES K=0.75				Number of competitors per contest
			S6A	S7	S8E	S3A	S4B	S8E/P	S9A	
OBERKULM	SUI	30.04.-02.05	15	-	9	-	-	-	-	24
BRATISLAVA	SVK	07-09.05	16	-	8	-	-	5	-	29
SAVENA	CZE	22-23.05	21	-	21	-	-	20	3	65
LIPT. MIKULAS	SVK	04-06.06	32	4	17	-	-	-	-	53
DUPNICA	BUG	03-04.07	41	-	11	37	27	-	-	116
DNIEPROPETR.	UKR	25-26.06	24	9	4	-	-	-	-	37
RYBNIK	POL	20-22.08	51	18	20	-	-	12	-	101
STIP	MAK	02-03.10	29	4	7	-	20	-	-	60
LJUBLJANA	SLO	15-17.10	46	5	12	35	28	-	-	126
Total / Class	-	-	275	40	109	72	72	37	3	608

Table 2



and in different programs in order to stimulate modellers to participate in international competitions.

A few words about the quantity of the work: input tables with all scores for 1999 were given on 18 pages, A4 format, Table 4 also contains 18 pages, and a listing of 261 competitors takes 6 pages - a real book of 42 pages. I shall try and put all this on floppies and make it available for spacemodellers at the CIAM Plenary Meeting.

Let us now think how we shall bring SMIR into practice? International ranking exists in tennis, boxing, skiing and many other sports. Its advantage is to make known to the competitors their current international standing. Competitors with higher placings shall be better treated by the media and shall easily find sponsors and support, this will lead to further improvement of the whole activity. SMIR takes into account all competitors who completed at least one official flight in international contests. So at any time there will be a list of "SM international sportsmen" for the current year with their placings.

The Space Models subcommittee shall publish test calculations based on international contests held in 1999. In 2000 provisional SMIR with current placings will be made. Thus in 2001 this will be normal procedure and have a continuous presentation of spacemodelling scores. It looks very

promising and we wish to encourage other CIAM subcommittees to define their own IR rules. We are sure it will contribute to much better treatment of aero and spacemodelling by the public and media in the coming years. *CIAM flyer*

21st LJUBLJANA CUP - WORLD CUP 1999

LJU (SLO), CLASS: S6A,

K= 1 1
A= 46 46
Max= 540 540

Placing	NAME OF COMPETITOR	COUNTRY	Class Pts	SMIR Pts
1	Mazzarachio Antonio	ITA	457	101,26
2	Mosin Vladimir	LIT	448	96,58
3	Turk Ivan	SLO	423	90,19
4	Stricelj Igor	SLO	406	85,79
5	Zitnan Michal	SVK	396	82,97
6	Katanic Zoran	YUG	390	81,07
7	Roura-Misse Albert	ESP	389	80,21

Total of competitors in S6A : 46

Table 3

SPACE MODELS INTERNATIONAL RANKING

Test Calculation 1999

ID	NAME OF COMPETITOR	Country	Points	SMIR	Placing	Class	Venue
1	Chigak A	BEL					
	Total Score			46,38			
	Best 7 Scores			46,38			
1	Chigak A	BEL	245	46,38	19	S6A	DPE
71	Lodge Stuart	GBR					
	Total Score			417,02			
	Best 7 Scores			417,02			
71	Lodge Stuart	GBR	728	81,80	5	S7	LJU
71	Lodge Stuart	GBR	729	80,15	3	S7	LIM
71	Lodge Stuart	GBR	861	75,52	11	S3A	LJU
71	Lodge Stuart	GBR	311	60,24	25	S6A	LJU
71	Lodge Stuart	GBR	313	59,72	10	S6A	OBK
71	Lodge Stuart	GBR	313	59,59	22	S6A	LIM
71	Lodge Stuart	GBR	0	0,00	28	S4B	LJU
233	Zitnan Michal	SVK					
	Total Score			1225,67			
	Best 7 Scores			718,75			
233	Zitnan Michal	SVK	2208	112,30	1	S8E	LIM
233	Zitnan Michal	SVK	1972	110,79	1	S8E	LJU
233	Zitnan Michal	SVK	1528	110,08	2	S8E	SAZ
233	Zitnan Michal	SVK	1597	109,54	1	S8E	OBK
233	Zitnan Michal	SVK	1676	109,03	1	S8E	BRA
233	Zitnan Michal	SVK	428	84,03	5	S6A	OBK
233	Zitnan Michal	SVK	396	82,97	5	S6A	LJU
233	Zitnan Michal	SVK	400	79,51	6	S6A	SAZ
233	Zitnan Michal	SVK	950	78,75	2	S8EP	SAZ
233	Zitnan Michal	SVK	389	78,64	7	S6A	LIM
233	Zitnan Michal	SVK	2611	77,30	2	S8EP	BRA
233	Zitnan Michal	SVK	654	76,72	2	S4B	LJU
233	Zitnan Michal	SVK	385	76,35	5	S6A	BRA
233	Zitnan Michal	SVK	467	39,64	28	S3A	LJU

Table 4



Saturn 1B in S7 scale
1998 World Championships - Romania

HT/S - SPACE MODELLING MILLENNIUM BUG

Srdjan D. Pelagic
Space Models
S/C Chairman

The Y2K - computer millennium bug has frightened millions of computer people, but finally appeared in practice, after 1 January 2000. Sweet like a ladybird, and harming very few computer systems. HT/S-Space Models Millennium Bug, dated 2001, may be not so sweet. HT/S stands for hobby, technical activity and/or sport - A 'tri-lemma' facing spacemodellers, their sponsors and most often the media and public.

The 'triangle' HT/S is always improperly understood - and the result is the same - lack of sponsors (reads: money) and very poor support by the media. Everyone's explanation is routine: 'You are a hobby (or a technical activity) - not a sport'. And it must be clear these days, sports attract the public and the media - and generates revenue.

It is necessary to present our activity more like a sport, or we shall lose out for decades. I realise, we enjoy presenting ourselves like 'applied scientists' or something like that, but the public do not understand this and as a result show no interest.

First dangers may be predicted, but will not become obvious until 2001. Namely - there will be no spacemodelling in the second World Air Games in Spain in 2001, the greatest airshow for coming years (only a few aeromodelling classes will be there as well). Organizers have designated our activity as boring!

Let us consider our mistakes:

- ★ Our models are too small and not attractive.

- ★ To popularize spacemodelling we often call everyone's attention to youngsters. So all this seems 'childish'. Remember WAG 1997 in Turkey when a 12 year old Spanish boy became European Champion. It looked charming, but was not a recommendation for our whole activity.

- ★ Our competitions are too long. There are too many 'tactics', so sometimes for almost one hour nothing happens in the field and just after that, ten minutes before the end of the round the whole field looks like a mass of activity, which the public may not understand.

- ★ It is very difficult for the public to realise what is going on during these competitions for two reasons: 1) rules are pretty complicated and not explained to the public in an easily acceptable way and 2) usually there are no announcers on the field so you do not know who is winning and who is losing. The scores are posted too late when the competition is over-and already 'history'.

- ★ There is almost no information about the competitors (curriculum vitae and photos) so, the media rarely mentions anything about event champions.

- ★ There are many champions, medals and cups - 14 sets of cups and medals are necessary for World Championships for Juniors and Seniors (that includes about 200 diplomas). So, prizegiving ceremonies take almost two hours, quite enough that the food at the closing banquet gets cold and drinks get warm. The value of all prizes therefore, goes down and expenses for prizes go up considerably!

The CIAM Space Models Subcommittee tried to qualify spacemodelling for the WAG 2001, but the existing rules were too rigid and an attempt to adapt them was not very successful. But, there will be a 3rd WAG...



Mr Guy Revel, CIAM media consultant gave several very useful suggestions to the committee on how to make spacemodelling "telegenic":

- ★ Competition space models must be larger.

- ★ Space models should be considered as sporting tools for spectators and the media. It is important what is done with them, not who made them and how.

- ★ Competition classes grouped so as to have one class with more tasks and possibly with more models.

- ★ Modern competition is not made for all competitors to go through all rounds with scores gained by simple addition of results in all rounds, but by progressive elimination.

- ★ The number of classes should be reduced: too many classes and too many winners only delude and degrade the value of any title and reduces the interests of TV and spectators.

What is the solution to the problem? We must change and revise our direction, approach, and attitude to popular sports.

Firstly, to make SM "telegenic", we must provide for each first class contest:

- ★ "Competitor profiles", i.e. curriculum vitae with a photo of each competitor.

- ★ Easily understandable rules for the press, TV and public.

- ★ Competition histories and statistics for each class (venues and dates of preceding contests, score lists from them, world and other records, etc).

- ★ Public address systems and skilled announcers, and easily visible scoreboards (with updated results) etc.



- ★ Precise time-tables.
- ★ Distinctive sportswear for each national team with visible start numbers, etc...

In a technical sense we must realise the following:

- ★ Spacemodelling classes are grouped in the following areas: time-duration, altitude, scale and RC rocket-glider/FF Boost gliders.
- ★ Models for junior competition classes must be inexpensive and easy to build to appeal to the masses (so models may be small), but senior competition classes must be sophisticated with bigger and very attractive models.
- ★ For these reasons the CIAM Plenary Meeting in March 2000 shall consider many new proposals to achieve "telegenic" spacemodelling in the future.

The following World Championships classes are proposed:

Juniors: S1A, S3A, S4A, S5B, S8D and S9A,

Senior: S1C, S3C, S4C, S5C, S6C, S7, S8E/P and S9C.

This will allow us to have advanced equipment onboard and to have further



Scale Models

developments and improvements in spacemodelling.

- ★ Dimensions of the models should also be changed: Event class A stays as in the present rules - minimum length 350 mm and minimum diameter 30 mm, but for subsequent classes, diameters will be increased by 10 mm, and length by 15 cm. So, class B shall be 500/40, class C - 650/50 and the highest class F - 1100/80 mm.
- ★ Spacemodels in all classes except S5 and S7, should be painted according to the paint pattern in at least three bright colours specified by each NAC for the current competition season.

There were some proposals for the new classes like: RC spot landing (A.Mazzaraccio-Italy), S6A/P-Streamer duration and precision launches - for flight duration close to given maximums of flight and reduction of points for shorter or longer flights (V.Minakov-Russia), and a completely redesigned class S2-Payload altitude, etc...

These proposals are mainly based on the contributions of co-workers of the SAPPHERE Spacemodelling Development program and some SM S/C members, but all spacemodellers are invited to contribute to the comprehensive revision of SM rules. Finally international rankings must be set up, like in other sports. That means NACs should make some selection for sportsmen participating in international contests. Also World Cup and Open International contests shall provide selection for participation in World or Continental Championships. World Cup and Open International events must occur as soon as possible on other continents where SM is already developed (for example America and Asia). Through this principle we shall eliminate "random winners (champions)". Also we may be sure that sponsors and the media will pay much more attention to sportsmen ranking higher on SMIR lists and

earning their awards under more difficult conditions.

We may be sure that the reaction by many present champions will be very reactionary. Some of them already have a habit of earning medals and cups according to the old fashioned rules and will not be happy with any change. However, life is a permanent change. So, start getting used to new habits for the good of spacemodelling.

Some things already confirm our efforts to approach spacemodelling the same as we do the other sports. There are many signs that aero and spacemodelling are more and more accepted as sports. First Sandy Pimenoff, CIAM President is also the CASI President and CIAM 2nd Vice-President Werner Groth is CASI Secretary. This is real recognition that modelling is an air-sport. Second in my own country two spacemodelling world champions (A.Ducak and B. Milanovic) earned last year two scholarships from the Ministry of Sports and joined the league of top sportsman after many years. Also I. Kolic, aeromodelling F1B & F1J European junior champion was declared Junior sportsman of the year 1999, beating soccer, basketball and other sportsman on the list of the "Sports Journal", the greatest sports newspaper, for the first time in the sporting history of my country.

So, we should realise finally, spacemodelling is a recognized air sport and we must do our best to improve it all the time, leaving behind old fashion habits. *CIAM flyer*



Impressive start of RC rocket glider in S8E class

21st Ljubljana Cup

Joze Cuden

*Photos: Nina Cuden, Stuart Lodge,
Anton Sijanec and Joze Cuden*

After the Space Modelling European Championships in Novi Sad were cancelled by the FAI due to the war in Yugoslavia, a large number of participants were expected at the 21st Ljubljana Cup at the end of the contest season. The organiser hoped many well-known modellers who are prominent in the space modelling world would attend. Almost 70 competitors from 12 countries constructed their launching devices at Kamnisko polje airfield, which can be considered a unique record. Participants from Croatia, the Czech Republic, Italy, Yugoslavia, Latvia, Lithuania, Poland, Slovakia, Spain, Switzerland, Great Britain and Slovenia took part in the competition. Such varied attendance couldn't even be found at the recent world championships; not to mention a World Cup competition! For the organiser ARK Komarov it was undoubtedly proof of the popularity of this competition. So the 21st Ljubljana Cup was the main event of the year for ARK Komarov which was celebrating its 30th anniversary.

For all the competitors it was the last opportunity in the current season to show their skills and was compensation for missed chances at the cancelled European championships. Optimal weather conditions, which are rare at Ljubljana's competition, helped the modellers to complete all six events and the show program.

The large number of competitors who entered the S3A class proved that WC categories are not the only ones that attract modellers as is the opinion of certain FAI officials. The

parachute duration class is one of those that will be most likely sharing radical rule changes in future, and it attracted some real masters of this event. Eight of them finished the match with a maximum score and entered the fly-off. For the local competitor Andrej Vrbec, of ARK Komarov, it was a day of triumph he was hardly expecting. One of the best Slovenian modellers in S3 finally stepped on the highest step of the winners podium, followed by the young Spaniard, Jordi Roura Misse, and Italian master, Antonio Mazzarachio.



Gaining three medals made Antonio Mazzarachio from Italy the most successful participant of the contest.

Boost gliders are considered as a specific class in space modelling with some specialists usually placed in top positions. Among them Antonio Mazzarachio proved again his mastery with the best score. Next was Slovak Michal Zitnan, while Jordi Roura Font of the Spanish team placed third. It was probably the first appearance of a Spanish team at a WC competition. A strong Spanish team entered the competition with ten male and female competitors, all of them experienced modellers. Slovenian veteran and S4 specialist Egon Engelsberger was kept out of the medals this time. Despite his announcement that this was his final contest, no one really believed him. However, being an experienced competitor he intends to remain a strong supporter of the Slovenian national team in future.



The final world cup competition in S6A class completed the first day of the competition. Who else could be the winner than the actual world cup winner Antonio Mazzarachio? His rivals had good reason to envy him of his success. This time Antonio was invincible. Lithuanian Vladimir Mosin won the silver and Slovenian Ivan Turk, the traditional bronze dragon.

As the contest went on at the airfield, scale judges did their job measuring and getting points for S5 and S7 scale models. Judges Milan Jelinek of Slovakia, Srdjan Pelagic of Yugoslavia and young promising referee Primoz Kuhar of Slovenia decided the winners. 787 went to Arnis Baca from Latvia for his wonderful Soyuz, while Joze Cuden and Mateja Kozjek took the lead in S5 achieving 604 points for their Nike Cajun sounding rockets.

After the fly-off in S3A on Sunday morning, the first round of S8E class started and promised to be a tough race. RC pilots of rocket gliders performed several perfect flights. There wasn't any distinctive favourite among the masters of this class. At the end only three seconds separated the winner Michal Zitnan of Slovakia and young Slovenian Ivan Turk at second place. An excellent performance helped Slovak Stefan Mokran to reach third place who was close behind Turk.



Joze Cuden placed 2nd in S5B with his Nike Cajun sounding rocket.



Mikulas Szabo and Lubica Samelova of Slovak Team inspect their Ariane 1 scale model before flight.

Scale models are considered as the 'royal' class in space modelling; true miniature astronautics. Large numbers of spectators have always admired their realistic flights. Arnis Baca could not defend his first place from the previous Ljubljana Cup. A slight malfunction during the flight stopped him from regaining the medal. It was a chance for Slovak modellers to win the top trophies. Mikulas Szabo, Lubica Samelova and Vasil Pavljuk carried out valid flights with their Ariane scale models and placed in pole positions. An outstanding appearance by Briton Stuart Lodge cannot be overlooked. It is evident that he is slowly becoming a strong rival to the rest of the gang in S7.



Stuart Lodge (GB) is attaching clips to the igniter of Vertical 1 scale model.

Slovenian modellers performed some perfect two stage flights in the scale altitude competition. There was a close final result when Andrej Vrbec out scored Joze Cuden by only one point, while Matevz Dular lagged behind. The crew manning tracking devices once again proved efficient and no tracks were lost. We wish to have such well-experienced personnel at World and European competitions, which is rarely seen.

After two days of tough competition the 21st Ljubljana Cup ended with the show programme where some strange and odd rocket flights were seen. It is always a practice to give awards to the best show models whose construction sometimes technically exceeds some contest models. *CIAM flyer*

Results of 21st Ljubljana Cup

S3A

Place	Competitor	Team	Score
1.	Andrej Vrbec	(SLO)	900 + 420
2.	Jordi Roura Misse	(SPA)	900 + 408
3.	Antonio Mazzarachio	(ITA)	900 + 391
4.	Matija Vrtacnik	(SLO)	900 + 354
5.	Andreu Palau Pera	(SPA)	900 + 269

S4B

Place	Competitor	Team	Score
1.	Antonio Mazzarachio	(ITA)	717
2.	Michal Zitnan	(SVK)	654
3.	Jordi Roura Font	(SPA)	590
4.	Esther Roura Misse	(SPA)	588
5.	Denis Grguric	(CRO)	560

S5B

Place	Competitor	Team	Scale model	Static pts.	Altitude Score
1.	Andrej Vrbec	(SLO)	dragon III	576	330,2 906,2
2.	Joze Cuden	(SLO)	nike cajun	604	301,2 905,2
3.	Matevz Dular	(SLO)	dragon III	508	141,5 649,5
4.	Mateja Kozjek	(SLO)	nike cajun	604	- 0
5.	Miha Kozjek	(SLO)	nike cajun	600	- 0

S6A

Place	Competitor	Team	Score
1.	Antonio Mazzarachio	(ITA)	457
2.	Vladimir Mosin	(LIT)	448
3.	Ivan Turk	(SLO)	432
4.	Igor Stricelj	(SLO)	406
5.	Michal Zitnan	(SVK)	396

S7

Place	Competitor	Team	Scale model	Static pts.	Flight pts.	Score
1.	Mikulas Szabo	(SVK)	ariane 3 V-12	735	155	890
2.	Vasil Pavljuk	(SVK)	ariane 3 U-12	700	147	847
3.	Lubica Samelova	(SVK)	ariane 1 I-01	675	138	813
4.	Arnis Baca	(LAT)	soyuz-T	787	0	787
5.	Stuart Lodge	(GBR)	vertical-1	638	90	728

S8E

Place	Competitor	Team	Score
1.	Michal Zitnan	(SVK)	1080 + 480 + 412
2.	Ivan Turk	(SLO)	1080 + 480 + 409
3.	Stefan Mokran	(SVK)	1080 + 480 + 405
4.	Vladimir Cipic	(YU)	1080 + 480 + 362
5.	Bogdan Makuc	(SLO)	1080 + 480 + -

International Aeromodelling Sporting Calender 2000

WORLD CHAMPIONSHIPS

2-8 July	World Aeromodelling Championship - F3J	Corfu (Greece)
12-19 July	World Aeromodelling Championship - Control Line	Landres (France)
6-12 August	World Aeromodelling Championship - F5B, F5D	San Diego (CA) (USA)
14 August	World Junior Aeromodelling Championship - Free flight	Vsechov (Czech Republic)
20-26 August	World Aeromodelling Championship - F4B, F4C	Interlaken (Switzerland)
10-17 September	13th World Space Modelling Championship	Liptovsky Mikulas (Slovak Republic)
2-7 October	World Aeromodelling Championship - F1D	Slanic Prahova (Romania)

CONTINENTAL CHAMPIONSHIPS

29-30 April	European Aeromodelling Championship - F3D	Sumperk (Czech Republic)
15-24 June	3rd Combined Asian-Oceanic Aeromodelling Championship - F3A	Singapore (Singapore)
18-22 June	European Aeromodelling Championship - F1E	Cluj Napoca (Romania)
19-24 August	European Aeromodelling Championship - F1A, F1B, F1C	Buzau (Romania)
19-26 August	European Aeromodelling Championship - F3C	Assen (Netherlands)
2-9 September	10th European Aeromodelling Championship - F3A	Othée (Belgium)