



ORGANISATION SCIENTIFIQUE
ET TECHNIQUE INTERNATIONALE DU VOL 'A VOILE
- O.S.T.I.V. -
INTERNATIONAL SCIENTIFIC AND TECHNICAL
ORGANISATION FOR GLIDING
(Affiliated Member of the Fédération Aéronautique
Internationale, F.A.I.)

President: L.M.M. Boermans

Delft, 25 August 2014

Fédération Aéronautique Internationale (F.A.I.)
108th FAI General Conference, Pattaya, Thailand
14 – 18 October 2014

REPORT ON THE ACTIVITIES OF THE INTERNATIONAL SCIENTIFIC
AND TECHNICAL ORGANISATION FOR SOARING FLIGHT (OSTIV)
for the period October 2013 to October 2014.
Loek M.M. Boermans, President of OSTIV.

XXXII OSTIV Congress

The main event of the reporting period was the **XXXII OSTIV Congress**, held from 30 July to 6 August 2014 at Leszno, Poland, at the site of the 33rd FAI World Gliding Championships 2014 in the 15m, 18m and Open Class.

At the **Opening Ceremony** of the Congress in the Briefing Hall on the glider airfield, the following Awards were presented:

The **OSTIV Plaque and Klemperer Award** was awarded to Prof. Dr.-Ing. Fred Thomas for “his tremendous contribution to the entire world of the fundamentals in sailplane design, and also in keeping sailplane technology in public attention as one of the basic techniques supporting aviation progress”.

The **OSTIV Prize and Morelli Award** was awarded to Walter Binder “for his significant contribution to the development of retractable power plants for sailplanes”.

The **Mertens Award** for the best student contributions at the congress was given to Andreas Reeh for his presentation on the technical subject “Analysis of unsteady inviscid flow effects on a natural laminar airfoil in flight through turbulence” and to Kamile Uysal for her presentation on the meteorological subject “The formation of urban heat island in Eskisehir”.

The **OSTIV Diploma** for the best technical paper presented at the XXXI OSTIV Congress in Uvalde, USA, 2012, was given to John J. Bird and Jack W. Langelaan for their paper “Spline mapping to maximize energy exploitation of non-uniform thermals”.

The **OSTIV Diploma** for the best meteorological paper presented at the XXXI OSTIV Congress in Uvalde, USA, 2012, was given to Prof. Emeritus Dr. Edward Hindman for his paper “An on-line meteorological self-briefing system for glider pilots”.

The **keynote lecture** titled „Around the world with a Solar Powered Aircraft” was presented by Hannes Ross, member of the Solar Impulse Team.

During the following 5 days of the **Congress**, 29 papers of good quality were presented in the **Technical and Meteorological Section** of the Congress, dealing with aerodynamics, flight

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mechanics, design and development, instruments, crashworthiness, materials, fatigue, and weather forecasting, nowcasting, convection, mountain waves, thermal waves, microburst, urban heat island and atmospheric gravity.

In the **Open Section** on the evening of the restday of the competition on 5 August, for everybody to attend, the Director of the Mountain Wave Project René Heise presented his lecture “The Mountain Wave Project – Himalaya Research Expedition”.

At the daily **briefings** the President informed the pilots and crew members about the OSTIV activities that day and referred to the short summaries of the daily lectures on the new OSTIV website. On the last day of the Congress the President thanked the WGC organisation for their hospitality.

After a review process the papers presented at the Congress will be published in the forthcoming quarterly issues of OSTIV’s International Journal of **Technical Soaring**.

At the **Closing Dinner** the President of OSTIV thanked Krzysztof and Magdalena Jakubowski for their local assistance in the organisation of the congress and excursion, and in particular Britta Schlenker for her indispensable help in organising the Congress to run smoothly.

OSTIV Speaker Track

Following the success of the previous **OSTIV Speaker Tracks** at the Convention of the Soaring Society of America in Little Rock (2010), Philadelphia (2011) and Reno (2012), OSTIV’s Honorary Member Bernald Smith organized another successful OSTIV Speaker Track with 17 lectures at the SSA Convention in Reno, USA, from 27 February to 1 March, 2014.

Keynote speaker at the OSTIV evening was Mark Stucky of Scaled Composites with a lecture titled “Flight Testing from Hang Gliders to SpaceShipTwo”.

Extraordinary OSTIV General Conference

At the OSTIV Board meeting on 1 August 2014 in Leszno, Poland, the Board of OSTIV decided to have an **Extraordinary General Conference** at a suitable moment during the next annual IGC meeting 2015 in Lausanne. Main items of the agenda will be voting of the Active Members of OSTIV (National Aero Clubs) on some changes of the Constitution, on an increase of annual subscription fees and on the election of a new OSTIV Board.

Panel meetings

The **Sailplane Development Panel (SDP)**, chaired by Helmut Fendt, had its annual meeting **2013** at the premises of Airbus, Toulouse, France on 9 and 10 October 2013. Items discussed were:

- an update on the implementation of “6% for Safety“. After discussing the practical problem of selecting a winner for the OSTIV Safety Award at the two previous World Gliding Championships, the Panel concluded that the Award should only be given when there is a pilot who has clearly made a most outstanding contribution to safety within the context of the competition.

- to improve safety of winch launching, the panel discussed a preliminary table of maximum acceleration and cable force for the winch driver, the position of the tow hook release handle, and an airbrake locking device (Piggot hook).

- other subjects: the fruitful cooperation between OSTIV and EASA, Flarm antenna installation, electric and jet propulsion system, energy absorbing seat cushions, spine shell back protection, simulation models for pilot training, and ageing pilots.

The **Sailplane Development Panel** had its annual meeting **2014** at the two days before the World Championships and XXXII OSTIV Congress in Leszno, Poland, on 28 and 29 July 2014. Items discussed were:

- the reorganisation of EASA and consequences for the cooperation with OSTIV. The old rulemaking directorate has been dissolved, CS-22 belongs to the new General Aviation Department within the Certification Directorate, but the same persons are the focal points for rulemaking and CS-22. EASA promotes a new “GA roadmap” under the motto “simpler, lighter, better rules”.

- other subjects: the OSTIV Safety Award, the new special conditions for electric propulsion, the spinning requirements in CS-22, the winch launch table, the availability of a document on construction materials, devices for pilot location after a crash, and the impact of UAVs on the existing aviation activities like air-sports and private flying.

The **Training and Safety Panel (TSP)**, chaired by Ian Oldaker, had its bi-annual meeting on 25 and 26 October 2013 in Lasham, UK. Items discussed were:

- accident review and trends by country, accident database, Safety Expert Group of FAI, Instructor Standards, Stall Warning System, EASA requirement for clubs to be certified as an Advanced Training Organisation, Disable Flying, progress on Standard Operating Procedures,
- and the subjects discussed by the Sailplane Development panel as well: update on the implementation of “6% for Safety”, ageing pilots, simulation models for pilot training, energy absorbing cushions, Flarm antenna installation.

The **next meeting** of the **SDP** will be in October 2015 at the Wasserkuppe, near Poppenhausen, Germany. If facilities allow, the **TSP** will meet there too and have a **Flying Training Seminar**. The meetings are separate, and followed by a joint meeting to discuss items of mutual interest.

The **Meteorological Panel (MP)**, chaired by Prof. Dr. Zafer Aslan, had its annual meeting on 20 and 21 September 2013 at the WMO Regional Training Center, Alanya, Turkey. The event was supported by 3 universities, the Turkish Aeronautical Association and Turkish State Meteorological Service. Fifteen papers were presented on subjects as atmospheric convection, solar radiation, thunderstorms, mathematical modeling and computer simulation, soaring weather forecasting, radar and satellite products, tourism activities related with aero-sports.

The **next meeting** of the MP is planned in February 2015 at the ZAHW Zurich University of Applied Sciences, Winterthur, Switzerland.

Acknowledgements

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This is my last report to the FAI General Conference. After 37 years Board Member of OSTIV, of which 18 years as President of OSTIV, I will resign at the next Extraordinary OSTIV General Conference, to be held at a suitable moment during the annual meeting of the International Gliding Commission on 27 and 28 February 2015.

The new Board has to be elected at this Extraordinary OSTIV General Conference by the Active Members (National Aero Clubs) of OSTIV. I strongly recommend to elect Prof. Dr.-Ing. Rolf Radespiel (TU Braunschweig, Germany) as my successor, as well as the new Board members proposed by the present Board of OSTIV. I am absolutely confident that OSTIV will be in the best hands of this new Board.

I take this opportunity to personally and officially thank:

- my Faculty of Aerospace Engineering of the TU Delft for supporting my work for OSTIV, and my colleagues for their assistance in the wind tunnel experiments and support of my contributions to the design of more than 20 high performance sailplanes,
- FAI and IGC for the good relationship with OSTIV, making it possible for the experts of the OSTIV Panels to contribute on the highest level to
 - the safety of the gliders via the work of the Sailplane Development Panel, in particular the elaboration of the airworthiness requirements,
 - the safety of gliding via the contributions of the Training and Safety Panel to the IGC and FAI Safety Expert Group,
 - the research and prediction of the phenomena in the atmosphere like thermals, mountain and thermal waves, and micro-lift via the contributions of the Meteorological Panel,
- and not the least to the Board of OSTIV, the Chairmen of the Panels and Sections, the Chief Editor, the Publication Manager, the Webmaster, and all experts of the Panels for their voluntary contributions to the work of OSTIV, all for the benefit of our beautiful sport of gliding, worldwide.