THE GLIDING FEDERATION OF AUSTRALIA INC

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FAI LILIENTHAL AWARD – Mr Alan Patching

The Gliding Federation of Australia respectfully submits the following recommendation for consideration by the International Gliding Commission.

RECOMMENDATION:

In recognition of his extensive and substantial contribution to glider airworthiness and sailplane fatigue life in particular, the Gliding Federation of Australia (GFA) recommends Alan Patching (OAM) as a very deserving candidate for the FAI LILIENTHAL AWARD.

ACHIEVEMENTS

Alan Patching has been active in gliding for over sixty years and was involved in glider construction and airworthiness matters from the very beginning. Official positions held by Alan include:

1976 - 1996	Member of OSTIV Sailplane Development Panel (SDP)
1985 - 1999	Board member of OSTIV
1965 - 1996	Australian representative to OSTIV
1985– 1992	Program Manager, Janus fatigue testing at Royal Melbourne Institute of Technology (RMIT).
1964 - 1969	GFA Chief Technical Officer – Airworthiness
1974	Technical Services Team, World Gliding Competitions, Waikere
1987	Technical Services Director, World Gliding Competitions, Benalla

Alan Patching has authored (and co-authored) some fourteen papers on gliding, with an emphasis on fatigue matters. A listing of these papers is attached including details of the forums where Alan has presented them.

Alan was awarded the Order of Australia (OAM) in 1992 which recognised his services to gliding in Australia.

OUTCOMES FOR THE GLIDING COMMUNITY

Alan Patching has maintained an intensive study of, and interest in, glider airworthiness over Forty years and made a significant contribution to the knowledge of glider structures and Fatigue, providing a significant contribution to life extension of GRP gliders. Particular highlights and outcomes from this research include:

- Early recognition of the potential for fatigue failure in Blanik gliders
- Extended fatigue testing of a Janus glider wing at Royal Melbourne Institute of Technology which required significant technical expertise and provided an important contribution to the extension of the operational life of GRP gliders. **This work has been of lasting value to the gliding community throughout the world.**
- Development of fatigue design requirements as part of OSTIV standards
- Chairman of Crashworthiness sub-committee, OSTIV SDP
- Director of the GFA National Gliding School for 16 years

Since 1992 Alan has been involved in the formation of the Australian Gliding Museum and supervising the restoration of a number of airframes to either static or flying condition, including :

- Seminars on the fatigue of structures and timber repairs,
- Providing an advisory role to the GFA in regard to the airworthiness of the older fleet of aircraft.

REFEREES

We refer you to the letters of support for Alan from Gerhard Waibel and Richard H Johnson (attached).

At the age of 82 years Alan recently completed his 9,000th flight in a glider and continues to be an active glider instructor and tug pilot.

The GFA recommends Alan Patching as a most worthy recipient of the FAI Lilienthal Award

Yours sincerely,

Terry Cubley
IGC, Australia

LETTER OF SUPPORT ***(GERHARD WAIBEL)***

A great part of his life C. Alan Patching devoted to sailplanes and to old ones in particular. In doing so he transferred knowledge and expertise on material fatigue gained in his professional life as an aeronautical engineer into the soaring world.

By measuring a load spectrum applicable to sailplanes operated in Australia he could help to remarkably increase the life time of metal sailplanes.

The sailplanes made from fibre reinforced plastics attracted Alans interest from their appearance in Australia. Because of the unusually high usage of sailplanes in that country the possible fatigue of the new materials became an urgent issue for modern sailplanes. By co-ordination of research work in that subject in Australia and Europe he became an expert who in the same period chaired the "Fatigue Subcommittee" of OSTIV (Organisation Scientifique et Technique Internationale de Vol a Voile) which in the larger Sailplane Development Panel adapted the text proposed by the sub-committee as the Fatigue Requirement of the OSTIV Airworthiness Standards OSTIVAS.

The fatigue requirements laid down in OSTIVAS are such that they are not an undue burden to the sailplane designers and manufacturers but ensure, that the fatigue problem of sailplanes is adequately monitored.

C. Alan Patching was the first of the fatigue experts who distributed the news, that fibre reinforced plastics are less prone to fatigue than metals at the stress levels used in sailplane design and even more important, that fatigue problems may be recognised by appropriate inspection intervals early enough, so that catastrophic failure can be avoided.

Because of his engagement in considerably extending the service life of sailplanes FAI should consider an appropriate recognition.

Gerhard Waibel, sailplane designer

Bad Hindelang, 20 December 2005

----- Original Message -----

LETTER OF SUPPORT ***(Richard H. Johnson)***

I will be very happy to write my recommendation for Alan (Patching).

I have known Alan Patching since he came to Texas 35 years ago to assist General Dynamics with the production of the Australian F-111 fleet of military aircraft. He is one of the best friends to the soaring world that I have ever had the privilege to know. He has for many years been both a fine gliding instructor and an outstanding aircraft engineer, and one of the best club members that any club could hope to have.

His work toward developing structural fatigue life criteria for modern sailplanes is far reaching. I was most impressed to witness his ongoing fatigue testing of a composite sailplane wing in a Melborne laboratory some 10 years ago. He has worked tirelessly to advance the development of safety related criteria for sailplanes. I can wholeheartedly recommend Alan for the Lilienthal Award.

Sincerely,

Richard H. Johnson

PUBLICATIONS AND PAPERS RELATED TO GLIDING BY ALAN PATCHING

July 1970	Establishing the Integrity of Ageing Gliders OSTIV Publication XI (Co-author, G Strickland)
Nov. 1976	Design and Airworthiness Requirements for Gliders University of NSW, Light Aircraft Symposium
July 1978	Fatigue Life Considerations for Gliders Operated in Australia OSTIV Publication XV (Co-author, G Esson)
1981	Two seater glider flight test evaluation OSTIV Publication XVI
October 1998	RMIT Composite Sailplane Fatigue Program 'Aerospace 88', Royal Aeronautical Society, Sydney (Co-author, D R Collyer)
August 1990	Fatigue Life Substantiation of Composite Sailplane Wings International Conference on Structural Advances in Testing & Design, Bangalore (Co-authors, Lincoln A Wood, Murray L Scott)
October 1991	Fatigue Testing of a GFRP Wing XXII OSTIV Congress, Uvalde, Technical Soaring Vol 15, No 4, October 1991 (Co-author, Lincoln A Wood)

PUBLICATIONS AND PAPERS RELATED TO GLIDING BY ALAN PATCHING

August 1991	Fatigue Performance of a Repaired GFRP Sailplane Wing (not published) Aircraft Damage Conference, Civil Aviation Authority, Canberra (Co-author , Lincoln A Wood)
June 1993	Fatigue Behaviour of a Glass Fibre/Epoxy Glider Wing ICAF Symposium, Stockholm (Co-authors, A Loh, N Miloshskin, Lincoln A Wood)
March 1993	Fatigue Behaviour of a Repaired GFRP Wing Structure PICAST2/AA6, Melbourne, Institute of Engineers Australia, National Conference Publication No 95/1 (Co-author , Lincoln A Wood)
March 1995	Fatigue Testing of a Repaired Janus Glider Wing Report TR95/01, RMIT Sir Lawrence Wackett Centre for Aerospace Design.
November 1996	GFRP Glider Fatigue Project – Final Report Report TR96/04, RMIT Sir Lawrence Wackett Centre for Aerospace Design. (Co-author, A Loh)
January 1997	Ageing GFRP Glider Structures (not published) SSA Soaring Convention, Dallas
July 1997	Further Fatigue Testing of a GFRP Wing XXV OSTIV Congress, St Auban Technical Soaring, July 1997 (Co-author, Lincoln A Wood)