FEDERATION AERONAUTIQUE INTERNATIONALE

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NOMINATION FORM

THE ANTONOV DIPLOMA

(for technical innovation(s))

From NAeC : British Model Flying Association

Address : Chacksfield House, 31 St Andrews Road,
Leicester, LE2 8RE

Date : 3rd November 2005

Country : United Kingdom

(only one person from a country may be nominated annually by that candidate's National Aero Club)

BMFA SECRETARY

Name of Nominee : Bernard Hunt

Address : 4 Ashfield Avenue
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West Yorkshire HD8 9BW

DESCRIPTION OF TECHNICAL INNOVATION(S) - Please Print

By profession, Bernard Hunt was an industrial chemist working as a manager in R & D and by applying an analytical approach to designing and flying 'microfilm' models, he changed the way these aeroplanes are constructed, made and flown. It would be hard to find another example where one person has had such a wide influence on a particular aeromodelling discipline.

Bernard pioneered research into both the theory and practice of many aspects of indoor flying. He is best known for the development of unbraced class F1D models but has also made important contributions to the testing of the mechanical properties of balsa wood, the measurement of the energy storage of rubber, the use of computer programmes to predict flight performance, and the design of variable pitch propellers. In 1980, together with Dave Pym, he was the first person to use variable pitch propellers successfully at World Championship level. He has left a legacy of widely used model design features and test methods that are still current today.

Probably his most familiar "invention" is that of the unbraced class F.1.D duration model. The standard practice in F1D for 40 years was to build wings with integral cabane struts, wing posts and bracing wires. This meant inherently fragile models needing large model boxes, which could not be hand-carried on board aircraft and so were stored in the hold with a high risk of damage. In the early 1990s, Bernard devised a much simpler unbraced, cantilevered wing structure, which gave more durable models that could be packed in small boxes, acceptable as cabin luggage on airliners. Virtually all indoor duration models including F1D's are now unbraced.

Unbraced models require wooden wing spars that are extremely stiff. In collaboration with others, Bernard devised a simple and practical method for measuring the stiffness coefficient of indoor balsa wood. He did this by adapting the Euler buckling test, well known to engineers. Serious competitors now universally use this method to evaluate spar material and one supplier of indoor wood stamps each sheet with a stiffness rating.

Although variable pitch propellers had been tried on indoor models before, Bernard led the initial development and refinement of a practical, and most crucially adjustable variable pitch mechanism and this in turn fuelled further design advances in other parts of the world. Many F1D modellers, particularly in Europe currently use hubs based on one of Bernard's design drawings.

Due in no small part to his analytical methods, Bernard has had great success in many different indoor classes, both in Great Britain and overseas. He was a strong competitor in 5 F1D World Championships and in medal winning British Indoor Teams in several different countries.

Importantly, and above all else, Bernard has made his ideas, theories, concepts and designs freely available to others by publishing many plans and articles..

NAeC Signature

(President or Secretary General of nominating FAI National Aero Club)

(must be submitted to the FAI Office by November 15)