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**ROYAL
AERONAUTICAL
SOCIETY**

Newsletter

Dedicated to Advancing Aeronautical Art, Science and Engineering



MELBOURNE BRANCH ISSUE : AUGUST



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YEAR: 2011

Editorial Desk

I am very excited in presenting the August Newsletter to you. The reason being in this edition we speak to you about our upcoming Hargrave lecture and dinner. I am sure you all have been waiting for this.

In recognition of Lawrence Hargrave, we bring you Ian Honnery who will be presenting on the topic 'Mighty Things From Small Beginnings' at the 2011 Hargrave Lecture/Dinner.

We also speak to Jesse McCarthy who was currently awarded RAeS Award and is currently undertaking PhD in aerospace engineering.

And in our regular sections, we hear from regulatory bodies highlighting the changes within the aerospace and aviation industry in Australia, with an update on ICAS – call for papers, and the latest news from industry and government.

Warm regards
Amit Menghani

2011 HARGRAVE LECTURE/DINNER

IAN HONNERY

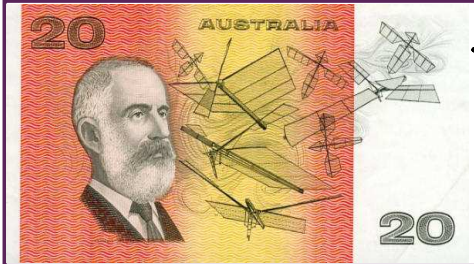
MIGHTY THINGS FROM SMALL BEGINNINGS

— [TUESDAY 27 SEPT. 2011] —

2011 HARGRAVE LECTURE/DINNER

IAN HONNERY

MIGHTY THINGS FROM SMALL BEGINNINGS GROW



TUESDAY 27 SEPT. 2011

VENUE: RYDGES MELBOURNE

ADDRESS: 186 EXHIBITION STREET, MELBOURNE

TIME: 6:00 PM FOR A 6:30 PM START



Ian Honnery is Chief Executive, and a member of the Boards, of Aerospace Maritime and Defence Foundation of Australia Limited and its affiliates, Aerospace Australia Limited, Aviation Development Australia Limited and Maritime Australia Limited. Ian has been the Chief Executive for the biennial Australian International Airshow and Aerospace & Defence Exposition held at Avalon Airport for ten shows held since the inaugural event in 1992.

Originally a lawyer by profession, Ian was in private legal practice for 28 years before taking up his current full-time position. He also served in the RAAF Specialist Reserve for 25 years and is currently chair of the Australian Aerospace Industry Forum.

Ian has received several awards for his service to Australian aviation, including the Oswald Watt Gold Medal and the Paul Tissandier Diploma. He holds the inaugural R C "Bill" Adams Award presented by the Aircraft Owners and Pilots Association of Australia and was installed by Rotary International as a Paul Harris Fellow. He was made a Fellow of the Australian Aviation Safety Foundation in 2007 and in 2009 he was the recipient of the Terry Kelly Memorial Award presented by the Australian Industry & Defence Network.

A graduate of the University of Sydney with degrees in Law and in Arts (majoring in Economics and Government), Ian Honnery is a Member of the Australian Institute of Company Directors, a Fellow of the Australian Institute of Management and a Fellow of the Royal Aeronautical Society.

Registration: We strictly require registrations for security purposes.

Website Registration: [Register Here.](#)

Contact: Cynthia Chen on 0423 733 129 or cchen148@gmail.com

Dinner Reservation and Payment Slip

Please include this slip with your cheque if registering by mail

Non-members: \$80 | Members: \$60 | Student Members: \$45

Name(s): _____

Phone: _____

Email: _____

Total Amount (\$): _____

Membership Number: _____

Payment Details

Cheque (to "Royal Aeronautical Society, Melbourne Branch")

Visa MasterCard American Express

Total Amount (\$): _____

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Bad Weather Can Be Fatal

The lessons from tragic accidents following flight into cloud or poor visibility are often ignored or forgotten. Some pilots who are only qualified to fly when visibility is good (visual flight) remain exposed to significant risk of a fatal accident. To fly in cloudy or foggy conditions, pilots need an instrument flight rules rating and attempting to fly Visual Flight Rules (VFR) in bad weather conditions can prove to be fatal.

With 14 fatalities in the past five years, general aviation accidents involving visual flights entering cloud remain a significant concern in aviation safety. These accidents were all the more tragic because they were avoidable. The dangers of flying VFR into Instrument Meteorological Conditions (IMC) have long been recognised, yet VFR pilots still fly into deteriorating weather and IMC. Weather does not always act as the forecast predicts.

If the weather starts to deteriorate, unqualified pilots should make an early decision to turn back or divert before they are caught in cloud.

“Accidents involving Visual Flight Rules Pilots in Instrument Meteorological Conditions” is the latest in the ATSB's Avoidable Accidents series. It highlights the dangers of unqualified pilots flying into deteriorating weather.

Before they take-off pilots need to carefully plan their flights and get up-to-date weather forecasts. If there's any doubt, don't fly. “Accidents involving Visual Flight Rules Pilots in Instrument Meteorological Conditions” presents case studies on the dangers of flying visual flight rules in bad weather. It focuses on the key safety lessons learnt from each of these cases and describes strategies for pilot to avoid the dangers of flying into adverse weather conditions, including:

- pre-flight planning
- considering alternate plans in case of an unexpected change in the weather
- making timely decisions to turn back or divert

using a 'personal minimums' checklist to help control and manage flight risks, including marginal weather conditions.

Source: ATSB

Improved Standards for Aviation

Australia's aviation maintenance industry has a new set of safety standards. A suite of new maintenance regulations came into effect on Monday 27 June 2011. CASA says that the regulations will deliver a clearer focus on safety outcomes, while allowing maintenance organisations flexibility in the way they conduct their operations. CASA also says that maintenance organisations will also now work to a set of rules more closely aligned with other leading aviation nations, which can reduce the complexities of doing business in the international aviation market, improving Australia's competitive edge in the world air transport industry.

The new maintenance suite is a group of rules included in the Civil Aviation Safety Regulations. They cover Part 42, Part 145, Part 66 and Part 147. More than 7000 licensed aircraft maintenance engineers (LAMEs) have been issued with new licences under Part 66 of the regulations. Eligible LAMEs have retained their existing rights to work on aircraft and CASA has undertaken a rigorous transition process to make sure the new licences accurately show their privileges. For more information: www.casa.gov.au

IAN HONNERY

Ian Honnery is Chief Executive, and a member of the Boards, of Aerospace Maritime and Defence Foundation of Australia Limited and its affiliates, Aerospace Australia Limited, Aviation Development Australia Limited and Maritime Australia Limited.

Originally a lawyer by profession, Ian was in private legal practice for 28 years before taking up his current full-time position. He also served in the RAAF Specialist Reserve for 25 years and was an active member of the aero club movement, playing a prominent role in the development of the successful Schofields Flying Club in western Sydney. He is currently chair of the Australian Aerospace Industry Forum.

Ian has received several awards for his service to Australian aviation, including the Oswald Watt Gold Medal and the Paul Tissandier Diploma (issued by the Federation Aeronautique Internationale). He holds the inaugural R C “Bill” Adams Award presented by the Aircraft Owners and Pilots Association of Australia and was installed by Rotary International as a Paul Harris Fellow, in recognition of services to aviation and, in particular, the staging of the Australian Bicentennial Air Show in 1988. He was made a Fellow of the Australian Aviation Safety Foundation in 2007 for services to Australian aviation and in 2009 he was the recipient of the Terry Kelly Memorial Award presented by the Australian Industry & Defence Network for his contribution to the promotion of SME's in the defence industry.

A graduate of the University of Sydney with degrees in Law and in Arts (majoring in Economics and Government), Ian Honnery is a Member of the Australian Institute of Company Directors, a Fellow of the Australian Institute of Management and a Fellow of the Royal Aeronautical Society.

ALL ABOUT THE ATLANTIS

NASA's fourth space-rated space shuttle, OV-104 "Atlantis," was named after the two-masted boat that served as the primary research vessel for the Woods Hole Oceanographic Institute in Massachusetts from 1930 to 1966. The crew also used the first electronic sounding devices to map the ocean floor.

Atlantis was completed in about half the time in man-hours spent on Columbia. This is largely attributed to the use of large thermal protection blankets on the orbiter's upper body, rather than individual tiles requiring more attention.

Weighing in at 151,315 pounds, Atlantis was nearly 3.5 tons lighter than Columbia.

On Oct. 3, 1985, Atlantis launched on her first space flight, STS 51-J, with a classified payload for the U.S. Department of Defense. The vehicle went on to carry four more DOD payloads on later missions.

Atlantis also served as the in-orbit launch site for many noteworthy spacecraft. An impressive array of onboard science experiments took place during most missions to further enhance space research in low Earth orbit.

Starting with STS-71, Atlantis pioneered the Shuttle-Mir missions, flying the first seven missions to dock with the Russian space station. When linked, Atlantis and Mir together formed the largest spacecraft in orbit at the time. On STS-79, the fourth docking mission, Atlantis ferried astronaut Shannon Lucid back to Earth after her record-setting 188 days in orbit aboard Mir.

The most significant upgrades and new features included:

- Installation of the drag chute
- New plumbing lines and electrical connections configuring the orbiter for extended duration missions
- New insulation for the main landing gear doors
- Improved nosewheel steering
- Installation of the Multifunction Electronic Display System, or "glass cockpit"

Source: NASA

Safeskie's Aviation Safety Conference

The 10th biennial Safeskie's Aviation Safety Conference will be held on Wednesday 26 and Thursday 27 October at the Hyatt Hotel in Canberra. It will be preceded by the Ansett Memorial Lecture 2011, which will be a joint presentation by Australian astronaut Dr Andy Thomas and his wife, fellow astronaut Dr Shannon Walker.

The conference will open on the Wednesday with a presentation by the Safeskie's Aviation Policy Group, which comprises: Mike Mrdak, the Secretary of the Department of Infrastructure and Transport, Air Marshal Mark Binskin, Chief of Air Force, John McCormick, Director of CASA and Greg Russell, CEO of Airservices Australia.

Other high-profile speakers invited to contribute include:

- Kevin Humphrey, Director Safety Regulation, Irish Aviation Authority
- Martin Dolan, Chief Commissioner ATSB
- Dr Kathy Abbott, NASA Ames/FAA project
- Group Captain Alan Clements, Director Defence Aviation and Air Force Safety
- Lt Col Raymond E King, USAF
- Yanick Malinge, Head of Safety Airbus
- Greg Marshall, BHP Aviation, BARS Program Manager
- Vince Galotti, Deputy Head, Air Navigation Bureau, ICAO

Safeskie's has a theme for each of its conferences, but the story that they most want to get across is that aviation safety doesn't happen by accident. Safeskie's is not about "talking heads talking to talking heads", it is a conference that is accessible by, and of interest to, anyone working in aviation at any level. Hence, the target audience of the conference is the people who need most to come, which is not heads of departments, but staff in the third and fourth level, working on anything to do with aviation.

For more information: www.safeskie'saustralia.org

Impact of Aviation on Environment

An international flight from Abu Dhabi and Sydney will take to the skies this weekend to demonstrate how improved air traffic management can reduce the impact of aviation on the environment. As part of the Indian Ocean Initiative to Reduce Emissions (INSPIRE) program, Airservices air traffic controllers, in cooperation with other air navigation service providers and airports in the region, will use technological innovation and best practice air traffic procedures during every phase of the flights, from gate to gate.

Virgin Australia flight VAU30, operated by a Boeing 777-300ER, will be given an unrestricted taxi and take-off when it leaves Abu Dhabi at 10.55am (local) on Saturday. The flight will then be given an uninterrupted climb to its initial cruise level, touching down at Sydney Airport at 6.20am on Sunday.

The INSPIRE flight aims to demonstrate efficiencies that can be achieved within the current Arabian Sea and Indian Ocean air traffic management environment by removing controllable system constraints as far as is practicable.

The reduction in emissions demonstrated through the INSPIRE program will serve as a basis for establishing a credible emissions reduction target level.

Results from the INSPIRE program will be used to establish a program that could ultimately lead to the achievement of these emissions savings on an ongoing basis.

Source: Dominic Perry, Flight Global.

ICAS»2012

23-28 SEPTEMBER BRISBANE AUSTRALIA



28th Congress of the International Council
of the Aeronautical Sciences



CALL FOR PAPERS



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Please submit your abstract online at
www.icas.org **before** August 21st, 2011

RAeS Australia

We thoroughly encourage people who are not members of the RAeS to join the Society. Membership of the Society gives you worldwide professional recognition and the right to use post nominal designations at the appropriate grades.

Aerospace International is the Society's monthly magazine packed with in-depth news, topical articles, conference reports, and is delivered to all members free of charge. Valuable Professional Development is derived from the Society's international Conference and Lecture Program. The Society attracts high profile delegates and speakers from a wide range of backgrounds – industry, government and academia, in both civil and military arenas.

The Society provides numerous opportunities for networking and exchange of views with other likeminded professionals.

Q & A with Jesse McCarthy



Originally from Canada, Jesse McCarthy came to Australia 4.5 years ago to study Bachelor's Degree in Aerospace Engineering at RMIT University.

He was recently awarded the RAeS award and we spoke to her about her achievements.

He is currently undertaking a PhD in Aerospace Engineering doing some aerodynamics work for an energy-harvesting project and aspires to work in this field.

What made you choose engineering?
I always loved aircraft and anything that flew, so Aerospace engineering was an obvious choice for me!

What makes you laugh?
Probably more a matter of who...my roommate is hilarious!

What motivates you?
I have learned that Doing A Little Extra (D.A.L.E.) makes one stand out. This is what motivates me.

What movie or book had a big impact on you?
Schindler's List.

What was one of the best decisions you've made?
To stop making my own decisions and yielding to the One who actually has the best life for me.

What do you do on weekends?
Saturdays, usually work a bit if needed or just relax with friends. Sundays, I am in Church!

What is your passion outside engineering?
Seeing people get out of wheelchairs, deaf people having their ears opened up, photography, music, and encouraging people.

Lawrence Hargrave (1950—1915)

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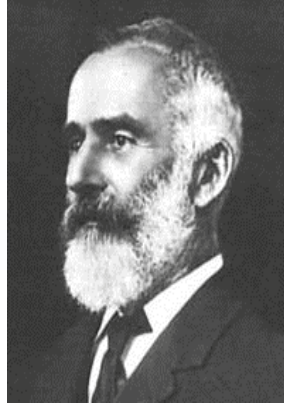
A/Prof. Cees Bil

Air Cdre Noel Schmidt

Karen Trezise

Luke Webb

Fatime Hoblos



On November 12, 1894, Lawrence Hargrave, the Australian inventor of the box kite, linked four of his kites together, added a sling seat, and flew 16 feet.

By demonstrating to a sceptical public that it was possible to build a safe and stable flying machine, Hargrave opened the door to other inventors and pioneers.

The Hargrave-designed box kite, with its improved lift-to-drag ratio, was to provide the theoretical wing model that allowed the development of the first generation of European and American aeroplanes.

In the 1890s a small number of inventive technologists were working to translate infant aviation theory into aeroplanes.

Leading the race was Hargrave, a quintessential 19th-century gentleman scientist of independent means. A gifted explorer, astronomer, amateur historian, and practical inventor, Hargrave devoted most of his life to constructing a machine that would fly.

He believed passionately in open communication within the scientific community and would not patent his inventions. Instead, he scrupulously published the results of his experiments.

The first successful aeroplane incorporated three crucial aeronautical concepts developed by Hargrave: the cellular box-kite wing, the curved wing surface, and the thick leading wing edge (aerofoil).

In 1889, Hargrave revolutionised engine technology by inventing the radial rotary engine, which reappeared (unacknowledged) in modified form in 1908 as the French Gnome engine.

An engraving of Lawrence Hargrave alongside a number of his gliders appeared on the reverse of the Australian \$20 banknote.

Contact Details

Post:

C/-Engineers Australia
Suite 201, 21 Bedford St
North Melbourne VIC 3051

Email:

melbournebranch@raes.org.au

Website (Aust. Division):

<http://www.raes.org.au>

Global Website:

<http://www.aerosociety.com>

Opinions expressed in this newsletter do not necessarily represent those of RAeS, the Melbourne Branch.

Promotion of external events does not imply endorsement by RAeS. Contributions and feedback are welcomed.

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