

INTERNATIONAL ANTARCTIC INSTITUTE

The new International Antarctic Institute (IAI), established in July 2006, will welcome enrolments in its first international degree programme – a Masters in Antarctic Science by course work – in early 2008.

With its secretariat being hosted by the University of Tasmania, the IAI is part of Australia's commitment to education and outreach during the International Polar Year.

The IAI will serve as an international educational centre for Antarctic programmes, with cross-accreditation of courses between participating institutions. Students will enrol in their home institutions and take up an agreed proportion of their course units at other IAI member institutions during their degree programme.

Members and associate members of the IAI presently include 20 universities and colleges from countries including Australia, Brazil, Chile, France,



International delegates gathered in Hobart to discuss establishment of the International Antarctic Institute.

Germany, Italy, Japan, Malaysia, New Zealand, Norway, Spain, the UK and the USA. The University of Tasmania will host the institute's secretariat for the first developmental phase (three to five years) before it is rotated among partner institutions.

The major objective of the IAI is to produce expertly trained scientists and social scientists with international experience and skills in research and its application. The IAI will deliver the knowledge and information needed by our

future scientists and policy-makers to address sustainable resource management, climate impacts and other global environmental and social issues associated with Antarctica and the Southern Ocean.

Patti Virtue and Andrew McMinn
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More information:
www.iai.utas.edu.au

Surfing the building technology wave

Expeditioners at Davis station now have a new place to chill out. A new library-cum-lounge room, built from the same material as surfboards, was delivered to the station last March, for commission next summer.

The new building is made of lightweight, durable 'fibre composite', or fibreglass and foam, which has unique insulating properties that boost the building's energy efficiency.

'The building is constructed of fibreglass encasing 200 mm thick blue foam panels of extruded polystyrene,' project engineer, Mark Pekin, said.

'This foam contains a lot more air pockets – and therefore insulating capacity – than white foam, or expanded polystyrene, which is predominately used as insulation for Antarctic buildings.'

To achieve similar insulation qualities, an equivalent concrete panel would need to be 1400 mm thick and therefore 15 times the weight.

The building also has 'dual double glazed' windows – four panes of glass – with automatic hollow-core blinds between the internal and external double glazed glass windows. This provides five layers of insulating air compared to the usual two layers in other Antarctic buildings with triple glazed windows.

The absence of a steel frame means the building is significantly lighter, allowing it to be manoeuvred into place with a crane. The whole building can also be assembled in Australia, reducing the risks and costs associated with construction in Antarctica. In addition, the fibre composite material can be moulded into any desired shape.

These characteristics provide engineers with greater flexibility in how they use and reuse such structures. For example, the new library-lounge can be easily moved, refitted, and if necessary, tipped on its side, to fulfil other purposes.

The prefabricated library-lounge – which measures 12.2 m long, 3.7 m wide and 2.6 m high – left Australia after a complete fit-out with electrical wiring, lighting, carpets and furniture. The foundations will be laid during the year, and the building should be ready for the first wave of visitors by Christmas.

Wendy Pyper
Information Services, AAD



MARK PEKIN

The prefabricated fibre composite building weighs about seven tonnes.