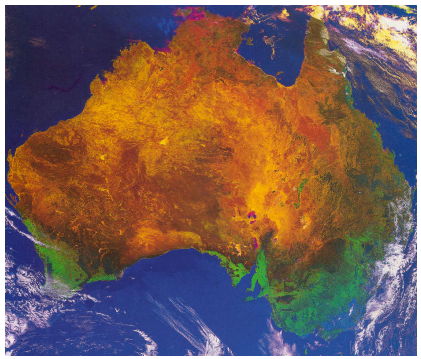

SPACE FUTURES

Challenge. Innovation. Exploration. Funk

A Conference for Tertiary Students & Young Professionals

Melbourne, Australia,
July 14 - 17, 2003

www.spacefutures.com.au

Contact SpaceFutures

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More information at

www.spacefutures.com.au

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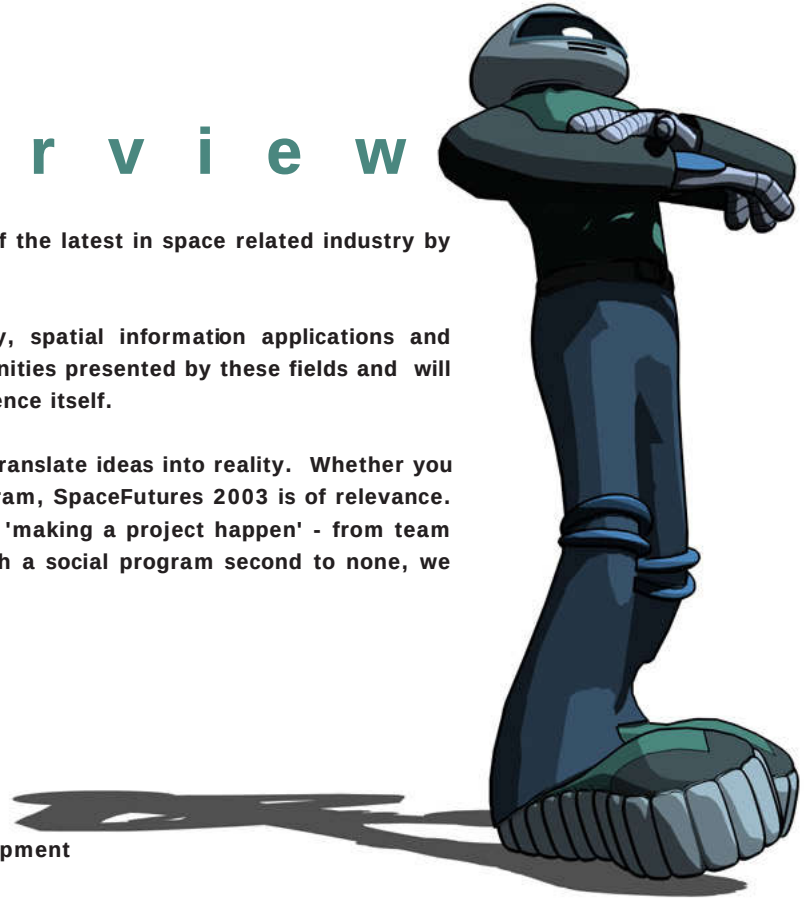


Our priority in presenting SpaceFutures 2003 is to inform and to inspire. We aim to present a selection of the latest in space related industry by some of public speaking's best in a dynamic and interactive setting.

A major focus of the conference relates to identified priority areas relating to aerospace technology, spatial information applications and biotechnology spin-off innovations. Streamed technical sessions will outline current challenges and opportunities presented by these fields and will provide a chance for hands-on involvement in industry-based projects that will continue beyond the conference itself.

The conference program is designed to provide insight into current space activity and the tools needed to translate ideas into reality. Whether you are looking for a career as an engineer, media coverage for a project or grant funding for a research program, SpaceFutures 2003 is of relevance. Plenary sessions will explore the both leading edge scientific discovery in addition to the fundamentals of 'making a project happen' - from team building and project management through to writing a grant application and engaging media. Finally with a social program second to none, we invite you to join us at the frontline of space innovation.

key speakers include

- **Shubber Ali (USA) - Director, The Institute for Space Development**
- **John Douglas (AUS) - Managing Director, Apogee Imaging International**
- **Warwick Holmes(EUR) - Satasint Consultants, European Space Agency**
- **Reece Lumsden (AUS) - Managing Director, Reese Lumsden & Associates, "Young Professional Engineer of the Year 2003"**
- **The Hon. John Brumby - Minister for Innovation, Industry & Regional Development**

p r o g r a m

Relavent, dynamic and interactive. These were our priorities in designing the SpaceFutures 2003 program. The sessions planned seek to illustrate the current landscape of the local and international space scene whilst providing more detailed insights into identified key areas.

plenary sessions

The focus of plenary sessions is the presentation of key information and ideas that is of universal relevance to participants across disciplines.

PLENARY: Working the System - A Guide to Government Resources

The government has an important part to play in the development of policy and legislation required to facilitate the smooth operation of an Australian space industry. During the course of "Working the System" we examine the factors influencing political support of the industry, the current initiatives undertaken by the Australian government in relation to space activities, and the avenues that exist for communication between political leaders and the next generation of Space innovators.

PLENARY: Granted - Low Cost Orbital Access

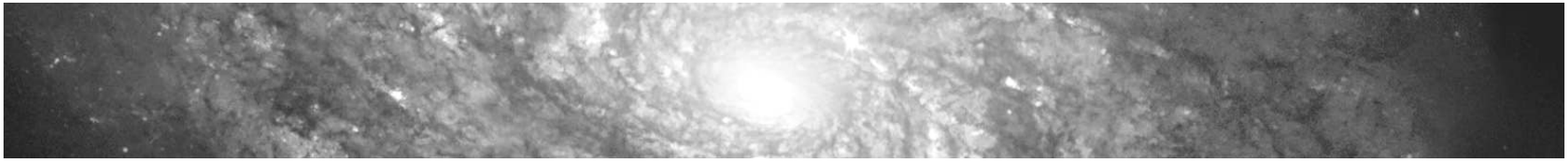
The development of reliable cost effective access to space has long been touted as the key driver in space commercialisation. Shubber Ali, director of the Institute for Space Development Research, presents his view on whether solving this challenge will provide impetus for the long term development, and how Australia, a country with little launch expertise, should approach this challenge.

technical sessions

SpaceFutures technical sessions aim to explore in more detail opportunities that exist within identified priority areas, specifically;

- **Biotechnology & Medical Countermeasures**
- **Remote Sensing Applications**
- **Aerospace Technology**

Beyond providing an overview of current developments within these areas, technical sessions will also serve to lay the groundwork for delegates seeking to participate in the SpaceFutures project series. This ongoing initiative will see selected participants work towards illustrating technical and financial viability of three industry based projects. (See also Outcomes)



panels

Indeed "there are many ways to skin a cat" - but surely some ways confer certain benefits. Panels are about perspective, several experts providing personal insights into the intricacies of a specific issue. Examples of panel discussions planned, include:

PANEL: Bang for Buck. When Research Meets Business.

A prevailing climate of economic rationalism has seen the installation of business strategists in research organisations where once it was academia that called the shots. To what extent should research be required to generate profit? How does government determine which areas in which to invest? "Bang For Buck" examines the role of government, research and business communities in the development of innovative space technologies and explores the likely evolution of their relationships in the future.

PANEL: Entrepreneur: Essential Elements for Successful Enterprises

The last forty years have been littered with commercial space projects that have failed to realise their full potential. What have been the major stumbling blocks for industry to date? Could anyone have succeeded in the circumstances? How should the game be played from here on? "Essential Elements for Enterprise" will investigate the core skills necessary at a business level for optimising chances of success. This session will outline business planning basics, the finer details of project management and resource allocation.

Embracing our values of "Challenge. Exploration. Innovation. Funk" we have sought program elements that will provide participants with an opportunity to challenge ideas, insight into leading edge developments and ultimately, the skills with which to move forward and innovate.

program overview

	Monday 14th	Tuesday 15th	Wednesday 16th	Thursday 17th
9:00 - 9:15		Introduction. Challenge. Exploration. Innovation. Funk.	G-Free. Man, Medicine and Micro-Gravity.	Surveillance One. Defence on Space.
9:15 - 9:30		Oracle. International Space Industry Examined.		
9:30 - 9:45				
9:45 - 10:00			Granted. Low Cost Orbital Access	Working the System. Gaining access to government resources.
10:00 - 10:15		Break.		
10:15 - 10:30				
10:30 - 10:45		ESA. An Opportunity.	Break.	Break.
10:45 - 11:00				
11:00 - 11:15			It's anything but routine. Space risks.	Commerce, Community & Conscience: Competition VS Co-Operation.
11:15 - 11:30		Introspective. Australian space stories.		
11:30 - 11:45				
11:45 - 12:00			Aerospace Technology. / Space Medicine & Bio-Technology. / Application Technologies.	Legal Low Down. Navigating Intellectual Property and Copyright.
12:00 - 12:15		Sea-Change. Building a Small-Business based Space Industry.		
12:15 - 12:30				Show me the Money. Making your Project Pay.
12:30 - 12:45				
12:45 - 13:00		Lunch.	Lunch.	Lunch.
13:00 - 13:15				
13:15 - 13:30				
13:30 - 13:45				
13:45 - 14:00				
14:00 - 14:15	Registration.	Aerospace Technology. / Space Medicine & Bio-Technology. / Application Technologies.	Bullet-proof. Creating teams that work.	
14:15 - 14:30				
14:30 - 14:45				Aerospace Technology. / Space Medicine & Bio-Technology. / Application Technologies.
14:45 - 15:00			Entrepreneur. Essential Elements for Successful Enterprise.	
15:00 - 15:15				
15:15 - 15:30				
15:30 - 15:45				
15:45 - 16:00				
16:00 - 16:15		Debate. That the future of space is tourism.		
16:15 - 16:30			Bang for Buck. When Research meets Business.	Space. Where to from Here.
16:30 - 16:45				
16:45 - 17:00				
17:00 - 19:30				
19:30 - late	Welcome Event.	Open Mike.	SpaceFrocks Costume Extraganza.	The End of the Beginning.

outcomes

More than a stand-alone event, SpaceFutures represents a movement. A generation of students and young professionals committed to furthering the advancement of science & technology.

The convening of SpaceFutures 2003 will generate several critical outcomes. Key immediate benefits will include:

- **Increasing engagement between space industry, higher education institutions and future professionals.**
- **Provision of opportunities and assistance for entrepreneurial space activities.**
- **Facilitation of cross-disciplinary networking at student, academic and industry level.**
- **Fostering cooperation between space interest groups**
- **Further defining the importance of science & technology ventures in the development of Australia's economy.**

SpaceFutures Technical Project Series

Over the longer term, SpaceFutures will continue its commitment to capacitance building through the SpaceFutures Techincal Project Series. This ongoing initiative launched at SpaceFutures 2003 will provide key opportunities for delegates to engage in the development and commercialisation projects that harness the medium of outer space. Projects are designed to focus skills and ideas about a challenge in one of three identified priority areas:

Aerospace Technology

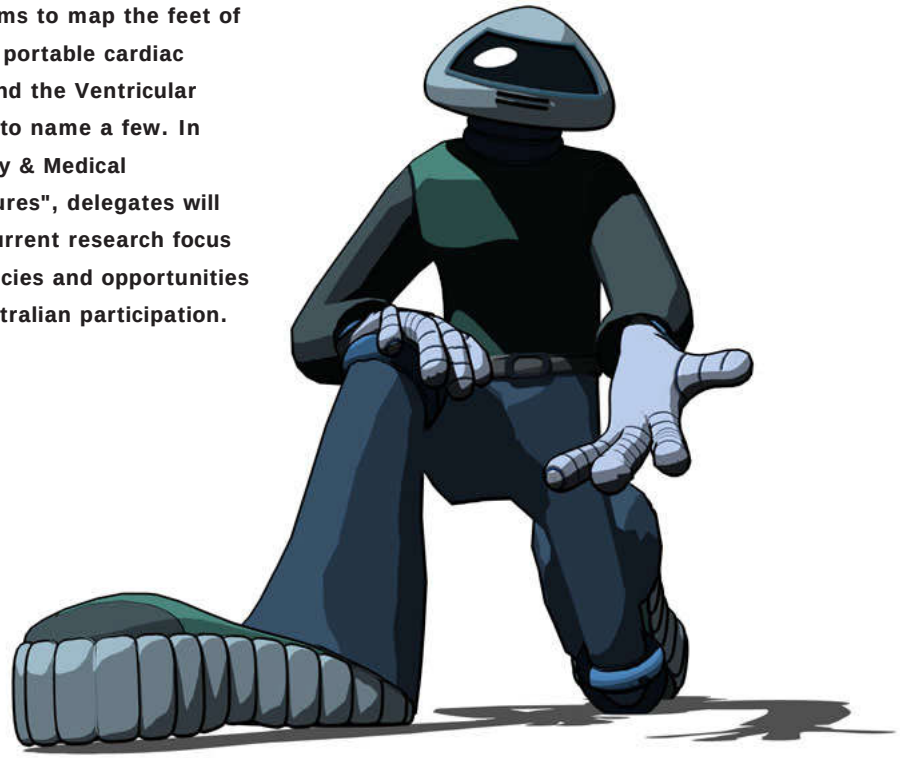
The recent Columbia disaster has stimulated new discussion about the need for next-generation reusable launch vehicles (RLVs) and ensuring reliable, cost-effective access to space. In 'Aerospace Technology' we will evaluate the requirements for next-generation RLVs, explore current concepts and designs, and the required advances in critical technologies. A key element of this technical stream will also include examining the characteristics of the future launch market and necessary revenue requirements in realising this technology.

Spatial Information Applications

We continue to see exponential growth in the use of space for telecommunication, commercial GPS navigation systems, and satellite imagery for resource exploration and environmental monitoring. A major driver of this has been value-added resellers who focus on the development of applications around the data supplied by satellites in orbit. In 'Remote Sensing Applications' we investigate the future trends in communications and imagery products, and how this information can be harnessed to create successful enterprises.

Biotechnology & Medical Countermeasures

Manned spaceflight has catalysed the development of several technologies and techniques that have been successfully applied to terrestrial medical settings. Laser eye surgery, Interactive Data Display Systems to map the feet of diabetics, the portable cardiac defibrillator and the Ventricular Assist Device to name a few. In "Biotechnology & Medical Countermeasures", delegates will explore the current research focus of major agencies and opportunities for future Australian participation.



Previous Event : SpaceFutures 2000

Convened under the theme of "Education & Collaboration: Building a Sustainable Australian Space Industry", SpaceFutures 2000 represented the inaugral meeting of students and young professionals in the name of Space. Coinciding with the UN World Space Week, the program brought together over 200 delegates and addressed the interdisciplinary nature of the global space industry with Australian and international presenters drawn from government, academia and industry.

Parallel to the main program, a forum was held for Australian space educators representing universities, schools, the private sector and current students at Mt Stromlo Observatory. This subgroup discussed models of good practice in space education and it's role in the further development of Australian Space Industry.

Key outcomes of SpaceFutures 2000 included:

Youth Space Charter

The development of the first Australian Youth Space Charter articulated the commitment of delegates towards making a sustainable Australian Space Industry a reality.

Educators Forum

As part of the conference theme of "Education and Collaboration", a number of educators also participated in the SF2K Educators Forum at Mt Stromlo Observatory. Spin-offs included the development of the SF2K Educators Charter, which presented guidelines for the further promotion of space through Australian educational institutions.

Media

Spacefutures received excellent coverage both during and after the formal proceedings: articles in many newspapers including the Australian and the Melbourne Age and the Canberra Times, as well as SpaceDaily (http://www.spacedaily.com/news/aust-00c.html), radio coverage through Triple J and ABC national and links from websites such as SpaceWeek International (http://www.spaceweek.org).

National Television

National Press Club Address televised live on the ABC.
Presentation by SpaceFutures speaker
Mirram Bultuk, Australian NASA Representative

National Radio

Radio National - Robyn Williams Science Show·
Triple J - Morning News

Regional Radio

ABC Radio Newcastle·
ABC Radio Brisbane·
ABC Radio Canberra

National Newspapers

The Australian - Full page feature article

Regional Newspapers

The Age
The Canberra Times

Magazines

- **New Scientist**
- **Double Helix Magazine**
- **Adelaide University News**
- **Panorama Magazine**
- **University of Queensland News**
- **The ANU Reporter**
- **Space Frontier News**

Government

Government: Successful tri-partisan support was achieved by the conference that was attended by a number of parliamentary members. Significant subsequent attention included

- **Press Release by Warren Entsch MP (Liberal)**
- **Presentations by Martyn Evans MP in a number of meetings after the conference (Labour)**
- **Speech to the Australian Senate by Senator Andrew Bartlett (Democrats)**

Industry

There was a very positive response from the SpaceFutures supporters regarding the conference. Major sponsors; Institution of Engineers, Australia and Cooperative Research Centre for Satellite Systems pledged their ongoing support of such initiatives.

Arguably the true litmus test and key measure of success of SpaceFutures 2000 was the response of the attending delegates. The following represent a selection of the comments received by organisers following the event.

"(SpaceFutures) was one of the best conferences I have attended for a long time due to the active involvement of the participants and the goal of the organisers to attain an outcome."

"The great presentations, the vision and commitment of people such as Jim Benson and John Douglas, and the insightful experience and inspiration of Vaughan Clift and David Newman"

"(SpaceFutures was) a great opportunity to hear from a whole spectrum of professional individuals on their opinions on space future, which helped me to crystallise my aim."

"I learnt about the issues and challenges that space in Australia is exposed to and how we must develop ways to overcome these. A lot of motivation to get involved; a good idea of the work required to get a project working; knowledge of how business, government etc can assist."

"I met a wealth of wonderful people. I was also inspired and encouraged. The opportunities I now have open to me are immense."

SpaceFutures 2000 was the beginning, the starting point to focus the enthusiasm and commitment of the youth of Australia to vibrant Australian Space Industry.