

National Committee for Space Science

Decadal Plan

Public Outreach Working Group

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Carol Oliver (Chair), Jonathan Clarke (Mars Society), Michael West (National Space Society of Australia), Kerrie Dougherty (Powerhouse Museum), Naomi Mathers (Victorian Space Science Education Centre), and Larisa Lindsay (200 Labs)

1. Public interest indicators

While no direct survey exists, the Working Group is dependent on available facts and statistics that indicate an interest in space exploration because at least some of these facilities would not be provided without public interest.

- The *To Mars and Beyond* exhibition attracted approximately 350,000 paying visitors in 15 months (9 months at the National Museum of Australia, Canberra; 6 months at ScienceWorks in Melbourne)
- Powerhouse Museum, Sydney, – 85% of visitors go to the space exhibit even though it is past its use-by date (it is to be updated in the near future)
- Most Australian science centres and museums have some space, astrobiology and/or astronomy content.
- In spite of our low population there are three home-grown space and astronomy magazines: *Cosmos*, *Sky & Space* and the Australian edition of *Sky & Telescope*
- Australia has a number of special interest groups including the *National Space Society of Australia*, the *Mars Society*, the Australian arm of the *Planetary Society*, the *Space Science Research Institute*, *Sydney Space Association*, and the *Space Association of Australia*.
- There are a large numbers of visitors to space/astronomy related facilities such as the *Parkes* radio telescope (around 60,000 per year) and *Tidbinbilla*
- The Victorian Government gave nearly \$7m to created the *Victorian Space Science Education Centre*, which opens on July 17, 2006.
- Space science and astronomy covered by *Catalyst* (ABC Television) and the *Science Show* (ABC Radio) as well as other media, notably *The Australian*.
- *Science Week* in 2005 had as its theme ‘space exploration’

- The *Australian Centre of Astrobiology* at Macquarie University gets hundreds of media interactions a year nationally and internationally, reflecting public interest. Recently a paper in *Nature* attracted 400 media interactions. It also recently co-launched with NASA the *NASA-Macquarie University Pilbara Education Project*. The latter had close to 25,000 page views on its associated website between May 23 and July 9, 2006.

Global statistics related to the Internet and public interest in space science

- The NASA *Mars Exploration Rovers* website had 17 billion hits in the first year – more than all of the hits on the entire NASA portal in the previous year
- The NASA *World Wind* Project that contains space exploration aspects in a 3-D immersive and interactive environment is approaching 20 million downloads with 10 million requests a day for visual data about our planet and space.
- Broad general media coverage internationally of space-related items; Number of documentaries on *Discovery* and *National Geographic* (both shown in Australia).

1.a. What do people want from Australian involvement in space exploration?

While a strong public interest and public support is indicated by the above, what do Australians actually want from Australian involvement in space? This is a difficult question to answer without a well-constructed poll. However one of the working group did go out and took a random poll. Here is the information Larisa Lindsay collected:

- A group of Adelaide health professionals were concerned about how space weather affects the human body, particularly as people start to go on these joy flights into "space" that Richard Branson is setting up. They were also interested in the idea of putting remote sensing environmental type information on the news. For example, ocean temperatures, CO2 concentrations, ozone depletion, water distribution on the continent, deforestation rates, salinisation, pollution buildups of any kind. They were also wondering if Australia had any astrobiologists.
- An online group of computer geeks were mostly concerned about communications and satellites. They wanted to know if there was a way to improve GPS, perhaps by mitigating against scintillation or having an extra one or two satellites over Australia. They wanted research into how space weather affects major infrastructure, power grids in particular and whether it would have an effect on broadband over power lines, wireless links, solar power generation etc
- A group of HAM radio enthusiasts said they were pretty happy with the job IPS is doing and hopes they continue to get funding.

1.b. Are special interest groups, or Space Advocacy Groups (SAGs) a conduit for space involvement information?:

The original brief for the working group was to encourage a better relationship between space science and SAGs, acquire information on public opinion via these groups and to explore the possibilities in public outreach.

Two members of the group felt that SAGs are not a reflection of public opinion but the space exploration advocacy conduit between space science and the public. On that basis the question should be tweaked towards discovering what kind of support the SAGs need to outreach to the public on the Decadal Plan.

Jon Clarke, representing the Mars Society, and Kirby Ikin, representing the National Space Society of Australia said it was probably a little of both. Clarke suggests SAGs - at least in Australia - serve four roles (at least)

1. To act as a conduit between researchers (scientists, engineers, etc) and the public. The Planetary Society, and to some extent the Mars Society, fulfill this function. However, given the accessibility of the Internet and Cable TV (NASA TV, Discovery Channel, National Geographic) this role may be decreasing, but the role of SAGs as interpreters of the flood of information to the public was increasingly important.
2. To act as a reflection of public opinion: However Clarke suggests this is diminishing, while other committee members and Ikin felt the groups largely only reflected those that already have a special interest in space exploration.
3. As a professional society and networking agency. Sometimes high level professional papers come from these groups. Some serve in a network capacity, but all are wholly, or almost wholly, run on voluntary contributions and these need to work around job and family commitments. Ikin said that as members got older, and benefited from membership, the irony was that job and family responsibilities cut in at the point members would otherwise be able to contribute more to the SAG.
4. As a substitute for official research programs. This probably applies mostly to the Mars Society, which carried out research on preparing for human missions to Mars. As Clarke says, "If you are interested in suit design, pressurized rovers, human factors, and space habitats, we are almost the only show in town." They have also enabled projects with direct funding in them.

1.c. What would be needed to support?

The NSSA is in, some ways, two groups within one – one that engages with industry and the other that engages with the grass roots community. Like the Mars Society it has an annual conference, though this is not intended for the general public and it is held in association with a space development conference. In general, public meetings and/or websites are available for the public to access the societies or information about them.

All of the committee agreed in one aspect – whether for the SAGs or others – that media training is vital. But to supply this to SAGs may also have to be on a volunteer basis, while in-organisation has more to do with organisational needs than that of promoting the Decadal Plan. However, this might be something the Australian Academy of Science could provide to key members of the Steering Group who are promoting the Decadal Plan.

Another general point on which there seemed to be agreement is the need for a public survey of space awareness in Australia (especially of how space impacts everyday life through communications, position fixing, remote sensing, environmental monitoring and security. It may well be the public generally do not have an awareness of the importance of these subjects and therefore little or no information on which to base an opinion for or against support of space science.

2. Target audiences for Public Outreach campaign

2.a. Primary target audiences:

Federal and state space policy makers; industry; researchers; the general public; national and international media.

2.b. Secondary target audiences:

High school and university students; science centres; museums; Space Advocacy Groups.

3. Communication Strategies

1. Create a unified searchable wiki website with open public access to directly input discussion. The software is free from MediaWiki and runs on an Apache server.
2. Develop a media plan in association with (1) to address primary and secondary audiences (eg one designed to reach Government, for example via a newsletter on the Space Decadal Plan; another for the public aimed at presenting information via news stories as they come up – eg the launch of public comment on the Space Decadal Plan)
3. Consider a properly constructed poll among the public to get the first good data on public awareness of, and attitudes towards, Australian involvement in space activities from space and related sciences through to support for industry engaged in space work.
4. Institute a media training strategy for those involved in the Decadal Plan – know how to get, and handle, appropriate media coverage.
5. Consider information leaflets in museums and science centres – this can be a simple book mark with the wiki website address; support from this could come from industries interested in promoting public support for space activities.
6. Participate in International Space Week (October 4-10)

7. Establish a 'speakers bureau' for Space Week and other events; provide media training
8. Address public outreach issues in special interest groups (see above) including media training
9. Encourage a co-operative approach between universities, industry and public interest groups that encourages stronger links perhaps via a forum driven by a group such as the Australian Academy of Science.
10. Consider the equivalent of 'science meets parliament' – visits to members of parliament to discuss and get their feedback.

4. Results and evaluation

1. Usage statistics on the wiki website can be tracked – this is particularly useful to watch during media coverage to see whether the coverage has been effective.
2. Information gained from public awareness survey
3. Measure media 'impressions' – ie how many people does media coverage reach?

5. Expected outcomes

1. Greater awareness by the public on Australia's current participation in space science and related industry, and its possible future.
2. Gain a clear understanding of what the public wants from Australian space science.
3. Greater awareness by Government of public opinion through the data collected from the survey, the wiki website and media interactions
4. Effectively underpin active public participation and comment for the Decadal Space Plan and greater awareness among the primary and secondary audiences of the existence of this plan and the information it contains.