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Communicating the Planetary Science Decadal Survey

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Abstract

In March 2011 the National Research Council (NRC) released the report *Vision and Voyages for Planetary Science in the Decade 2013-2022*, also known as the Planetary Science Decadal Survey. This is only the second planetary decadal survey to be prepared; it serves as the guide for NASA's planetary science program for the period 2013 to 2022, establishing priorities for flagship missions, a list of New Frontiers missions, and other priorities for the NASA and National Science Foundation's planetary science programs. The decadal survey was a major effort involving a steering committee and five panels, with over 60 members meeting from summer 2009 to fall 2010 as well as numerous town hall meetings and outreach events. A major aspect of the decadal survey is the involvement of the scientific community in the establishment of priorities, as well as the communication of the final results. But at a time of major changes in communication technology, the decadal survey is seeking to adapt to modern communications. In some ways it made great strides, such as webcasting and archiving all open meetings, which improved communications to the scientific community. But the survey was still transmitted to the public and the scientific community in a relatively traditional manner, and the NRC is seeking to adjust and adapt to more current forms of communications such as interactive websites, video summaries, and aps for platforms such as the iPad, Droid and other mobile devices.

1. Introduction

The decadal survey in planetary sciences is undertaken every ten years at the request of NASA and the NSF. It involves broad participation from the planetary science community and is the primary scientific input that NASA and NSF use to design their programs of planetary science and exploration. It has three guiding principles: science comes first, community involvement, and transparency and openness.

The decadal survey consisted of a steering group made up of a chair and vice chair, the vice chairs of the five panels, plus nine other members. The five panels were: Inner Planets, Outer Planets, Primitive Bodies, Mars, and Outer Planet Satellites. The five panels consisted of a chair and vice chair, plus 9-10 other members.

1.1 Inputs from the Community

A major aspect of the decadal survey's prioritization and deliberation was based upon inputs from the scientific community. The goal of the decadal survey was to seek out the community's views and build a consensus around those views. In order to do this the decadal survey used several traditional outreach mechanisms, but enhanced with modern communications technology. For example, when the steering committee put out a call for white papers to be submitted by the community, we were able to use software that allowed those papers to be submitted and displayed publicly nearly instantaneously. This allowed for members of the community to see what had been submitted and then adjust their own white papers to cover any perceived gaps. Of course, in actual practice, most people and groups submitting white papers waited until the deadline, but in the future it may be possible to adjust this approach to allow submitters to post a "letter of intent" to indicate what they are going to send by the deadline. The public white paper website, however, served a major function by indicating what white papers had been submitted. Ultimately, the decadal survey received 199 white papers with 1669 individual authors and endorsers. All white papers were read by the decadal survey steering committee members and some panel

chairs even required their members to read all of the papers, not simply those in their specific subject area.

Another aspect of transparency in the information gathering phase concerned the open meetings of the panels and the steering committee. The decadal survey must abide by Section 15 of the Federal Advisory Committee Act, which requires that presentations made to NRC committees must be made in open session (with only a few exceptions for classified information, etc.). In the NRC's definition, "open session" means that the meetings must be announced ahead of time and members of the public must be allowed to attend. The decadal survey extended this by webcasting most of the open sessions of its meetings using AdobeConnect. In addition, presentation materials were made available to the public nearly simultaneously. Sessions were also archived. Although few people took advantage of the ability to listen in to open sessions remotely, the primary benefit of this approach was to allow interested panel members to listen in to other panel presentations they could not attend. If members of the public want to reconstruct the meetings and inputs to the panels and the steering committee, they can access hundreds of hours of web presentations (audio and video) as well as all of the presentations, and 199 white papers.

The steering committee and panels viewed community input and engagement not simply as a means of gathering information, but also as part of its long-term communications strategy. The scientific community had to know what the decadal survey was long before it was delivered, and had to develop a sense of participation and ownership in it in order to the final report to have credibility.

2. Presenting the Final Report

The decadal survey also utilized several modern communications tools for presenting the results of the decadal survey in spring 2011. The report was presented at the Lunar and Planetary Science Conference (LPSC) in Houston in early March. The committee had struggled to meet this deadline as it revised its report in response to thousands of comments made by 18 separate reviewers during the NRC's exhaustive review process. Nevertheless, LPSC proved to be the proper venue. Approximately 1000 persons were in attendance at the presentation. Due to the help of the LPSC organizers, particularly Lunar and Planetary Institute Director Steve Mackwell, the presentation was also broadcast live via the web. The web broadcast reached an additional 2000 people, and within three weeks had over 10,000 unique viewers from 98 different countries.

The actual report was delivered as a free pdf from the National Academies Press website, and made available on other websites as well. After the initial presentation, the NRC also recorded a short video briefing by the decadal survey chair which was placed on relevant NRC websites.

To expand its communication to the public, not simply the scientific community, the NRC also considered both an interactive website and a mobile smartphone ap. It is developing the interactive website, but decided against the ap for several reasons, the primary one being cost. When the decadal survey was started, the iPad did not exist, and in fact smartphone use increased dramatically during the period that the study was underway. There was no way for the study to budget for this new technology, and the NRC has no experience with it. It remains difficult for large institutions to tap into this burgeoning communications field. Nevertheless, the NRC as an institution recognizes the importance of this new technology and is seeking to exploit it in the future, but doing so will require the NRC to actually budget for such a project from the start.

6. Summary and Conclusions

The new technologies that the decadal survey used, such as AdobeConnect and public websites, and the ones that it was unable to use, such as smartphone aps, have several downsides. These include: increased demand on staff time, increased cost, inconsistent support by the NRC, and the need to keep abreast of rapidly developing technologies. The NRC will probably be able to tap into all of these as well as new technologies by the time the next decadal survey takes place, but they will have to first be exploited and developed at a smaller scale in coming years.

References

[1] Vision and Voyages for Planetary Science in the Decade 2013 – 2022, National Academies Press, 2011.