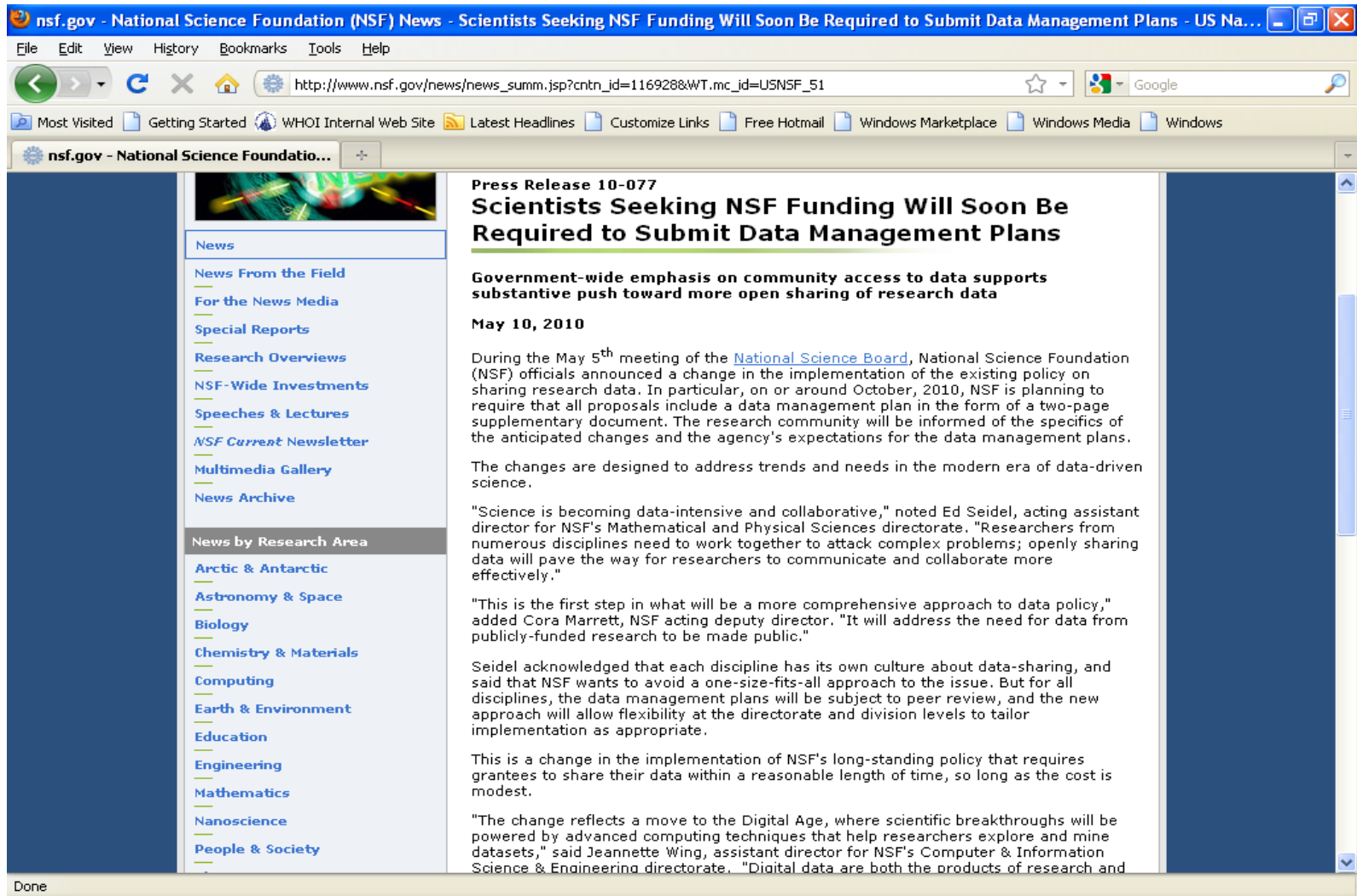**SAIL 2011: Into the I of the Storm; Information Resources Undergo a Sea Change**
Texas A&M University at Galveston
April 5, 2011 – April 8, 2011
Data Management Plans – The Role of the Library

Lisa Raymond

National Science Foundation Data Management Policy Implementation

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Press Release 10-077

Scientists Seeking NSF Funding Will Soon Be Required to Submit Data Management Plans

Government-wide emphasis on community access to data supports substantive push toward more open sharing of research data

May 10, 2010

During the May 5th meeting of the National Science Board, National Science Foundation (NSF) officials announced a change in the implementation of the existing policy on sharing research data. In particular, on or around October, 2010, NSF is planning to require that all proposals include a data management plan in the form of a two-page supplementary document. The research community will be informed of the specifics of the anticipated changes and the agency's expectations for the data management plans.

The changes are designed to address trends and needs in the modern era of data-driven science.

"Science is becoming data-intensive and collaborative," noted Ed Seidel, acting assistant director for NSF's Mathematical and Physical Sciences directorate. "Researchers from numerous disciplines need to work together to attack complex problems; openly sharing data will pave the way for researchers to communicate and collaborate more effectively."

"This is the first step in what will be a more comprehensive approach to data policy," added Cora Marrett, NSF acting deputy director. "It will address the need for data from publicly-funded research to be made public."

Seidel acknowledged that each discipline has its own culture about data-sharing, and said that NSF wants to avoid a one-size-fits-all approach to the issue. But for all disciplines, the data management plans will be subject to peer review, and the new approach will allow flexibility at the directorate and division levels to tailor implementation as appropriate.

This is a change in the implementation of NSF's long-standing policy that requires grantees to share their data within a reasonable length of time, so long as the cost is modest.

"The change reflects a move to the Digital Age, where scientific breakthroughs will be powered by advanced computing techniques that help researchers explore and mine datasets," said Jeannette Wing, assistant director for NSF's Computer & Information Science & Engineering directorate. "Digital data are both the products of research and

Done

Ocean Informatics Working Group : Director of Research - Mozilla Firefox

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Special Research Projects

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Data Management and Publishing

Communicating Science

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What is Informatics?

Informatics is more than computer science or information technology. It refers to the structures, behavior and interactions of systems that store, process, and communicate information contained within the physical and other sciences. It focuses on how people communicate and learn and how effective communication and other technologies can facilitate better scientific research and learning -- to the point where new knowledge and understanding can be achieved. Example informatics areas of research include Bioinformatics, Biodiversity informatics, Cheminformatics, Ecoinformatics, Geoinformatics, and Social informatics.

The science and technology of Ocean informatics is now emerging. Since Oceanography is by definition inter-disciplinary, several existing informatics technology areas will be incorporated into ocean informatics. Thus, the development of ocean informatics has the potential to identify commonalities and integrate technologies, tools, and concepts that exist in other fields of informatics.

Ocean Informatics Working Group

The WHOI Ocean Informatics Working Group is focusing on the data-handling needs of WHOI scientists. Once common needs among research projects and individual researchers have been identified it will recommend a strategy and an action plan to build a robust data informatics infrastructure at WHOI. This informatics infrastructure will complement the computing and network infrastructure that already exists at WHOI.

A 4-person team, currently dubbed the Ocean Informatics Working Group, was established in early 2009. Thanks to a modest budget provided by the WHOI directorate alongside synergistic staff resources provided by the Rensselaer Polytechnic Institute (RPI), the task force spent its first year engaging in many staff interviews, creating / assisting in several proposal efforts, directly supporting research projects, and researching

Done

Action Items

- All Hands Talks
- Survey WHOI Community
- Gather information
- Create tools to assist PI writing DM plans
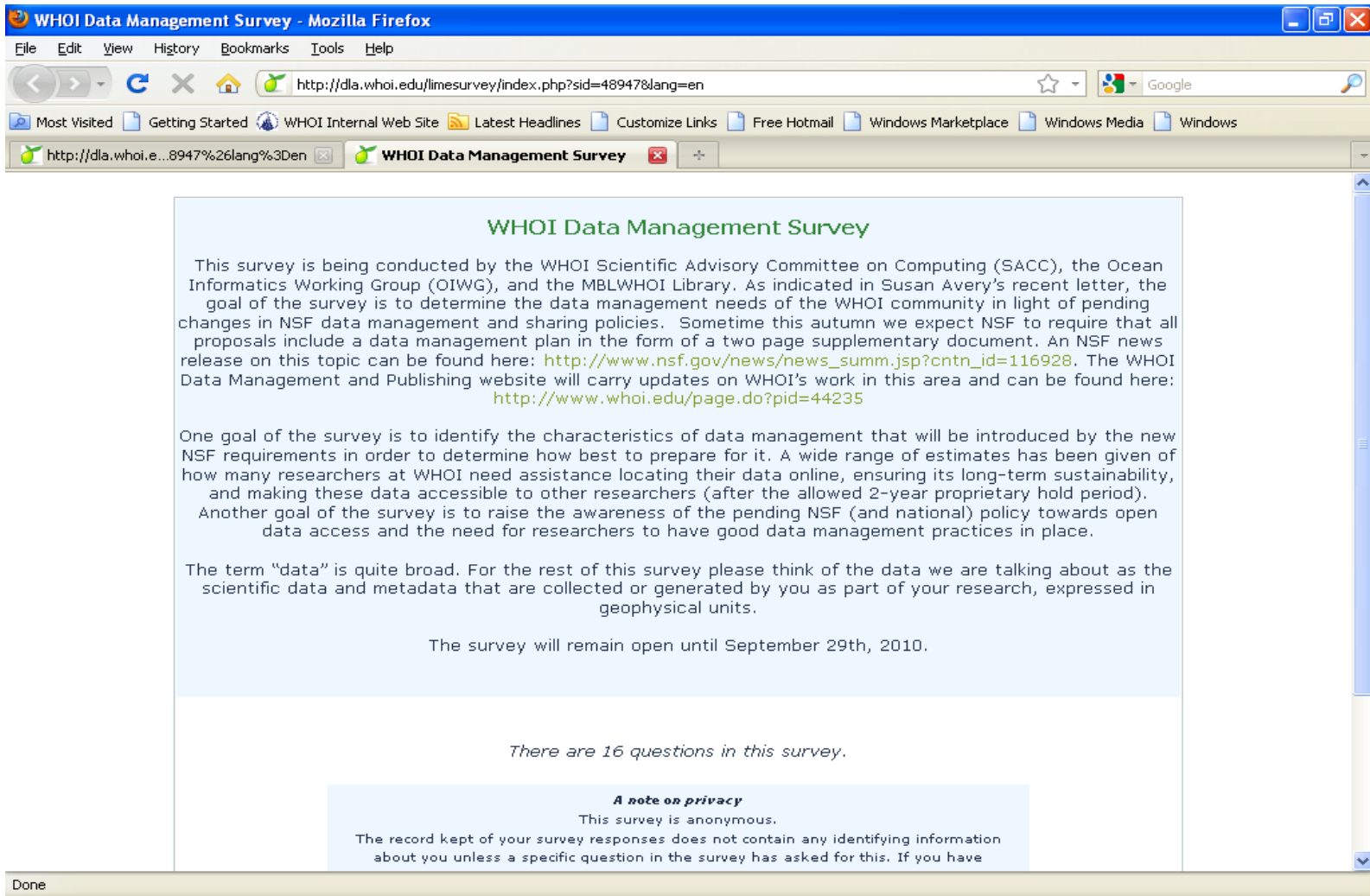
Survey – see what PIs want/need

Survey developed with a scientist, a full time data manager, a librarian and an informatics specialist.

Designed as an education tool as well as gage of needs of community.
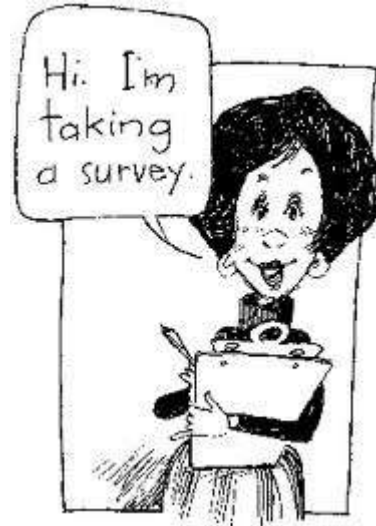
Email announcing survey went to Department Chairs, Scientific and Technical Staff, and in weekly WHOI announcement email

Data Management Survey Results Summary

- Sixty seven people responded to the survey, several indicated they were responding for their group.

- The Directorate/Program that is most often submitted to is Ocean Sciences, followed by Marine Geology & Geophysics and Physical Oceanography.

- The most common place to store data is on a local computer.

- Less than half of the respondents said they have a plan to manage data collected since 2008.

- More than half of the respondents said they would like assistance with a data management plan.

Gather Information

- Survey Results
- Talk to other Librarians – Tufts, MIT, Data Curation listserv, etc.
- Attend ESIP workshop on DM plans at AGU

Create checklist and list of other resources

- Title - Data Management Plan for [grant title]
- Author(s)– PI, data manager, etc.
- Identify the data-related materials that will be created – for example experimental data, model output, remote sensing, software, etc.
- What are the natural ways the material to be created would be organized?
- What are the standards in your community?
- If there are community standards and you are not using them, why?
- How will the data be gathered?
- Quality Assurance/Quality Control procedures?
- Directory structure
- Identifiers and naming standards
- Versioning
- Metadata standards
- Documentation
- Are there policies that define what data will be shared?
- What will be shared
- When will data be made available
- Where, is it publicly accessible
- Will it have a license – for example Creative Commons http://creativecommons.org/
- Any restriction on sharing or re-use, reasons?
- How are you ensuring that your materials are not lost?
- How/when are you creating copies (Lots of Copies Keeps Stuff Safe)
- Where are the copies
- How long do you need to keep

Related Links

» Additional Resources
» Data Management Plan Checklist
» Repositories Commonly Used by WHOI Researchers

Publicize Information

Need Help with a Data Management Plan for your NSF Proposal?

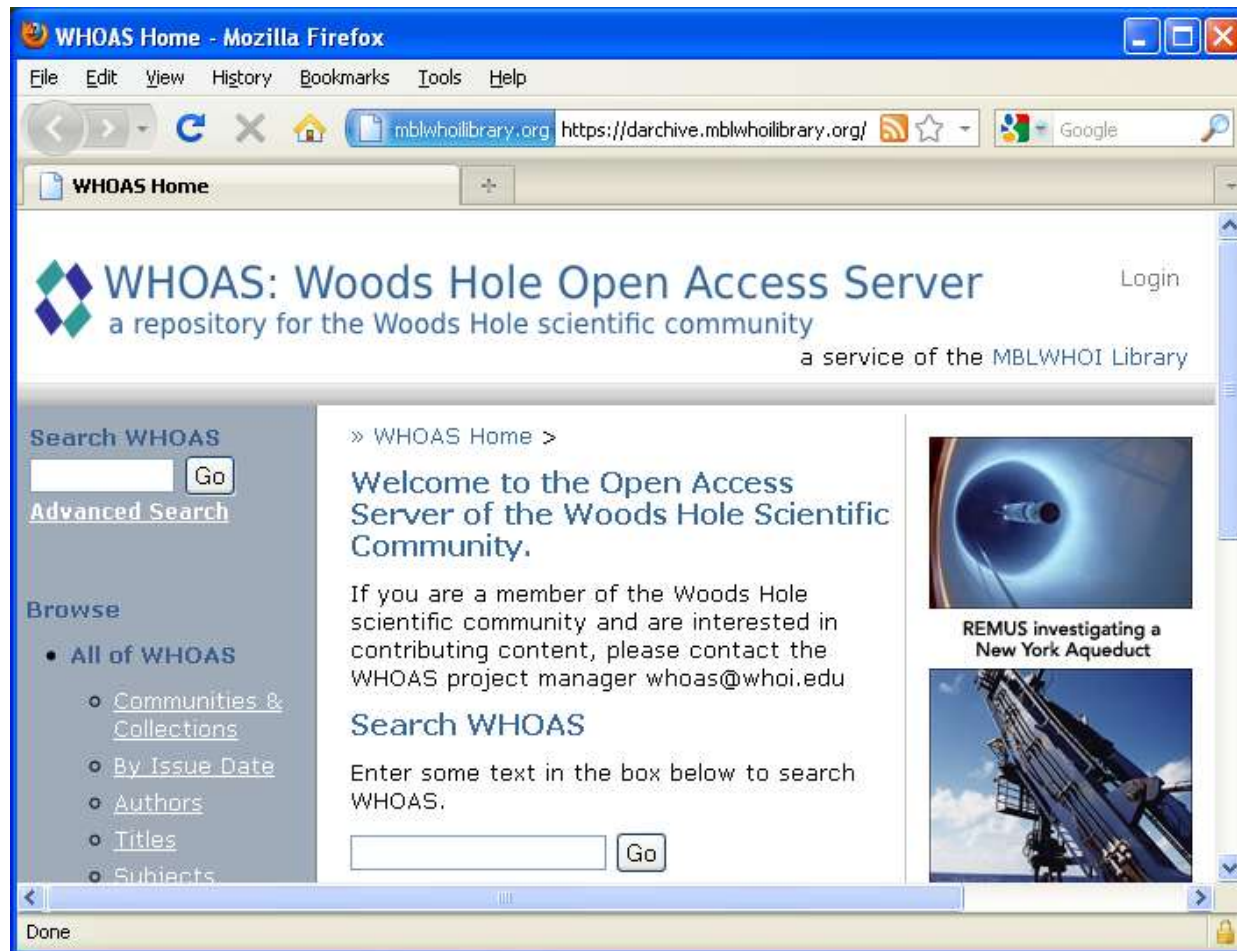For information, checklist, and resources go to:
http://www.whoi.edu/DataManagement/

Website Stats
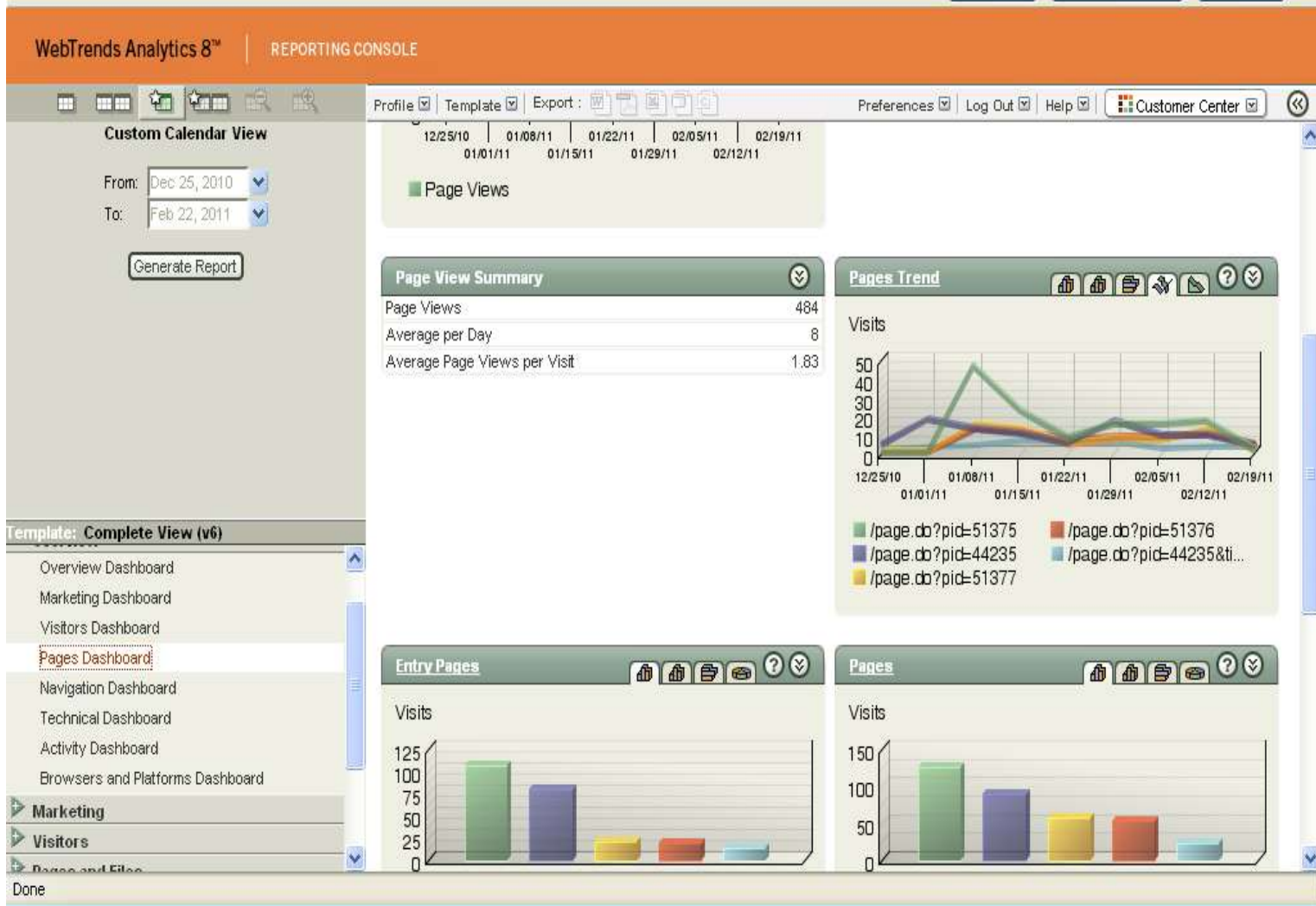
Role of the Institutional Repository WHOAS

Future

- Possibility of Woods Hole Repository

- What other services do PIs need?

- Sponsor in house workshops on Data Management

- What else?

Resources

- WHOI Data Management Site: http://www.whoi.edu/DataManagement/

- ESIP Workshop: http://wiki.esipfed.org/index.php/Data_Management_Workshop

- NSF FAQ: http://www.nsf.gov/bfa/dias/policy/dmpfaqs.jsp

- Feel free to contact me for any documentation lraymond@whoi.edu