Alaska Ocean Observing System

**Summary of AOOS Data Management Advisory Committee Meeting**

Sept 29, 2011 Anchorage

*Draft Meeting summary prepared by Darcy Dugan*

*In attendance*: Committee Members: Phil Mundy (Chair, NOAA/NMFA/AFSC), Warren Horowitz and Cathy Coon (BOEMRE), Peter Olsson (AEFF/State Climatologist), Tom Heinrichs (GINA), Angel Corona (NWS), Allison Gaylord (BASC/Nuna Technologies), and Steve Lewis (NOAA Fisheries). AOOS representatives: Molly McCammon, Darcy Dugan, and Rob Bochenek.

**Follow Up Items:**

* *Molly will send signed NOAA/Industry Umbrella MOA to the group.*
* *Rob will put the data disclaimer in an additional place on the website, and remove the State of AK reference*
* *Committee members will develop issues of concern regarding need for more guidance on data standardization from the national IOOS office. Phil will provide a statement to the AOOS Board who can send it on to the national IOOS office.*
* *Darcy will distribute draft data ingestion policy to the DMAC committee for their comments.*
* *Rob will send a log in and password to DMAC members next week so they can test the Ocean Workspace beta version by uploading sample datasets and metadata.*
* *Darcy will send electronic copies of the final Axiom work plan to DMAC members.*
* *DMAC members will send comments on the work plan to Darcy by Friday October 7.*
* *Darcy will put out a doodle poll to calendar 2012 meetings.*

**AOOS Executive Director’s Update**

Molly McCammon gave a program update. The items below reference data management.

EVOS: AOOS recently received approval for two grants from the Exxon Valdez Oil Spill Trustee Council (EVOS) for 5-year Long Term Monitoring and Herring Research and Monitoring projects. AOOS will be the lead data manager in these multi-partner projects. In addition, McCammon is the lead PI on the LTM project. NCEAS will also be a partner with AOOS for the data management services, bringing experience with ecological datasets and a broader network to help expand the AOOS capacity.

NPRB proposal: AOOS submitted a proposal in response to an RFP to provide data management services to the NPRB Gulf of Alaska project. This award will be re-competed since only one proposal was submitted.

Data Sharing: AOOS has been pursuing industry data sharing agreements with Shell, ConocoPhillips, and Statoil. This is part of NOAA’s recently-signed umbrella agreement with these groups to share oceanographic and environmental data in the Arctic. There are several annexes to the agreement currently being drafted that outline the details.

* The MetOcean Annex is the furthest along, and includes real time data from weather buoys owned by industry that will be used by NWS weather forecasters and also served up to the public by the National Data Buoy Center and AOOS.
* SAR ice images which are purchased by Shell will be archived for the AOOS/UAF sea ice atlas. These are not currently available to the public. Cartoon images also will be shared with NWS forecasters for their use in sea ice forecasting.
* Environmental data is collected jointly by the 3 oil companies, and they are willing to make it available, but due to agreements with university researchers for publication rights, the data may have a delayed release to the public.
* It was noted that industry metadata may not be very robust. Industry will need to either address this or pay AOOS to address it. Industry funding may be available through the National Fish & Wildlife Foundation to help with this.

**Announcements from the Committee:**

The Office of Naval Research (ONR) recently circulated three RFPs for sea ice research in the Arctic. AOOS submitted a letter of interest with NCAR in response to the first RFP, but was told that providing data management services would be handled internally to ONR, and that a larger scale effort was premature at this time. Peter Olsson received last minute requests to get involved, and referred these contacts to Rob Bochenek, who was not contacted, but might be included in future proposals.

BOEM will release an RFP in the next 60 days for data management for their environmental studies section. Additionally, the annual environmental studies plan will be circulated on Nov 15th, soliciting ideas for information gaps. It’s not an RFP, but rather an opportunity to submit topics for potential funding.

**Data Management Team Review**

Molly reported on the review of the data management team review conducted in August. Angel Corona, Steve Lewis, and Phil Mundy assisted the Executive Director in her review of the first year of Axiom’s 5 year contract. Overall, AOOS and partners are very pleased with progress in year 1, and had only some minor recommendations. The report was circulated to the committee.

**National Office Update – Rob Bochenek**

Rob reported that the roles and goals of the IOOS national data management office appear to be in flux after losing their technical architect. The office’s current priority is getting SOS services up and running and standardized across RAs. Thredds is currently standardized across RAs, while SOS is heterogeneous. The individual RAs are attempting to create their own standup instances, and as a result, there are discrepancies between syntax and formats.

Rob has taken the lead in exploring the SOS systems, and has advocated for specific solutions that could be adopted by all the RAs. The IOOS office delegated these tasks to Rob and it’s turned out to be more work than expected. It’s a complex and political issue because everyone thinks their own software project is best. Rob and ASA (advanced Science Associates) are recommending that all the RAs adopt the “52 North” reference specification for SOS rather than writing their own. AOOS is the only RA that’s set up with this right now.

The committee discussed how the initial concept for national DMAC was an end to end system, but that cycle has never been established. The bottom-up part of the end to end system is very important but there doesn’t seem to be adequate support or expertise from the IOOS office. Getting the other regions to implement the 52 North specifications may be difficult. There was a suggestion that it may help to get one on the east coast and one on the west coast. The committee also suggested taking a lessons-learned approach. AOOS’ former data managers were unable to get guidance from the IOOS office and went ahead and constructed something unique which was not ultimately useful. We need to avoid this happening again.

The committee expressed their desire to develop a statement of concern that they could provide to the Board to send to IOOS along the lines of:

The DMAC Committee is concerned about Rob’s work on SOS and whether his effort will be lost due to lack of national leadership and participation by other regions. Here are the concerns of the committee (state them specifically)

*Action Item: Develop issues of concern. Then provide to Board who can send it to IOOS.*

**Disclaimer**

The committee believed there should be a “notice to users” on the home page with a data disclaimer that was easily understandable. The current disclaimer appears now on the pop-up window for first-time users of the data portal and users can check a box to eliminate the pop-up window from ever appearing again. Also, the disclaimer currently on the AOOS site refers to State of Alaska liability. The disclaimer needs to be edited to remove this reference, and it needs to be placed in an additional location on the AOOS website.

*Action item: Put disclaimer at an additional place on the website, and remote the State of Alaska reference*

**Data Ingestion and Sharing Policy**

The committee in general liked the policy suggested by Molly prior to meeting:

I \_\_\_\_\_ agree to provide my data and metadata for inclusion in the AOOS data system and agree to all public access to that data (or agree to public access after a date certain, allowing for publication rights, or because of agreement with some other entity). I understand that AOOS uses open access, interoperability systems, and the data will be completely accessible to users throughout the world. In return, AOOS agrees to keep the data intact, ensure metadata is attached to the data, and provides for archiving in at least two locations for long term security of the data.

They suggested replacing the word “intact” with “integrity” so that “AOOS will respect the integrity of the data”

There was discussion about wanting to avoid the situation where people would not want to share their data with AOOS because it could get misused. The virtual sensor function was highlighted, which could be used to imply a level of a granularity in the model data that was not intended. The committee talked about giving data providers veto power if they didn’t like the way their data was being displayed, although with public data this might not be a viable option.

*Action Item: Distribute draft policy to the DMAC group and solicit comments. The committee prefers a simple statement rather than a complex statement. The statement should include a description of the process used by AOOS to provide for data security*

**AOOS Build Out Plan – Carl Schoch**

AOOS consultant Carl Schoch presented the 10-year AOOS build out plan, which can be found on the AOOS website. The IOOS regions are being asked to complete 10-year build out plans for ensuring initial, barebones capabilities to address priority needs. Carl worked within the constraints of Alaska’s broad geography, the guidelines set forth by IOOS, and the feedback provided from three thematic workshops held in 2010 that helped develop Alaska stakeholder priorities. There is no cap on total cost of implementation at this stage. The Alaska Region is being split into 3 Large Marine Ecosystems, 7 sub-regions and 15 ‘areas’. Within each area are ‘sites’ of actual observing platforms and instruments that will be determined at a later date.

The DMAC liked the way the plan was laid out, including its scalability.

**AOOS Data Product Overview – Rob Bochenek**

Rob gave an update on advances in the AOOS data management system. Their HPCC set up in Anchorage has greatly increased the speed and efficiency at which they are able to pull and display data, and a second HPCC mirror site currently being constructed in Portland will be 30 times faster. Rob noted there are multiple copies of each pieces of data so the system can handle multiple failures and still survive.

Ocean Portal

Rob took the committee on a tour of the new “Ocean Portal”, still in beta, and they provided feedback. The Ocean Portal allows users to combine model output, sensor data, satellite imagery, and GIS layers into a single interface, searchable by time, space, parameter, and species.

Recommendations:

* When you zoom, can you make it so the layered options for non-relevant areas disappear?
* Make sure to test out the products to beta-tester group before launching anything public.
* Have shoreline as a layer that you could layer over everything else.
* Find out how many users can be on the system at once in case a particular emergency use results in hundreds of users at the same time.
* Have the ability to make use of a password mandatory so responders can have priority access.

Coming soon

* Streaming HD video for ShoreZone; a dot will move along map showing video location.
* Show dots with vectors or color to indicate magnitude and direction of the sensor values, and also how old the images or data are.
* Better visual display of waves.
* Extract data by drawing a polygon around it, and export in Excel, csv, or shape file. Shape file will provide metadata document packaged with it
* Caching images

Ocean Workspace

This interface will allow researchers to create personal and project profiles, author metadata, post and organize data, manage files into a single level file structure. Some of funding is from the PWSSC and there is a phased roll-out strategy.

Phase 1: Oct Beta version

Deployment to PWSSC – web services in Anchorage but data storage in Cordova

Beta version – Anchorage data storage, Anchorage services

Phase II: Feb 2012, Ocean Workspace version 1.0 released to public

Will be used to provide services for EVOS LTM and Herring Research & Monitoring

Storage via Swift Cluster Portal

Beta testers will help refine the tool between October and February.

*Action: Rob will send a log in and password to DMAC members next week where they can upload sample datasets and metadata and Beta test the Ocean Workspace.*

The committee discussed the functionality of the tool and members were interested in how it addressed project tracking (who does what where), and data access. The data catalogue would sit on top of the workspace and include a search function. Uploaded shape files could automatically be visualized. People uploading data could input data without a complete metadata record, but the record must contain certain minimum components. The PWSSC is going to be the first program-wide Beta tester of the Ocean Workspace.

The group discussed future meeting dates and adjourned at 4:30pm.