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**DMAC Advisory Committee Meeting**

**Oct 5, 2012 Anchorage**

*Members in attendance*: Phil Mundy (Chair, NOAA/NMFA/AFSC), Steve Lewis (NOAA), Scott Pegau (OSRI), Louise Fode (NWS) for Angel Corona, Warren Horowitz (BOEM)

*Members by phone:* Allison Gaylord (BASC/Nuna Technologies)

*AOOS/Axiom Staff*: Molly McCammon (AOOS Exec. Director), Rob Bochenek (AOOS data team lead), Darcy Dugan (AOOS Program Manager), Chris Turner (Axiom)

The meeting started at 10:15am in the AOOS Conference room.

**Briefing from Rob Bochenek**

**Cyber Infrastructure Status** – Rob displayed a new graphic showing existing data flow through the AOOS system, and new linkages that will help bring new data and products online (see end of summary)**.** He noted thehigh performance computing cluster purchased with funding from NOAA’s HPC program had greatly benefited AOOS data analysis and visualization capabilities, and there was a 450% increase in speed using Inifiniband (as compared to using Ethernet). This has enabled the AOOS system to visualize and analyze large model and remote sensing output.

**Interoperability systems -** Axiom received additional funding from IOOS to develop a revamped sensor observation service (SOS) that can be used by other ocean observing regions and is currently in the process of implementation by AOOS.

**Offsite Backup** - An Axiom cluster in Portland is serving as a mirror site in the case of emergency. This system was tested in early September when Anchorage lost power, but since the mirror cluster wasn’t fully implemented, the main AOOS site went down too. A subsequent storm hit 10 days later when implementation was almost complete, and the AOOS system stayed intact except the model explorer. Rob and his staff are automatically notified when any system goes down.

**User Applications --** Rob gave briefings on the following applications:

* **Ocean Workspace** – This is a password protected webspace/tool for data and file sharing. Users can drag and drop projects and datasets and create metadata. Every action is tracked. The system is currently being used by about 10 groups for integrated research projects. Since April, almost 1,000 individual files have been pushed into the workspace (about 5 gigabytes of data). 138 users currently have access.

Group Discussion:

* + *How easy is it for new groups to join*? Groups have been spinning up as needed, but it requires Axiom staff time to educate group members about how to use the Workspace and facilitate interactions. Best practices will emerge but it’s still early in the process
	+ *Is there ability to include external researchers who are not part of a group*? Soon, there will be the capacity to create a file with a person’s name, and add subsequent files assigned to that person. The system will also be able to track the former positions the researcher held so someone could be assigned to more than one entity.
* **Arctic Portal –**Though not yet publicly available, Axiom has been working on a base system to visualize satellite imagery, real-time sensors, model output, and GIS layers on a single map. This is the foundation for the STAMP project, and also serves as the general infrastructure for the Cook Inlet Response Tool and other future visualization tools. So far there are 368 layers in the portal but not all of them are useful.

Group Discussion/Suggestions:

* Display standard datasets like HF radar in the standard way so viewers don’t have to figure out a new visualization scheme (i.e. use the UAF Chukchi radar symbology).
* Allow users to change the legend/styling of layers.
* Employ beta testers before public launch.
* Are we giving people too many options for models and data? One way to get feedback is to track what people are clicking on.
* **STAMP – Spatial Tools for Arctic Mapping & Planning** - more on this project can be found [here](http://www.aoos.org/stamp/). After a scoping process was conducted this summer, Axiom is working to populate the current Arctic portal with data layers prioritized by the project advisory group.
* **Assets Map Expansion –** several hundred more instruments have been added to the map since the spring, in addition to new capabilities (i.e. search by project). With the help of AOOS intern Nathan Hollenbeck, the map coverage is now being expanded to the Bering Sea and Gulf of Alaska.
* **Cook Inlet Response Tool** (CIRT) – currently on hold for public release until a new search function can be implemented this month. Rob demo’d the preliminary search function which is still awaiting dataset category tags. AOOS will send the CIRT tool to the DMAC for beta testing before public release. We’ll also be giving a demo to the response community (CISPRI, etc.).

Group Discussion/Suggestions

* If possible, lighten the system for people on 3G connections in the field.
* Find out in advance who the sources are that may deploy drifters in the event of a spill. Know the format of the data streams so the system can be prepared to ingest them.
* BOEM is planning a Cook Inlet workshop, probably next year. Good place to demo the CIRT tool.

**Salmon Run Timing Project Report – Phil Mundy, NOAA**

AOOS worked with ADFG and NOAA’s Fisheries Science Center this spring to produce a run timing forecast for Chinook salmon in the Yukon Delta. Fifty-two years of coupled environmental and fish data were used to produce a model which fairly accurately predicted the late 2012 run. It was particularly significant that the model was able to hit an outlier. Project partners were pleased, and are interested in continuing the collaboration next year.

**AOOS/ADFG Partnership – Rob Bochenek, Axiom**

This partnership has been slow to evolve. So far, AOOS is not ingesting additional ADFG data, and ADFG is still working to upgrade their data system. There is a meeting with ADFG planned for later in the month, and Axiom will update the data advisory group by email.

**Discussion about the DMAC work plan**

* Two items will be added:
	+ Axiom is working on an iPad/iPhone-friendly version of the data portal. This requires moving to HTML5 from Flex, a process which is underway but will take some time.
	+ Axiom is working on a service giving users who provide data to the Ocean Workspace the option of also publishing it directly to the National Ocean Data Center. We are awaiting the results of pilot efforts underway with other IOOS Regional Associations.
* There is a need to improve and systematize the user feedback approach for data products. Focus groups were recommended, organizing people of similar backgrounds/interests (i.e. the technical researcher, resource managers, general public, etc.)
* *Is there a next generation of the website planned?* This is essentially the “ocean portal” which can handle many different kinds of data, incorporates historical data, and may have different default views for specific types of users while working off one technical platform. In addition to this map-based ocean portal, there will also be a searchable data catalog for non-spatial data.

**Update on AOOS Projects & Activities -** A 6-month continuing resolution for FY13 has frozen funding at FY12 levels, and the future after that is uncertain as agencies often cut external partner grants at the end of the year. The worst case reduction for IOOS is likely 20%, which would be a big hit.

2012 was a good year for AOOS. In addition to core funding, we received $80-90K for Axiom to work on the Sensor Observation Service (SOS) for other IOOS regions, and $147K for operations/maintenance for HF radar in the Chukchi.

**Other Data Portals -** The group discussed other portals (ERMA, the new Arctic information portal being developed by the U.S. Arctic Research Commission, Ocean.data.gov, the Marine Cadastre, and a new DOE portal) and their relation to AOOS.

**Industry Data Update -** The first installment of Arctic industry-funded data is now in theOcean Workspace and awaiting metadata (historical met-ocean data), per Annex I of the Industry/NOAA data sharing agreement requirements. Annex 2 has been slow but is now making progress. AOOS will receive data from the environmental studies program some time in the next 2 months. There is currently not funding to create visualization tools for these data. NDBC is receiving real-time data from industry buoys which is also being streamed through the AOOS sensor map.

**Recommendations/Action items:**

Data Applications

* Create a seamless way to transition to the ocean workspace from Internet Explorer (which doesn’t work with the Workspace). This could be a button that says “launch in Chrome or Firefox”?
* Change default on assets map to be Jan 1-Jan 1 for present year.
* Add HF radar to the real-time sensor map.
* Provide archived sensor data from the sensor map.
* Find out in advance who in Cook Inlet would be deploying instruments during spill, and the data format they’d be in so the Cook Inlet Response Tool can ingest them seamlessly.
* Figure out a mechanism for publishing data through the Ocean Workspace.
* Provide Prince William Sound data through the AOOS website.
* Create a systematic way to receive and implement feedback on data products.

Collaboration/Communication

* Brief the DMAC group on the ADFG partnership at end of month.
* Send the DMAC group the new search tool for beta testing.
* Share the integrated budget showing personnel/project funding with DMAC members.
* Collaborate with BOEM on their new data project using the Marine Cadastre, perhaps using the Ocean Workspace. David Stein is a key contact at NOAA’s Coastal Services Center. Warren Horowitz will help put Rob in touch with him.

**The NEXT MEETING was set for Friday, March 1st. The group adjourned at 4pm.**

**Data Flow Diagram for the Alaska Ocean Observing System (created by Rob Bochenek)**

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