

Bi-Weekly Z-GRAM - 14 May 2010

[www.IOOS.gov](http://www.IOOS.gov)

The Z-Gram is an informal way of keeping you up-to-date on IOOS® activities. Please advise of additional addressees, or if you are receiving and no longer want to receive. If you think others could benefit from the Z-Gram please pass it on. To see previous Z-Grams go the IOOS website and view under 'program updates.'

IOOS® - Our Eyes On Our Oceans, Coasts, and Great Lakes

### Programmatic:

- FY10 RCOOS Awards: AOOS and CARA RCOOS awards were processed by NOAA's Grants Management Division and have been accepted by the recipients. The remainder of the awards continue to go through the process at NOAA's GMD. Earmark for ACT has also been processed and accepted by ACT.
- Welcome Aboard: Dr. Doug Levin joined the NOAA IOOS Program on Monday, 3 May, 2010 as the IOOS Program Manager for the Modeling Test Bed project for a 12-month effort. Doug Levin spent the past 5 years with NOAA's Chesapeake Bay Office assisting with the establishment of programs to map habitats in the Bay and determine the extent of Derelict Fishing Gear. He also coordinated the Environmental Science Training Center being established in Oxford, MD. Prior to joining NOAA in 2005 he held private sector, academic, and federal government positions. These positions involved management, grant management (FPO), business development, program design, proposal writing, technical coordination, planning and execution of field operations, education curriculum development, and data analysis and report writing. Doug has over thirty years of hands-on experience with a multitude of seafloor mapping systems, including DGPS, multi-beam, side scan sonar, sub bottom profilers, ADCPs, ROVs, AUVs and magnetometers. Project experience spans oil seep detection off of Cartagena, Columbia; pipeline and fiber optic cable route selections in the Gulf of Mexico, the Aleutian Islands and the Med; shipwreck imaging in Thunder Bay, Michigan (Lake Huron); and searching for evidence of Noah's deluge in the Black Sea with Bob Ballard. He's also participated in NASA's LIDAR Ice Mapping missions in Iceland and Greenland.

**Initial Operating Capability - Data Management and Communications (DMAC) Subsystem of IOOS®** [http://ioos.gov/library/dmac\\_implementation\\_2010.pdf](http://ioos.gov/library/dmac_implementation_2010.pdf)

- **Customer Projects:** **Contact Charly Alexander** at [Charles.Alexander@noaa.gov](mailto:Charles.Alexander@noaa.gov) if you want to be part of the action.
  - IOOS BIOLOGICAL OBSERVATIONS PROJECT:
    - IOOS - US-OBIS Conference Call (5/11): Jeff, Phil Goldstein, and Elyce Belmonte from US-OBIS discussed a data model and schema to allow integration of biology data (including taxonomic information) with physical data. There is a desire to reuse the existing work on both sides as much as possible. Need further discussion with other project participants.
    - IOOS Biological Data Project Conference (5/7): Status reports were provided on project tasks to define specific requirements, potential

biological observing data and data sources/providers, and system concept and design. Terms of reference for the Advisory Committee were reached: Charly will serve as Chair; the Committee will meet two to three times during the project. The purpose of the Committee is to provide guidance for the project and to provide information to the community.

- **Technical Updates: Data Providers**
  - NDBC – New Encodings Offered: Both comma-separated (CSV) and tab-separated (TSV) encodings (in addition to IOOS Geography Markup Language [GML] already offered) can be accessed from an NDBC test server. The CSV encodings will be basic and suitable for Excel. The TSV encodings will have a few enhancements to allow it to be read directly by the Ocean Data View (ODV) software used by NOAA ocean acidification researchers and EU SeaDataNet project. NDBC will migrate the encodings to a production server soon. NDBC is also continuing work on KML+JSON format for Google Oceans.
  - CO-OPS will begin to add CSV and TSV format encodings after a new programmer has been hired, which is anticipated by mid-Summer (complicated by a security breach that has CO-OPS making major changes to their IT security. Charly had his monthly meeting with CO-OPS' Rob Bassett on Thursday, 13 May, 2010 to discuss the status of the new programmer and emerging water level coordination work with USACE and USGS.
  - USACE (Water Level Data): Jeff met with Clint Padgett (USACE Mobile District) to begin discussions on the establishment of mutually agreeable data access services and formats for water level data in the Mobile district to be used by NOAA Coastal Inundation customers. Excellent agreement on conceptual approach. Need to confirm requirements and capabilities.
  - USGS (Stream Gauge Data): Jeff met with Nate Booth (USGS) to discuss USGS' plan to make Mississippi River stream gauge data available via SOS in 2010 and mutual work on registries and catalogs.
- **IOOS Data Catalog and Viewer:** The early prototype is taking shape nicely. See Jeff for test URL and password. The time line is as follows:
  - May 25: Initial demonstration at NOAA Data Management Workshop.
  - June 18: Second demonstration at OGC Interoperability Day.
  - June 30: Release of Version 1 - NOS milestone date.
- **IOOS Regional DMAC Team Efforts:**
  - Matt Howard (GCOOS) reported on the GCOOS/SECOORA vocabulary effort and asked other RAs to provide feedback. Lisa Hazard (SCCOOS) and Matt Howard (GCOOS) proposed a plan for a shared regional code repository to support efficient product development. Facilitating exchange of code between regions to build tools or enhance applications was a topic and activity that emerged from the RA DMAC Workshop in March. Matt intends to share the plan at the NFRA Product Developer's Workshop next week.
  - Discussed use of NetCheck, a program (developed at the West Coast Regional Node at the NOAA CoastWatch Program) that can check status of THREDDS Services in the regions. Need to find a host to run the program.

- IOOS Regional DMAC Workshop Report - Can be found on the IOOS® website and can be directly accessed from the URL:  
[http://ioos.gov/library/ioos\\_ra\\_dmac\\_workshop\\_2010.pdf](http://ioos.gov/library/ioos_ra_dmac_workshop_2010.pdf)
- GCOOS/SECOORA Vocabulary Effort - Matt Howard (GCOOS) and Stephanie Watson and Sarah Haines (SECOORA) are building on a list of terms for physical, marine meteorological, water quality, and model parameters developed in SECOORA. The vocabulary list is being reviewed by the RA DMAC team for missing terms for observations that they collect in their region to make this as comprehensive as possible. A subsequent version may emerge as a common data vocabulary that can then be mapped to other vocabularies.
- SOS Testing -Alex Birger in the process of testing the Regional Association's Sensor Observation Service Servers for compliance with OGC specifications. A report will be generated when the testing is complete.
- **NWS Next Generation (NEXTGEN) Air Transportation System, Weather Information Database:** IOOS met with NWS NextGen representatives. They are interested in getting NDBC data, possibly (but not necessarily) in time for September 2010 capability demonstration. An important consideration is how to mediate between services (SOS at IOOS, WFS at NextGen) and formats (WXXS GML at NextGen, IOOS GML and non-GML at IOOS).

**Interagency Project Collaboration:** The Z-Grams are certainly focused on providing information on IOOS® connections to these projects and it is not intended to provide programmatic updates of these specific projects because they all have project leads.

- **IWGOO 3rd Industry Day - 25 May 2010 - La Jolla, CA:** The Interagency Working Group on Ocean Observations (IWGOO) is cosponsoring a stakeholder workshop on Tuesday, 25 May, 2010 at the Scripps Institution of Oceanography in La Jolla, California. The workshop will explore how monitoring and understanding the ocean delivers economic and environmental benefits to industries, government, and the citizens of California. To register for this workshop, please visit <http://www.oceanleadership.org/iwgoo/california>.
- **High Frequency Radar/Radio (HFR):** No update.
- **IOOS and Links to the National Water Quality Monitoring Network:** No update.
- **IOOS and National Science Foundation (NSF) - Ocean Observatories Initiative (OOI):** Charly met with the OOI-CI team and USGS' Rich Signell on Friday, 14 May, 2010 to discuss the progress on the "use case" project and to re-calibrate on project tasks, roles/responsibilities, etc (Charly and OOI-CI's John Graybeal both prepared detailed, updated task-lists for discussion based on Arthur Taylor's original project plan). OOI-CI has hired ASA's Chris Mueller to assist with the technical implementation (coastal modeling is the "customer" to whom data will be delivered via Release 1 of the OOI-CI software). Good discussions and there are now standing, biweekly meetings to track and discuss progress. One of the immediate next steps is to officially engage two additional coastal modelers (three total) -- Rutgers, Texas A&M, and the University of Hawai'i.
- **IWG-OP:** Gabrielle and April provided an ICOOS Act overview briefing to the IW-GOP on Friday, 14 May, 2010.
- **DMAC Steering Team:** Charly and Sam met to discuss status this week before Sam was deployed for Deep Horizon support. Preliminary new team (with a draft Terms of

Reference) seems set for possible June meeting, save for three key reps: OOI (now have commitment from the OOI-CI team's Matthew Arrott), EPA (we're exploring several names per EPA's CSX database work), and U.S. Navy (Sam will follow up with ONR's Steve Ackelson, and Charly with follow up with NAVMETCOM's John Lever).

#### Other:

- **Response to Deep Horizon:** IOOS continues to be involved in this effort. Special thanks from OR&R Hazmat Division to Dr. Robert Weisberg (Professor of Physical Oceanography, College of Marine Science, University of South Florida) and his colleagues for working quickly to make their model output available in formats that could be used by OR&R. The community has been working to provide input to how *in situ* assets could be used to map the presence of oil within the 3-dimensional water column. Jack Harlan has been working with OR&R and the IOOS community on additional HFR along the coasts of Louisiana. Sam Walker deployed to the Gulf of Mexico on 13 May to assist with GIS/Remote Sensing, and he remains at the main Command Center in Louisiana. April Black, Regina Evans, Dave Easter, Jessica Geubtner, and Hassan Moustahfid (filling part of Sam Walker's shift before Sam departed for Louisiana) are taking rotations at NOAA's Incident Command Center. Thank you very much for all of the efforts you are undertaking as we rally to support the response effort.
- **SECOORA Annual Meeting - 11-12 May, 2010:** Dave Easter and I attended the SECOORA annual meeting in Savannah, GA. We were joined by Geno Olmi, NOAA's Coordinator for the South East/Caribbean Region. Again, the maturity of the IOOS regions is wonderful to see. It was also a great chance to capitalize on the tremendous intellectual capacity within SECOORA and GCOOS (as there are mutual members) and to begin the dialog on potential response to understanding the presence of oil in the three dimensions. It has been part of the discussion now ongoing. On the first day, Debra Hernandez introduced the IOOS version of speed dating by having set up tables whereby Debra, Ann Jochens (GCOOS), Judith Krauthamer (MACOORA), Josie Quintrell (NFRA), SECOORA's new website, and I were able to answer questions by the SECOORA members in 10-minute intervals. It was a great way to meet and network with folks.
- **AOOS Releases Request for Proposal (RFP) for Data Management and Communications (DMAC):** The RFP was released on 12 May, 2010 for AOOS Data Management and Communication Services for the next five years. Proposals are due to the AOOS offices by 25 June, 2010. The RFP and related documents are all available on the AOOS website at <http://www.aos.org>.
- **CarICOOS to provide data for Central American and Caribbean Games:** The Puerto Rico Sailing Federation (FVPR), in co-ordination with Central American and Caribbean Sailing Confederation (COCECAVE), will act as the organizing authority for sailing competitions of the Mayagüez 2010 Central American and Caribbean Games to be held in Balneario de Boqueron Boqueron , Puerto Rico, 21-30 July 2010. The FVPR has requested the cooperation of CarICOOS in the acquisition and interpretation of wind data (speed and direction, patterns) in the competition area. Researchers, technicians, and students at CaRA/CarICOOS have undertaken the task of designing, implementing, and publishing a specialized website dedicated to the sailing competitions. This service will

result in safer and more efficient regattas. In providing this service on behalf of CaRA, the Caribbean Regional Association for Ocean Observing, our enterprise fulfills its mission of service to the community on coastal observations.

- **CarICOOS Validation Experiment for Numerical Wave and Current Models:** **During March 2010:** CariCOOS researchers carried out a field experiment in Rincón, Puerto Rico to validate the numerical wave and current models that form the foundation of CarICOOS' multi-scale wave and current forecast pro-gram. For the Rincón Waves Experiment (RINWEX), two pressure sensors and an acoustic current meter were deployed by divers at depths ranging between 10 and 20 meters. These instruments were used to obtain field measurements of wave height to characterize wave refraction, shoaling, and dissipation along a stretch of coral reef. Vertical current profiles of the whole water column were also obtained. The resulting data will be used for validation of the SWAN wave model, a high-resolution wave model which provides wave forecasts up to seven days in advance; validation of the BOUSS2D wave model, a wave model used by CarICOOS to better understand beach erosion and rip currents, and validation of the ADCIRC coastal circulation model. Preliminary analysis of the data indicates the observations were successful, and more than a month of high-quality observations of waves and currents are available.
- **University of Washington Seaglider 144, New Seaglider Endurance Record:** During a mission in the Northeast Pacific, Seaglider 144 propelled itself for 292 days, covering 5,528 km (3,435 miles) through the water, more than half of the pole-to-equator distance (or about the distance between Boston and Paris). Seaglider 144 averaged a speed of just over .75 km per hour (0.5 mph), stopping for only a few minutes about every 9 hours to send back its data via satellite. During this mission it got the gasoline equivalent of over 30,000 miles/gallon from its high-energy lithium batteries. "We're very pleased with this new endurance and the data collected," said Dr. Charles Eriksen, a University of Washington professor of [Oceanography](#) and the owner of Seaglider 144. The scientific objectives of the mission were to continuously sample ocean properties, including salinity, temperature, density, dissolved oxygen concentration (by two methods), chlorophyll-a, and turbidity to 1000 meters depth in repeat surveys of the environs of Ocean Station P (50W). Ocean Station P is the site of one of the longest time series of ocean variability and is critical for studying ocean-atmosphere interactions, carbon uptake, and ocean acidification. Study at the site has been supported by the National Science Foundation, the National Oceanic and Atmospheric Administration, and the Department of Fisheries and Oceans, Canada. Seaglider 144's mission began at Station P in June 2009 and continued there through late January 2010 when it began its 1300 km transit to a location about 120 miles off the coast of Vancouver Island where it was recovered by a chartered sport fishing boat on 4 April.
- **Hydrographic Services Review Panel Spring Meeting:** Jack Harlan represented IOOS at the HSRP meeting in Providence, RI, 5-6 May, 2010, and gave a presentation on the status of the National High Frequency Radar network. The Panel, which meets regularly to solicit public advice/comments, is composed of a diverse field of experts in hydrographic surveying, vessel pilotage, port administration, tides and currents, coastal zone management, geodesy, recreational boating, marine transportation, and academia. Advice from this panel will assist in addressing NOAA's strategic plan to improve the nation's marine transportation system and NOAA's plans to support commerce with

world-class products and services that will help ensure safe, efficient, and environmentally-sound marine transportation.

### **Congressional:**

- Capitol Hill Oceans Week (CHOW) - The First Trans-Atlantic Glider Flight: What it Means for Future Ocean Observing, breakfast reception set for 8 June in the U.S. Capitol Visitor Center Congressional Meeting Room South. 10:00-10:45 AM. Invitation created and sent to CHOW organizers and the House Committee on Science and Technology. See the attached flier and spread the word.

### **Communications and Outreach:**

- The Smithsonian "Scientist Is In" exhibit is an all-day event set for Saturday, 5 June, 2010 from 11:00 AM - 4:00 PM. Scott Glenn and students from Rutgers University will be available to talk about the Scarlet Knight Trans- Atlantic Mission. Scarlet Knight will be on display, and it will then be on display in the main entrance lobby of the Department of Commerce Building downtown from 5-7 June, 2010.
- NEW IOOS Backgrounder posted on [www.ioos.gov](http://www.ioos.gov) "IOOS®: Partnerships Serving Lives and Livelihoods" at [http://ioos.gov/library/backgrounder\\_032910.pdf](http://ioos.gov/library/backgrounder_032910.pdf)
- Article highlighting IOOS involvement in Deepwater Horizon response went live on 12 May, 2010 - <http://oceanservice.noaa.gov/news/features/may10/ioos-deepwater.html>

**IOOS Conference Involvement:** This section will highlight those conferences where IOOS is a sponsor or has a session.

- **JSOST Workshop on Attaining Operational Marine (Oceans, Coasts, and Great Lakes) Biodiversity Observations - 24-27, May 2010 – Washington, DC:** IOOS is cosponsoring this invitation-only workshop with other NOAA partners as well as NASA, MMS, and ONR. The goal of the workshop is to identify the best options for implementing a local, national, and global biodiversity observing network. The expert group will address current biodiversity observation capabilities and scope future solutions for shallow and deep hard bottom, soft bottom, and pelagic environments. The lead POC for NOAA IOOS is Gabrielle Canonico.
- **MTS / IEEE OCEANS'10: The IOOS session is SEA 01 - "Operational Ocean Observing Systems."**
- **ASLO - Advancing Science of Limnology and Oceanography** (formerly the American Society for L&O), session submitted.
- **AMS - Ninth Conference on Coastal Atmospheric and Oceanic Prediction and Processes, 27 September – 1 October, 2010, Annapolis, MD:** Special IOOS session - "Coastal Oceanography and Meteorology -from Observations to Improved Forecasting." The Ninth Conference on Coastal Atmospheric and Oceanic Prediction and Processes, sponsored by the American Meteorological Society, and organized by the AMS Committee on Coastal Environment, will be held in Annapolis, MD, from 27 September to 1 October, 2010. Preliminary programs, registration, hotel, and general information has

been posted on the AMS website

(<http://ametsoc.org/MEET/fainst/201017asi17sm9caopp.html>).

- **Marine Technology Society (MTS), NOAA Research, and IOOS - TechSurge Workshop, 8-9 June, 2010: Ocean Observing: Thinking Outside the Basin:** The TechSurge Workshop will provide innovative knowledge and an interdisciplinary perspective to enhance our ability to collect, deliver, and use ocean information. This is the can't-miss event for all marine communities — the U.S. Navy, U.S. Coast Guard, NOAA, and all federal and regional partners involved with marine spatial planning and ecosystem-based management. For more information, please visit <https://www.mtsociety.org/conferences/OceanObserving2010.aspx> and register at [www.regonline.com/mtsoos](http://www.regonline.com/mtsoos)

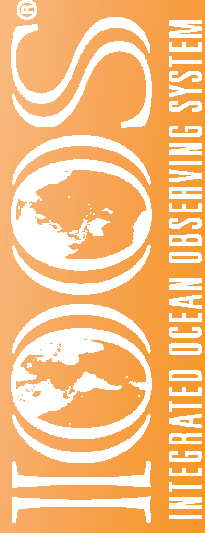
**Upcoming Meetings:** We have merged our calendars and now there is single calendar that allows you to view the IOOS-related meetings. To see this calendar, please visit

<http://www.usnfra.org/calendar.html> or <http://ioos.gov/calendar/>

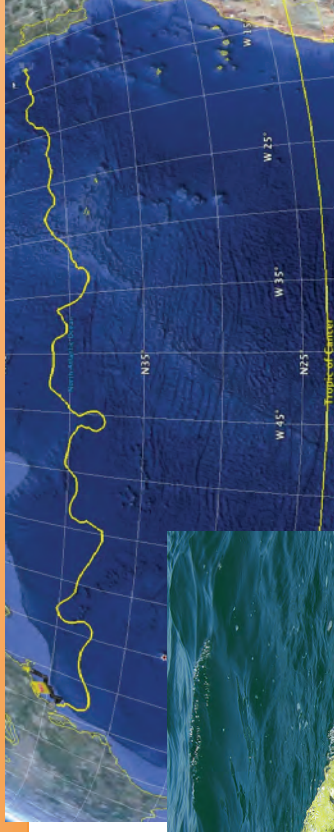
- May 17-19: Ann Arbor, MI; NFRA Product Developer's Workshop; Charly Alexander and Dave Easter (IOOS) to attend.
- May 24: NANOOS Annual Meeting - Portland, OR.
- May 25-26: NOAA Environmental Data Management Committee Workshop; Jeff is helping to plan workshop, and will give a talk, a demonstration, and co-lead one of the break-out sessions. The workshop will be in Silver Spring, MD (SSMC-4/NOAA Auditorium).
- May 25: La Jolla, CA; Small Sea Changes: Big California Impacts Workshop; IWGOO, CeNCOOS, SCCOOS.
- June 14-18: Silver Spring, MD; Open Geospatial Consortium and Ocean Interoperability Day.

Cheers,  
Zdenka

--



# The First Trans-Atlantic Glider Flight: What it Means for Future Ocean Observing



Please join us on June 8th to explore the first ocean crossing of an unmanned, underwater robot and what it means for the future of ocean observations, predictions and climate change, as well as its applications for marine spatial planning and ecosystem-based management.



Speaker **Scott Glenn** is a world-renowned oceanographer, researcher and professor at Rutgers University, NJ - a key member of the Mid-Atlantic region of IOOS. The glider's mission represents the culmination of Glenn's 30-year career as a pioneer in oceanographic observation. Glenn is now narrating a documentary highlighting the Atlantic Crossing story and is looking forward to the glider's debut at the Smithsonian later this year.

**Tuesday, June 8th, 2010  
10:00-10:45am**

**U.S. Capitol Visitor Center Congressional Meeting Room South**