

Bi-Weekly Z-GRAM - 11June 2010

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

Programmatics:

- FY10 RCOOS Awards: NERACOOS and ACT awards have been accepted by the recipients. Congrats..

Initial Operating Capability - Data Management and Communications (DMAC) Subsystem of IOOS® http://ioos.gov/library/dmac_implementation_2010.pdf

- **Customer Projects:** **Contact Charly Alexander** at Charles.Alexander@noaa.gov if you want to be part of the action.
 - **Biological Observations Project: Conf Call 6/4:** The Project team continues to make advancements in defining specific customer requirements and toward reaching consensus on the schema that will be implemented. A workshop will be held the week of September 20th at the NOAA/Marine National Monument in Honolulu, HI. The workshop will be an opportunity to set the stage for implementation phase of the project.
 - **USACE – IOOS Water Level Project:** We are kicking off a project with USACE/Mobile District (Clint Padgett) to support a pilot project establishing data representation standards and web services to expose USACE water level data in the Mobile District. Products from this project will be portable to other USACE districts and will not only facilitate improved access to these data internally for the USACE, but also for coastal inundation models/analysts who have repeatedly requested improved methods for assimilating additional water level data. We eventually anticipate seamless access to current and historical data in a standardized format, datum and structure. Discussions to finalize the approach included Jeff, Rob, Clint and Linda Lillycrop.
- **Technical Updates:**
 - **NDBC:** NDBC reported that it will likely move the next version of the IOOS code from test to production on June 23. Announcement is pending to the IOOS System Status mailing list. Contact jeff.deLaBeaujardiere@noaa.gov or rob.ragsdale@noaa.gov if you want to subscribe to that one-way announcement

list. New formats will be available, and some changes may require minor modifications to existing client code.

- **IOOS Data Catalog and Viewer:** On schedule for a 30 June release of V1.
- **IOOS Regional DMAC Team Efforts:**
 - **IOOS Regional DMAC Team Coordination:** SOS Web services testing: Alex Birger has completed testing of the SOS Web services that have been implemented by the IOOS RAs. The tests have revealed errors due to: 1) the strictness of the OGC test used and 2) implementation of the schema at the server. The results will be discussed on the next Regional DMAC Conference (6/11). Resolving the errors will be a major focus of the RA DMAC work over the next year. There is an issue with strictness of the OGC test and this will be raised at the next OGC meeting in Silver Spring (June 14 -18, 2010).
 - **NetCheck:** Kyle Wilcox (MACOORA) has set up and is running the NetCheck program, for the RAs, to test the IOOS RA THREDDS Services.

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.

- **High Frequency Radar/Radio (HFR):** Jack Harlan is participating this week (June 9-11) in the installation of a WERA HF radar at the University of South Florida's (USF) site near St Petersburg, FL. .
- **IOOS and Links to the National Water Quality Monitoring Network:** No update.
- **IOOS and National Science Foundation (NSF) - Ocean Observatories Initiative (OOI):** No update.
- **DMAC Steering Team:** No update.

Other:

- **Response to Deepwater Horizon:** We have 9 gliders in the Gulf as I write this Zgram. Keep up with the action by visiting <http://rucool.marine.rutgers.edu/deepwater> for IOOS support. Thank you very much to MACOORA Partner Rutgers for providing this web portal. The portal included a blog with daily updates of assets in the water. The website also provides Google Earth KMZs - gliders, satellites, hf-radar, models. This week University of Delaware and SCRIPPS launched gliders in the Gulf of Mexico, and they join the Gliders from MOTE, USF, USM and Rutgers. Participate in the planning process by logging into the following wiki site: <https://www.st.nmfs.noaa.gov/confluence/display/OOP/Home>. If you are in NOAA, use your NOAA LDAP credentials to access the site. Partners please use: Username: oilspill.response; P-word: WikiWelcome!

- **SCCOOS/CeNCOOS Joint Strategic Advisory Committee (JSAC) meeting:** Dave Easter and I had a chance to participate in the JSAC. We presented an overview of US IOOS strategic goals, accomplishments towards those goals, where the program was headed and support to Deepwater Horizon. The overall purpose for the meeting was for the two CA OOSes to seek feedback from the advisory panel on upcoming priorities. A number of the advisers gave presentations on the use and needs for the CA OOSes information. Highlights include a Synthesis for Coastal Ocean Observing Products (SCOOP) project which is a systematic effort to work with over 90 agencies to determine what and how they make decisions and then match this with how the IOOS data/information can be used, how SCCOOS and CeNCOOS might adapt their data collection and products and services to meet these needs; a collaborative effort that has been proposed by the California-Nevada Applications Program (CNAP) a NOAA Regional Integrated Sciences and Assessments (RISA) on inundation; how SCCOOS and CeNCOOS information can be used by NOAA's Southwest Fisheries Science Center, support to CA's HABMAP program, and a very close working relationship with USACE and the City of Encinitas on regional beach management. Toby Garfield and Mike Clancy, Navy - provided a look at SCCOOS/CeNCOOS support to Deepwater Horizon. The afternoon was spent in 4 breakout sessions: Ecosystem and Climate trends; Water Quality, Marine Operations, and Coastal Hazards where each discussion focused on efforts to date from the last JSAC meeting and priorities for moving forward in the next year.
- **Scientist is In - Smithsonian Hall:** Scarlet Knight and Scott Glenn, Tina Haskins, Dave Aragon and 10 students from Rutgers University participated in the Scientist is In event on World Ocean Day at the Smithsonian. It is estimated that over 40,000 people made their way to the Ocean Hall on 5 Jun. The students had a chance to show case Scarlet Knight, provided posters and talked to the visitors about the Scarlet Knight mission. Additionally they developed an interactive demonstration using a fish tank where children of all ages could see just how the Glider works. Dena Sidel was there with the trailer to the documentary she and her students have put together. It was a great event and I want to thank Jennie Lyons (IOOS Program) for all of the hard work she did to put this event together.
- **Marine Technology Society (MTS), NOAA Research, and IOOS - TechSurge Workshop, 8-9 June, 2010: Ocean Observing: Thinking Outside the Basin:** The Norfolk Chapter of IEEE/MTS, with sponsorship from NOAA (IOOS and NOAA Research) and Computer Sciences Corporation, hosted a workshop focused on the current state-of -the art and future needs for the nation's ocean observing capabilities. The Program Committee (Ray Toll - SAIC; Justin Manley - Liquid Robotics; Dr. Larry Atkinson - Old Dominion Univ.; and Dr. Richard Spinrad - recently retired from NOAA) brought together key federal programs, partners from academia, examples of cutting edge technologies transitioning to operations, and industry partners in oceanography. The

nationally significant event of the Deepwater Horizon oil spill in the Gulf of Mexico and observable climate change set the context and established a sense of urgency among those present to collaborate and exchange information as well as expertise to strengthen our national oceanographic capabilities. Representatives from Naval Oceanographic Office described their 3D Gulf of Mexico modeling capabilities, of which products are shared with the NOAA Scientific Support Coordinator in the National Command Center and are made publicly available via NOAA at http://www.opc.ncep.noaa.gov/newNCOM/NCOM_currents.shtml. Dr. Rich Camilli shared impressive pictures and video from his recent (the previous day!) work in the Gulf of Mexico to estimate flow rate at the wellhead. In other aspects of ocean observing, Dr. Jim Birch of Monterey Bay Aquarium Research Institute described the MBARI-developed Environmental Sample Processor (ESP) and its transition to commercial production by a California company, Spyglass. NASA is also interested in the ESP sensor for future missions to discover life on other planets. The workshop included speakers from scientific areas that might not usually be included in an MTS workshop: Dr. Kurt Schwehr from Univ of New Hampshire who works on unmanned NASA exploratory platforms like the Mars Rover and Dr. Peter Fox from Woods Hole Oceanographic Institution who spoke on ocean informatics. RADM Dave Titley, Dr. Ralph Rayner, Dr. Jon Delaney, RDML Jon White, Tim McGee RADM (retired), and Conrad Lautenbacher VADM (retired) all delivered informative and thought-provoking perspectives on the roles we as members of the ocean observing community have and must have in advancing the state of oceanographic science and in setting public policy.

- **Climate, Energy, and National Security: Meeting the Environmental Information Challenge.** <http://www.forumoneo4.com/index.shtml> Carl Gouldman represented IOOS at the Forum on Earth Observations IV in Washington DC on June 9, 2010, hosted by the Alliance for Earth Observations and the Institute for Global Environmental Strategies. The forum this year included panel discussions on

- * Responding to the Urgency of Climate Change-The New Information Demands and the Melting Arctic;

- * Monitoring Carbon; and

- * Supporting a Broader U.S. Climate and Energy Strategy.

The event included government representatives, leading entrepreneurs and innovators to raise the visibility of the need to better adapt to climate change through sustained measurements and information.

Featured speakers included The Honorable Alan Mollohan (D-WV), Chair, Subcommittee on Commerce, Science, and Related Agencies, Committee on Appropriations, U.S. House of Representatives; Jigar Shah, CEO, Carbon War Room; Monica Medina, Principle Deputy Undersecretary for Oceans and Atmosphere; and Thomas Armstrong on behalf of the Honorable David J. Hayes, Deputy Secretary, Department of the Interior. Other speakers and panelists included Oceanographer of the

Navy Rear Admiral David W. Titley; David J. Dean, Senior Advisor, Office of the Undersecretary for Science, U.S. Department of Energy; and CNA Senior Vice President, General Counsel and Board Secretary Sherri Goodman.

Panels consisting of high-level government officials and industry leaders examined the topics of: Key messages from the meeting included emphasis on the need for long term sustained observations and monitoring as part of a strong science portfolio to enable informed decision making on local, regional, national, and global scales. Strategy discussions focused on developing innovative enterprise-wide approaches fueled by partnerships between private, public and non-profit organizations.

- **AOOS in Action: Thematic workshops:** AOOS hosted 3 thematic planning workshops focusing on marine operations on May 12 (navigation safety, oil spill response, search & rescue), coastal hazards on May 13 (storms, coastal erosion, flooding, sea level rise & fall), and ecosystems & climate trends on May 17 (ocean acidification, climate change trends & impacts on ecosystems, ecosystem based management needs). Participants in the workshops included a mix of scientists, local experts, agency managers, and stakeholders will be used to help develop the next AOOS 5 year plan and budget. Workshop summaries will be posted on the AOOS website by June 7.
- **CaRA in Action - Coastal Weather Educational Module:** Past CaRA outreach activities have shown that the majority of the public lacks the skills necessary to interpret and fully utilize the wide range of coastal weather products available through our web page or, others such as the NWS Graphical Forecast System. CaRA's Education & Outreach Committee consequently convened a workshop designed to address this educational void. A select group of high school teachers from around the island of Puerto Rico met at La Parguera (April 16-17 2010) to design a Coastal Weather educational module for incorporation into school curricula. Responding to CaRA's findings of stakeholder needs, the module focuses on winds, waves and currents. Positive (recreational, commercial) as well as negative (rouge wave, rip currents) aspects of coastal weather are stressed. Editorial Norma (a specialized publishing company) represented by Mildred Correa provided support for the activity.
- **GCOOS in Action - Dedicated support to Deepwater Horizon Oil Spill:** Environmental Data Products disseminated via the GCOOS website have been expanded in response to the BP Deepwater Horizon Oil Spill incident. Dedicated pages support official containment and mitigation efforts, delivering a suite of in situ, remotely sensed, and numerical modeling information from federal, state, academic, and private sector data providers. The speed with which traditionally proprietary and/or for-profit information is being shared, enhanced by collaborations, and made readily available via the GCOOS website and the GCOOS partners is a testament to the value of the IOOS RAs and the relationships established among stakeholder partners. It also demonstrates success of the GCOOS-RA's efforts to build our Regional Operations Center (ROC). Through the efforts of GCOOS DMAC Coordinator Dr. Matt Howard, DMAC Chair

Vembu Subramanian, and the entire GCOOS DMAC Committee, the data integration and portal efforts towards a ROC are enabling the use of these critical data by the oil spill responders during this emergency situation.

- **GCOOS in Action - Science and the Media Workshop:** The GCOOS Education and Outreach committee worked with the Gulf of Mexico Alliance Public Relations Committee and the University of South Florida Poynter Institute to develop a Science and the Media Workshop. The workshop was test-piloted 8 April 2010 at the Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL. Approximately 20 scientists, journalists and outreach specialists participated. Post-workshop evaluations are being used to enhance the curriculum before offering it again for scientists, educators and journalists to improve science communication in the GCOOS-RA domain.
- **NERACOOS in Action - Regional Planning Meetings:** Together with the Northeast Regional Ocean Council (NROC), NERACOOS is leading the New England-Canadian Maritime Collaboration and Planning Initiative which is bringing together 10 regional organizations including the NeCODP. Through a series of four theme-based meetings in May and June (Ocean and Coastal Ecosystem Health, Renewable Ocean Energy, Coastal Hazards, and Ocean Observing), the organizations will define shared goals and expected outcomes for the next several years that their organizations will then pursue either independently or with others. In the fall of 2010 the ten organizations will then convene a Partners Summit to agree on what policy, planning and management projects they will jointly act on. One of the documents that was used to inform the planning effort was the 2009-2010 NERACOOS Draft Strategic Plan that was released for review in May. The regional planning meetings will help inform the next, five year, strategic plan.
- **PacIOOS in Action - new sensors deployed:** Water quality monitoring systems have been deployed in Guam, Palau, The Marshall Islands, and the Federated States of Micronesia. These systems, placed in collaboration with stakeholders, afford real-time and near real-time views of coastal and lagoon water properties. PacIOOS has purchased two Datawell Waverider buoys for deployment in Hawaii and the insular Pacific. These buoys, the workhorse of CDIP, will be deployed in coming months in consultation with CDIP and regional partners.
- **SECOORA at The Coastal Society:** On Wednesday, June 16, SECOORA will be hosting a panel at the 22nd International Conference of The Coastal Society, being held in Wilmington, NC. The panel is entitled "Supporting Regional Coastal and Ocean Managers: Linking Ocean Observing Tools and Capabilities to the Priority Needs of Managers and Users in the Southeast Region". Presenters include: Debra Hernandez, SECOORA, Harvey Seim, UNC-Chapel Hill, Susan Libes, Coastal Carolina University, and a representative of the Digital Hurricane Consortium. The panel will focus on three of SECOORA's priority areas: Ecosystems, Marine Operations, and Coastal Hazards. SECOORA will also be sponsoring a booth throughout the conference in coordination with NFRA, ACT, NERACOOS, and MACOORA.

- **CeNCOOS in Action - Humboldt Bay Symposium:** CeNCOOS presented a talk by Heather Kerkering, posters by Kerkering, Shaughnessy and Crawford and co-chaired a session at the Humboldt Bay Symposium held April 22-24th in Eureka, CA. All presentations from the Symposium will be posted on the [Humboldt Bay Conservation and Recreation District website](#) soon.
- **NANOOS in Action - sensors deployed:** The summertime mooring of the NANOOS supported buoy, NH-10, off the coast of Newport, OR was deployed in April 2010. Something that is new to this mooring and of great interest to many people here in the NW is the fact that we are now measuring dissolved oxygen at 30 and 73 meters and making these data available in NRT so that we can monitor DO levels as the upwelling season progresses. April 2010 redeployment of the improved NPB-1 UW-Mobilisa depth-profiling buoy in Puget Sound.
- **SCCOOS in Action - HF Radar Data provide to Oil Spill Response:** IOOS Regional Associations and partners are working to provide relevant ocean data, models, and products for the Gulf of Mexico Oil Spill Response. SCCOOS members from the Scripps' Coastal Observing R&D Center have worked with NOAA and regional partners to ensure that near real-time surface current measurements are available through the National HF Radar Network so that updates can be provided to the spill command center. For near real-time data in Google Earth (zoomed to area of interest) go to http://cordc.ucsd.edu/projects/mapping/maps/fullpage.php?ll=29.084977,-87.286377&zm=8&mt=p&rng=0.40&cs=4&res=6km_a&ol=1,3&cp=1
- **MACOORA in Action - Mid-Atlantic Buoy Deployment:** The Coast Guard Cutter James Rankin, a 175-foot buoy tender homeported in Baltimore, set the historic Francis Scott Key buoy in the Patapsco River near the Francis Scott Key Bridge. The buoy marks the spot where the ship carrying Francis Scott Key, the author of "The Star-Spangled Banner", was anchored during the bombardment of Fort McHenry during the War of 1812. Each year the buoy is set in the spring marking the historic location of the event and later removed in the fall.
- **GLOS in Action - New and Improved Observation Explorer:** View real-time and historic data and receive updates from the station or buoy of your choice. Check out the Record of the Day! This new explorer uses an improved, IOOS-compliant framework.

Congressional:

- **Capitol Hill Oceans Week (CHOW) - The First Trans-Atlantic Glider Flight:** What it Means for Future Ocean Observing, breakfast reception. Thank you to Scott Glenn who returned to Washington on Tuesday to provide a great talk on Scarlet Knight and the importance of how technology like the glider are changing the way we collect data in the ocean, the importances to our lives and livelihood, as well as the inspiration to new generations of students. Scott recounted his first interaction with satellite images when he was 8 years old and how that sparked a life long ambition to study the storms and how

the ocean plays a strong role in those storms. He recounted his journey from days at sea to Scarlet Knight making her historic crossing. Thanks again to Jennie who made all of this possible.

- 06/16 – Senator Whitehouse (D-RI) will host an event entitled “Rhode Island Energy and Environment Leaders” aimed at demonstrating how the federal government is working collaboratively to benefit Rhode Island. Suzanne Skelley will represent IOOS on a panel at 2:15 pm entitled "Environmental Research and Technical Assistance in Rhode Island."

Communications and Outreach:

- New York Times, 3 June 2010, Paul Voosen of Greenwire "Federal Funding Cuts Leave Oceanographers, Spill Responders in Dark,"
<http://www.nytimes.com/gwire/2010/06/03/03greenwire-federal-funding-cuts-leave-oceanographers-spil-74436.html>
- Proceedings, May 2010: Don Walsh, "A Historic Atlantic Crossing Undersea and Unmanned"
- Wilmington New Journal, 9 June 2010: Wade Malcolm, "University of Delaware Robot Scours Sea for Signs of Oil,"
<http://www.delawareonline.com/apps/pbcs.dll/article?AID=2010306090015>

IOOS Conference Involvement: This section will highlight those conferences where IOOS is a sponsor or has a session: No update.

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/>

- Open Geospatial Consortium (OGC) Meeting: Jeff; June 14 – 18; Silver Spring, MD
- President’s Council of Advisors on Science and Technology (PCAST): Charly/Hassan; June 24; AAAS/Wash. D.C.
- Wakefield, VA Weather Forecast Office (storm surge discussion); Doug (and Jesse Feyen); June 16; Wakefield, VA
- NOAA Ocean/Coastal Modeling Partnership Discussion: Zdenka/Doug/Charly; June 25; Camp Springs, MD
- IEEE Geoscience and Remotes Sensing Society (IGARSS) 2010: Jeff; July 26-30; Honolulu, HI
- Bay and Estuarine Sensor Technologies (BEST) Workshop: Doug Levin, Rob Ragsdale; July 27 – 30; Oxford, MD

Cheers,
Zdenka