

Development of a U.S. IOOS National Glider Strategy

This document is a synopsis of recent and planned US IOOS Program activities that are providing a foundation for a national strategy on the coordinated use of profiling gliders across the US IOOS Program. Its purpose is to promote a broader understanding across US IOOS of the work completed to date and present a plan for anticipated next steps. Please direct questions or comments to Becky Baltes, becky.baltes@noaa.gov, 301-427-2427.

INTRODUCTION

Profiling gliders are rapidly becoming essential instruments for operational observing of the nation's coastal oceans and Great Lakes. US IOOS regions and partners are heavily engaged in glider operations and in many instances leading the way on their uses and applications. As use and mission variety expand, there is an increasing need for a program-level dialog on topics such as how gliders are deployed and operated, community standards for data access and organization, and what the candidate expansion paths might be towards a national capacity for gliders for observing and understanding better our coastal oceans and Great Lakes. Towards this end, the US IOOS Program has initiated a set of preliminary actions intended to address these.

PROGRESS TO DATE

(1) Glider Asset Map

A pilot project to demonstrate visualization of glider operations from multiple programs was begun in January 2012 in collaboration with NANOOS (University of Washington – Craig Lee), MARACOOS (Rutgers – Oscar Schofield), SCOOS (Scripps – Dan Rudnick) and Applied Science Associates (ASA – Charlton Galvarino). The results are at:

http://www.ioos.gov/observing/observing_assets/glider_asset_map.html. This prototype was developed with a simplified data sharing construct, using KML files to display glider tracks. It also pulls some visualization from parent sites and provides data access links. It can be easily expanded to include other gliders and is compatible with emerging architecture for an IOOS Program data portal. Significant future enhancements are anticipated.

(2) Steering Team for National Workshop

During the establishment of the asset map, discussions also began on the possibility of convening a national glider workshop in 2012 to frame priority requirements for broader coordination and collaboration on glider operations. Logistics for a national workshop, candidate topics for discussion and potential participants, are being discussed via a series of conference calls with an initial workshop steering team consisting of:

- Dan Rudnick, Scripps/SCOOS
- Oscar Schofield, Rutgers/MARACOOS (Mike Crowley, Alt.)
- Craig Lee, University of Washinton/NANOOS
- Chad Lembke, Univeristy of South Florida/GCOOS/SECOORA
- Becky Baltes, Operations Division/US IOOS Program

(3) FY12 Funding

The U.S. IOOS Program provided \$50K to support both the prototype glider asset map and a national workshop. These funds were distributed during the 2nd quarter of FY12 to NANOOS, MARACOOS and SCOOS as supplemental grant funds.

ANTICIPATED NEXT STEPS:

(1) FY12

- ***National Workshop, August 1-3, Scripps Inst. of Oceanography, UCSD, La Jolla, CA***
 - The steering team is planning an early August meeting at Scripps and has begun assembling white papers for discussion and circulation within the glider community
 - The principle goal is to define content for a national plan via a robust or annotated outline
 - A list of potential attendees is attached and includes broad representation of glider operators and data users from US IOOS, NOAA and other federal agency partners
 - A key outcome will be a schedule of writing assignments for sections of a national plan
 - A workshop summary including the vision for a national plan is expected by Sept 30, 2012
 - Possible presentations and/or discussions on the meeting results and the emerging national plan are anticipated at:
 - MTS/IEE Oceans 2012 (Virginia Beach, VA, Oct 14-19)
 - IOOS Summit (Herdon, VA – Nov 13-16)
 - American Geophysical Union (San Francisco, CA, Dec 6-10)

- ***Adding to the Glider Asset Map***
 - ASA's Charlton Galvarino will continue to work with all IOOS regions to facilitate incorporating current and historic glider tracks/operations into the asset map
 - Links to data per reach back to home sites will also be included
 - Enhanced capabilities and functions will continue to be evaluated and documented for a potential upgrade in FY13

(2) FY13

- ***Development of a National Glider Plan***
 - A strategy for developing a national plan will emerge from the workshop and be presented at several national meetings, including the IOOS Summit in Nov 2012
 - A first draft of the national glider plan is anticipated in December 2012
 - A final draft is anticipated in March 2013
- ***Data Standards***
 - Included in the plan will be development of data content standards. The next step will be to develop an implementation plan for these data standards including how the data will be stored and archived, and the role of regional data assembly centers.
- ***Glider Asset Map – Version 2.0***
 - After the data standards have been established, a more robust glider asset map or portal should be developed to allow better ingest of data and improve web services associated with the map.
- ***Implementation of National Glider Plan***
 - A permanent steering team for glider operations is anticipated following the completion of the national plan. Key aspects of this FY13 execution will likely include ensuring execution of glider mission priorities, sharing/deployment of assets, and improved data interoperability and access.