



## Regional Ocean Data Portal: Transforming Information to Knowledge

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#### Regional Ocean Data Portal: Transforming Information to Knowledge

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The mission of the Gulf of Mexico Coastal Ocean Observing System's (GCOOS) regional data portal is to aggregate data and model output from distributed providers and to offer these, and derived products, through a single access point in standardized ways to a diverse set of users. The portal evolved under the NOAA-led U.S. Integrated Ocean Observing System (IOOS) program where automated largely-unattended machine-to-machine interoperability has always been a guiding tenet for system design. Initially, the portal focused on aggregating relatively homogeneous oceanographic and marine meteorological data from the principal Gulf of Mexico data providers. Obtaining community agreements from the data providers on data formats, vocabularies, and levels of service was relatively easy because the technical barriers to participation were low and we were able to provide financial support to them to make small additions or changes to their local data systems. Over time, the portal requirements became more complex as new parameters, new providers and heterogeneous data streams were added and the spatial domain increased to include beaches and adjacent wetlands. This began to strain our resources and take us outside our science domains of expertise. During the same period, the Gulf of Mexico Alliance (GOMA), a new environmental quality initiative involving the five Gulf states and Mexico with similar goals and directives as those of our sponsor, gained momentum and demanded both our attention and participation. GOMA is working, mostly among themselves, to discover or establish community standards for various types of data sets – e.g. water quality and nutrients. In addition to aggregation, the portal is also tasked with producing products from the collected information streams. Arriving at a prioritized list of desired products has been a major part of the business conducted by the GCOOS Regional Association (RA). Numerous stakeholder (e.g. emergency responders, oil and gas producers, recreational boaters, etc.) workshops were held to elicit user needs and requirements for observing system products for each group. The GCOOS-RA's Products and Services Committee and Education and Outreach Council have gone through similar activities aimed at determining what products various users groups want. We have been sensitive to the private sector when deciding which products to produce. While science users want numbers, users of all types mainly want maps. We have tried to develop flexible capabilities within the portal that helps users to create their own fused products, ad hoc, for a variety of output devices, from desktop screens to the smart phones. We will discuss how our data management system has evolved within the backdrop of rapidly changing technologies and diverse community requirements.

Attachment	Size
<a href="http://marinemetadata.org/files/mmi/AGU2009_Howard.pdf">AGU2009_Howard.pdf</a> ( <a href="http://marinemetadata.org/files/mmi/AGU2009_Howard.pdf">http://marinemetadata.org/files/mmi/AGU2009_Howard.pdf</a> )	35.24 MB
<a href="http://marinemetadata.org/files/mmi/AGU2009_Howard.ppt">AGU2009_Howard.ppt</a> ( <a href="http://marinemetadata.org/files/mmi/AGU2009_Howard.ppt">http://marinemetadata.org/files/mmi/AGU2009_Howard.ppt</a> )	34.51 MB

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