Geophysical Research Abstracts
Vol. 13, EGU2011-9528, 2011
EGU General Assembly 2011

Using OpenGeospatial Consortium Sensor Web Enablement Frameworks to Assess Quality Controlled Data

Janet Fredericks (1), Julie Bosch (2), Eric Bridger (3), and Tony Cook (4)

(1) Woods Hole Oceanographic Institution, Woods Hole, MA, United States (jfredericks@whoi.edu), (2) National Coastal Data Development Center, NOAA, Stennis Space Center, MS, United States (Julie.Bosch@noaa.gov), (3) Gulf of Maine Research Institute, Portland, ME, United States (ebridger@gmri.org), (4) University of Alabama in Huntsville, Huntsville, AL, United States (tcook@nsstc.uah.edu)

Over the past few years, the NOAA Integrated Ocean Observing System funded a project to demonstrate the use of OpenGeoSpatial Consortium (OGC) Sensor Web Enablement (SWE) frameworks to fully describe a real-time observational system in SensorML encodings and provide data services through Sensor Observation Services (SOS) with information about data processing, sensor characteristics and quality control tests and results. The project built upon the community-adopted standards of a grass roots organization called QARTOD – Quality Assurance in Real-Time Oceanographic Data. QARTOD defined data quality tests for in situ currents and wave observations from an acoustic Doppler current profiler. These tests are fully defined and registered with an ontology using the MMI – Marine Metadata Interoperability – ontology repository. By defining and registering the tests, the encoded descriptions can be linked to the registry, where they can be mapped to other qc tests and qc flagging systems. A content-rich sensor network model and implementation was developed for the Marthas' Vineyard Coastal Observatory and can be used to demonstrate the ability to assess data quality for wave observations off the coast of Massachusetts, in the north-eastern United States.