



## **An innovative methodology for the transmission of information, using Sensor Web Enablement, from ongoing research vessels.**

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Research vessels are sophisticated laboratories with complex data acquisition systems for a variety of instruments and sensors that acquire real-time information of many different parameters and disciplines. The overall data and metadata acquired commonly spread using well-established standards for data centers; however, the instruments and systems on board are not always well described and it may miss significant information. Thus, important information such as instrument calibration or operational data often does not reach to the data center. The OGC Sensor Web Enablement standards provide solutions to serve complex data along with the detailed description of the process used to obtain them.

We show an innovative methodology on how to use Sensor Web Enablement standards to describe and serve information from the research vessels, the data acquisition systems used onboard, and data sets resulting from the onboard work.

This methodology is designed to be used in research vessels, but also applies to data centers to avoid loss of information in between

The proposed solution considers (I) the difficulty to describe a multidisciplinary and complex mobile sensor system, (II) it can be easily integrated with data acquisition systems onboard, (III) it uses the complex and incomplete typical vocabulary in marine disciplines, (IV) it provides contacts with the data and metadata services at the Data Centers, and (V) it manages the configuration changes with time of the instrument.