



Ocean Data Interoperability Platform (ODIP): supporting the development of a common global framework for marine data management through international collaboration

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Ecosystem level marine research necessitates that large amounts of interoperable data are readily available for use in a wide range of new and complex multidisciplinary applications. Significant amounts of marine data and information are available throughout the world due to the implementation of e-infrastructures at a regional level to manage and deliver this data to the end user. However, each of these initiatives has been developed to address specific regional requirements and independently of those in other regions.

To establish a common framework for marine data management on a global scale that supports an ecosystem level approach to marine research there is a need to develop interoperability across these existing data infrastructures. The Ocean Data Interoperability (ODIP) project is creating a co-ordination platform to support collaboration between a number of these existing regional e-infrastructures which include Rolling Deck to Repository (R2R) in the USA, SeaDataNet and Geo-Seas in Europe, IMOS in Australia and also the international IODE initiative.

To demonstrate this co-ordinated approach several prototypes will be developed to test and evaluate potential interoperability solutions for solving the incompatibilities identified between the different regional data infrastructures. These prototypes will be used to underpin the development of a common approach to the management of marine data which can also be promoted to the wider marine research community with a view to expanding this framework to include other regional marine data infrastructures.

To achieve these objectives relevant domain experts are coming together at a series of workshops where areas of commonality between the regional infrastructures will be identified which can then be used as the foundation for the development of the prototype solutions. As a result six topics are currently being addressed by the ODIP project which have been identified and analysed during the first two ODIP workshops. These topics are: use of controlled vocabularies, standardised data discovery metadata formats, existing implementations of standards and protocols, sensor web enablement, interoperability between metadata and data exchange mechanisms and data formats. For each of these topics a series of actions and potential interoperability solutions have been identified and work has now begun to implement these solutions within three prototype development tasks which will be outlined as part of this presentation.

ODIP is a community led project that is currently focussed on regional initiatives in Europe, the USA and Australia. It is supported by parallel funding from the responsible agencies in each region. The European component of ODIP includes 10 partners from six European countries and is funded by the EU Framework 7 (FP7) programme. The US participation in the project is being supported through a supplement from the NSF for the R2R project, and the Australian contribution is being sponsored by the Australian government.