



## Visualizing Earth Science data using a Web Map Service interface to the THREDDS Data Server

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Unidata's THREDDS Data Server is a widely-used system for sharing many different kinds of earth science data across the Internet. It is used by many institutions, including European operational ocean forecasting agencies, for providing access to data from numerical models and satellite platforms. This presentation describes how these valuable datasets can be visualized using a variety of tools including Google Earth, NASA WorldWind, Godiva2 and other geographical information systems both on the web and on the desktop.

The visualization of datasets is made possible by the addition of a new Web Map Service (WMS) interface to THREDDS, based upon the University of Reading's ncWMS software. WMS is a specification of the Open Geospatial Consortium (OGC) that provides a standard protocol for clients to request customized map images from servers. The new system therefore enables data from THREDDS servers to be compared directly with other sources of data, such as topographic/bathymetric maps, in situ observing systems, shipping/aircraft routes and many more. The use of the WMS standard is mandated by the European Union INSPIRE directive, and the new system will help public data providers to meet their obligations for making data available to scientists, decision-makers and the public.

This presentation will describe current and future applications of the THREDDS-WMS system, particularly focussing on its use in European operational oceanography programmes including ECOOP (coastal-ocean observing and forecasting) and MyOcean (the new European Marine Core Services programme).