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COastal Marine Perception Application for Scientific Scholarship (COMPASS)

by Anne Robertson – EDINA



COMPASS demonstrates how knowledge-based discovery techniques can assist in improving the discovery of marine data and other scientific resources.

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by Olivia Merritt - SeaZone Solutions Ltd



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OpenGeoScience

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by Helen Glaves - BGS



A Pan-European infrastructure for marine and ocean geological and geophysical data. The purpose of GEO-SEAS is to create a network of 26 marine geological and geophysical data centres in 17 coastal countries across Europe.

COastal Marine Perception Application for Scientific Scholarship (COMPASS)

by Anne Robertson - EDINA

The COastal Marine Perception Application for Scientific Scholarship (COMPASS) project led by [EDINA](#) and funded by the [Joint Information Systems Committee](#) (JISC), demonstrated how an ontologically supported knowledge infrastructure for the coastal marine environment can assist in the enhanced discovery, access and use of scientific resources such as data, journal articles, scientific models and web services.

A knowledge infrastructure is an approach to systematically organising knowledge in such a way as to allow users to easily access content to suit their requirements. Such infrastructures differ from typical search engines for discovery of resources in that they allow discovery on the basis of knowledge rather than simple keyword search. In order to achieve this, knowledge infrastructures store more advanced content about available scientific resources than a typical search mechanism, and structure that content in ways that allow for searching and more intelligent discovery as ontologies. Within COMPASS, ontology experts worked closely with marine experts to create a domain ontology for selected marine instruments and measurement parameters. The instrument and measurement parameter ontology has been registered in the [Marine Metadata Initiative Ontology Registry and Repository](#).

COMPASS delivered a demonstrator discovery interface (Figure 1) that presented a new approach to the discovery of scientific resources to support scientists in more advanced ways than existing discovery tools. The approach allowed discovery on the basis of semantic information captured in the instrument and measurement parameter ontology, and also on the basis of scientific knowledge and the process by which science is developed (including scientific theories, models and analysis methods). Discovery was combined with tools for immediate access to scientific resources (whether publications, data sets or web services) that are of particular interest in the context of the geosciences.

The evaluation of the approach showed that marine scientists were enthusiastic about the idea of such searching and recognised its power. The COMPASS project recommends that discovery tools underpinned by structured knowledge in the form of ontologies offer new and powerful options for resource discovery relative to existing approaches and that increased investment should be made in this area.

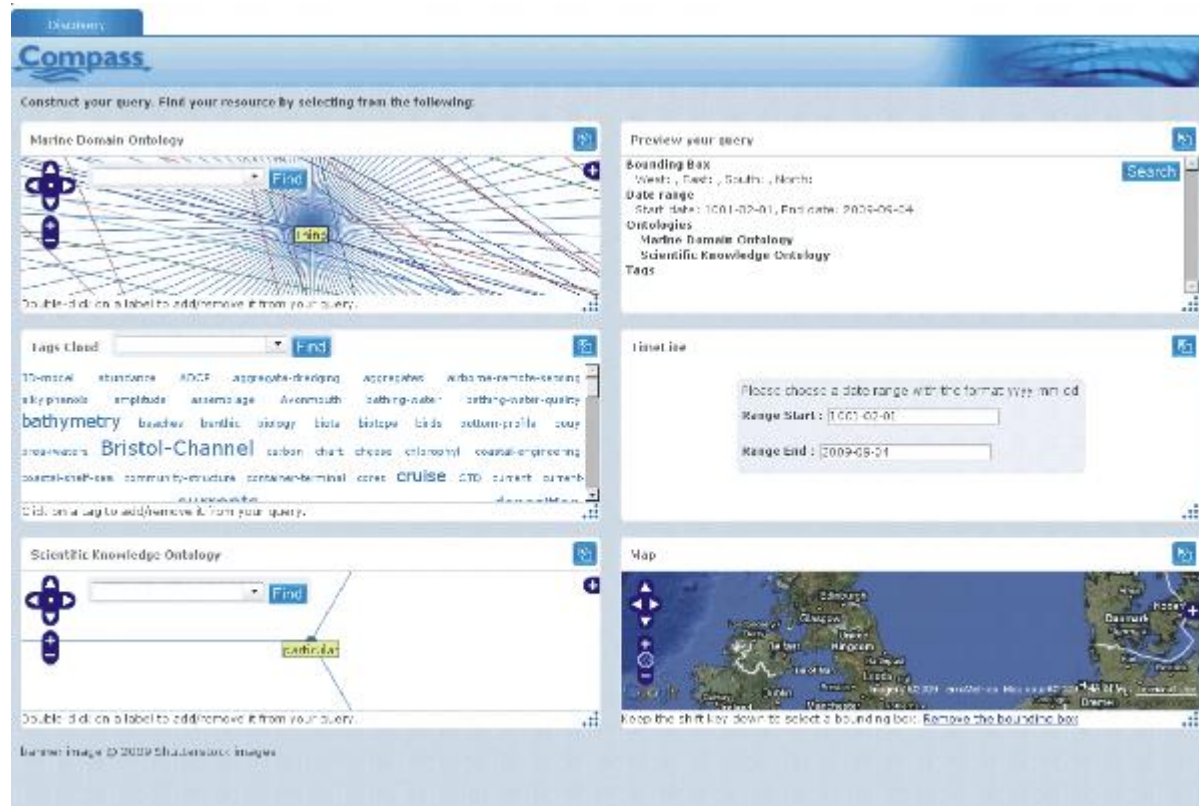


Figure 1 – COMPASS Discovery interface.

Project wiki - <http://compass.edina.ac.uk/tiki-index.php>

Project demonstrator (currently only working in Firefox 3.0.x and above) - <http://compass.edina.ac.uk/beta/csw-broker/>

Project demonstrator walk through Part 1 -

<http://www.youtube.com/watch?v=qiNVDnME674>

Project demonstrator walk through Part 2 -

<http://www.youtube.com/watch?v=6h-reLHwRbI>

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Characterising the Potential for Unrecorded Shipwrecks

by Olivia Merritt - SeaZone Solutions Ltd

The "*Characterising the Potential for Wrecks*" Project (AMAP2), commissioned in October 2009 by English Heritage, is a 18 month collaborative project between SeaZone and the University of Southampton (UoS) which seeks to improve the management of the marine historic environment through the enhancement of reference information to be used, for example, in marine planning.

In order to study the relationships between wreck data and aspects of the marine environment which affect their survival in seabed sediments, SeaZone will be filtering out valuable information from shipwreck records contained in SeaZone HydroSpatial (based on data held at the UK Hydrographic Office) and the National Monument Record (NMR). The results will be used to identify trends in the degradation of wrecks in different marine environments.

By combining and filtering data from these two important datasets, the AMAP2 project will enable the identification of shipwrecks which are not recorded in both databases, as well as validating the associations between records which already exist. Problems such as conflicting identifications or descriptions of wrecks and missing records will be tackled as part of the project to make best use of available information during the analysis of data. Feedback will be provided to both data providers throughout the project.

Once shipwrecks with matching characteristics have been identified, the distribution of sites of similar construction, age, burial and state of decay will be compared with modelled environmental variables such as sediment depth, type and mobility which affect their rate of preservation.

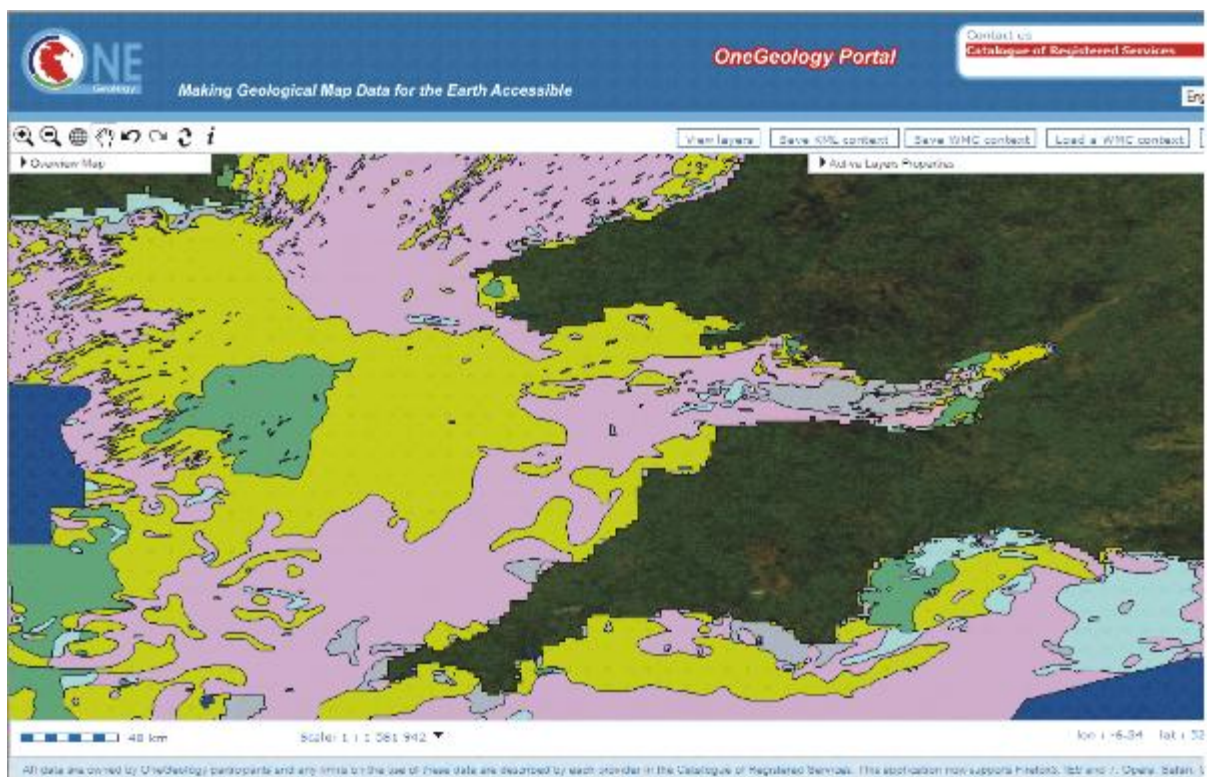
In addition to improving and linking information held across both datasets, the results will be used to develop a characterisation of data affecting the potential for wrecks to survive in differing seabed environments, providing the basis for a more justified assessment of potential for unrecorded wrecks during the planning process.

OpenGeoScience

by Jeremy Giles - BGS

[OpenGeoscience](#) is an expression of the [British Geological Survey's](#) (BGS) commitment to make the information it manages on behalf the nation more accessible. The initial launch of the OpenGeoscience contains a range of resources including:

- Maps
- Pictures
- Data including Web Map Services
- Educational Resources
- Reports
- Software



The website is aimed at both professional and amateur scientists. A short introductory video guides new users through the main features of OpenGeoscience. This is also available on YouTube [here](#).

"Even if you have very little geological knowledge, I'm sure it will be fascinating to zoom into your street and instead of seeing an aerial photograph, see the colourful geology underneath," said Dr Keith Westhead, head of Information Delivery at the BGS.

"We don't know all the uses people will put this information to, but what we're hoping is that they'll think of new and creative things to do with it."

The resource of particular interest to the MEDIN community will be the Web Map Service (WMS) of UK Continental Shelf Seabed Sediments see Figure 1. If you are unfamiliar with using WMS the service can be viewed on the [OneGeology Portal](#).

The BGS plan to progressively increase the resources available through OpenGeoscience.

GEO-SEAS

by Helen Glaves - BGS

[Geo-Seas](#) is a European Commission Framework 7 (FP7) e-Infrastructure project which started in May 2009 and will run until 2013. The purpose of the project is to create a network of 26 marine geological and geophysical data centres in 17 coastal countries across Europe. The creation of this infrastructure will allow researchers to locate and access harmonised and federated marine geological and geophysical datasets and data products which will be available across Europe via a single Geo-Seas portal. It will also facilitate interoperability with other data and knowledge infrastructures as well as providing middleware for users to be able to locate, retrieve and use primary data and data products in a multi-disciplinary way. In order to achieve this common data standards and data exchange formats will be agreed and implemented across the network of Geo-Seas data centres.

The infrastructure and new data products/services which are being developed by the project will be made available to the wider user communities who will also be consulted on their requirements via an on-line questionnaire which will be available in January 2010. This questionnaire will be circulated to the MEDIN mailing list and will also give users the opportunity to join the Geo-Seas mailing list which will be used to provide users with project information as Geo-Seas progresses.

The Geo-Seas infrastructure will be developed by adapting the existing SeaDataNet architecture and middleware to include geological and geophysical data, data products and services. This will create an infrastructure which accommodates both marine geoscientific data and oceanographic data.

The Geo-Seas project is aligned with a number of European directives including those relating to marine habitats, as well as to broader framework programmes such as INSPIRE, GMES and GEOSS. In addition Geo-Seas also has links with other FP7 projects including EMODNet and One Geology. Synergies between these projects will be maintained.

Further information about the Geo-Seas project is available at <http://www.geo-seas.eu>

News

Archival of Marine Data Sets Supported by MEDIN funding

http://wwwdev.oceannet.org/library/workstream_documents/documents/funded_data_proposals_summary.doc

BODC release new GEBCO_08 Grid

The GEBCO Digital Atlas gives global coverage of digital bathymetry data in the form of bathymetric contours and a one minute interval grid.

[BODC](#) have released a new GEBCO_08 Grid which includes version 2.23 of the International Bathymetric Chart of the Arctic Ocean (IBCAO). A 'Source Identifier' Grid to accompany the GEBCO_08 Grid is also available.

The download and further information is available [here](#).

The Marine and Coastal Access Bill published

The Marine and Coastal Access Bill was published 5th December 2009, and had its second reading in the House of Lords on 15 December.

The Bill makes provision for:

- a new network of marine conservation zones;
- the establishment of a new Marine Management Organisation;
- a new marine planning system;
- a simpler more streamlined marine licensing system;
- better management of fisheries; and
- a new right of access for people to walk round the English coast for the first time.

Further information can be found on the DEFRA website [here](#).

The Act can be downloaded in pdf format [here](#).

New chair for IMarEST board of Trustees

Professor Chris Hodge *FREng CEng CMarEng FIMarEST*, Chief Electrical Engineer of BMT Defence Services and Honorary Professor of Engineering at the University of Warwick, has been appointed Chairman of the Board of Trustees of the Institute of Marine Engineering, Science and Technology (IMarEST), taking over the role from Vaughan Pomeroy CEng FIMarEST FRINA FIMechE, Technical Director of Lloyd's Register who has held the post since April 2005.

[More information >>](#)

MEDIN discovery metadata standard update

The MEDIN discovery metadata standard has been updated to reflect the release of the GEMINI2 metadata standard which will be used by the UK Location Programme. The MEDIN metadata standard must be used by partners to record details of data sets. The fields used in the standard are compliant with other international conventions (INSPIRE, ISO19115), which means that the details can be transferred easily between organisations and queried by the MEDIN portal.

Further information is available [here](#).

Events

Coastal Futures 2010

Coastal Futures 2010 : Review and Future Trends

09:00, **20th January to 17:00, 21st January 2010**

Brunei Gallery,
School of Oriental and African Studies,
University of London

Conference Programme available [here](#)

To add details of your upcoming meetings and events of interest, please visit the [MEDIN meeting switchboard](#).

14th HBDSEG Meeting

14th [HBDSEG](#) meeting

13th January
DEFRA, London

To add details of your upcoming meetings and events of interest, please visit the [MEDIN meeting switchboard](#).