



Land and Sea - Talking with SeaZone

Dr Mike Osborne talks to us about the challenges facing the marine environment and coastal zone community and comments on SeaZone's continuing focus to promote, develop, deliver and support increasing demand for off the shelf marine geographic information ahead of the company's 5th birthday later this year.

The full interview is available online (www.geoconnexion.com/geouk_articles.php)

Geo: There appears to be a lot of change happening in the marine environment – why is this important to the GIS community?

MO: Yes there are some very interesting and challenging times ahead resulting from increasing demand for offshore renewable development, mitigation of climate change and calls for better protection of the rich biodiversity of our seas. Emerging legislation, such as the Marine and Coastal Access Bill, will address the need for delivering more effective and sustainable marine management.

Underpinning these changes is the increasing and overriding recognition of the importance of the best available marine data and information, together with appropriate tools and expertise. Geographic information systems (GIS) and Spatial Data Infrastructures (SDIs) are seen as vital to securing effective management, analysis and interpretation of data, essential to understanding our marine environment and delivering better science and improved evidence based decisions.

SeaZone is ideally placed to assist in meeting these new challenges, having extensive experience of working with a wide variety of public and private sector organisations over the last five years. We combine our unique knowledge of marine science, data acquisition and use, with expertise in GIS and data management, to provide customers with innovative data, software and service solutions that address their data access, processing and management needs.

Geo: The value of geographic information and related technologies for land applications is well understood. Is the same true offshore?

MO: Most people think of the need for safe navigation of ships or other vessels as the primary requirement for marine geographic infor-

mation, recognised as nautical charts produced by the UK (and overseas) Hydrographic Offices. However, the information required for navigation is less demanding when compared to that to support other marine activities, such as the site selection and development of an offshore oil and gas platform or wind farm, or for the assessment and identification of marine protected areas.

As widely demonstrated in the terrestrial environment, access to the highest resolution and most accurate data available and with the ability to use this information in a GIS environment, is hugely valuable. Not only is it efficient and crucial for business decisions but also helps to protect the health and safety of workers, and the environment.

Such value is being increasingly recognised and understood by those working in the wider marine community. Adoption of GIS for marine applications has admittedly been at a much slower pace; partly due to the historic proliferation and use of navigational charts outside of their designed application, and lack of appropriate data in GIS formats, now readily available through SeaZone.

Geo: What data have organisations used in the past and what are the problems faced when attempting to capture, access and use marine data, in particular in map preparation and interoperability with other datasets?

MO: As just mentioned, nautical charts are still being used for non-navigation applications in paper form or scanned/digitised for use in GIS often without appropriate copyright permissions. There is little awareness of the limited content and associated implications of making decisions based on such information.

Hydrographic offices collect and access large volumes of data to compile

their nautical charts, but only show information relevant to navigation. Unfortunately much of the richer data is then archived and made inaccessible. In addition, although this is changing, HO's discard a lot of data that is not relevant to navigation, with little foresight given to its potential wider use.

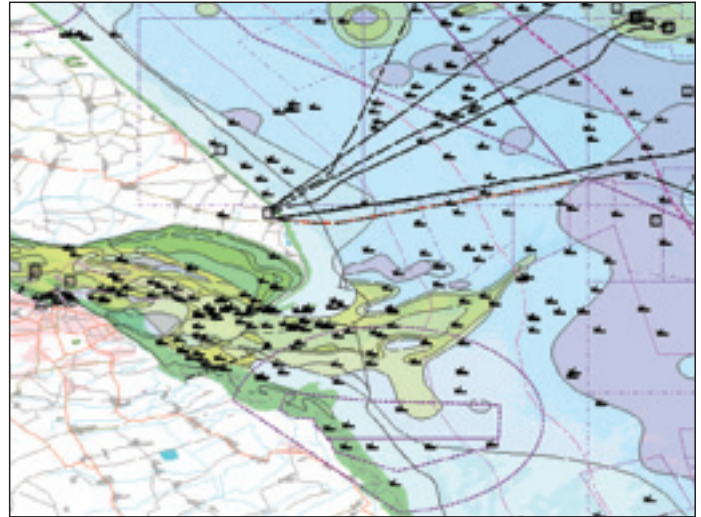
Charts are created on an individual basis, with scale based on desired geographic extent and standardised paper size. This results in almost 50 different scale levels with disparities between charts in content and difficulties in providing seamless datasets. The UK Hydrographic Office works independently from Ordnance Survey, so there is very little correlation between land and sea information, vital for coastal zone applications.

Organisations, both within the public and private sectors, who have required better marine information, have had little choice but to collect data themselves, at great expense in time and money. In the absence of a national policy towards marine data and information, we have ended up with duplication of effort, disparate inconsistent datasets with little or no interoperability making broad scale mapping or reporting extremely difficult.

Geo: What is the value of SeaZone's professional and long term involvement in marine GI?

MO: SeaZone is addressing the need for digital marine mapping comparable to digital land mapping, which has been available from Ordnance Survey for some time. Hitherto inaccessible data is being captured and re-engineered to create authoritative marine and coastal reference information that can be used for a wide range of different purposes. We are changing practices within hydrographic offices to defocus data capture and management from being purely navigational and encouraging them to think about the much wider purposes for hydrographic and marine data.

SeaZone is working closely with its users in the public and private sectors, other marine experts and agencies to ensure the data it provides is the best available and meets current and future needs. We have an ongoing improvement programme to address issues such as interoperability with land topography, height and geology, creating new datasets such as a marine gazetteer and working with third parties such as the Crown Estate to ensure SeaZone's marine data is authoritative, comprehensive and up to date.



Above all, we are ensuring our customers are able to access the best available data they can in an easy and efficient manner to assist in delivering better informed decisions and reduce the time and high costs associated with capturing field data. SeaZone is involved in a number of GI initiatives, such as DNF and the Location Strategy, promoting the adoption of good data management practices and to ensure the marine sector can contribute to and benefit from UK SDI.

Mike explored a number of other areas in more depth e.g. new technologies and the issues for marine and coastal data gathering and management. The extended interview and other linked papers are available online for free download. Visit: www.geoconnexion.com/geouk_articles.php

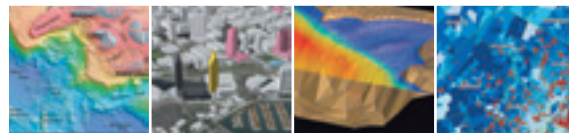
Dr Mike Osborne, Managing Director of SeaZone Solutions Limited, www.seacone.com

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