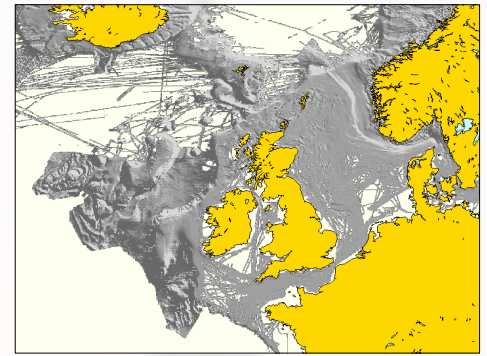
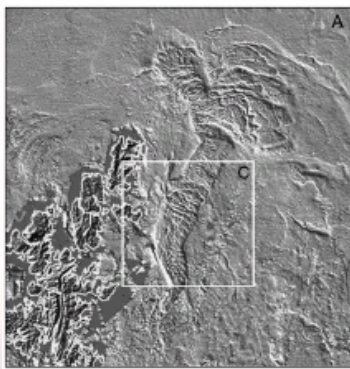


With more than 4 billion bathymetric soundings contributed by over 3000 users, the Olex system is a powerful tool for marine research. Whether you need visualise large datasets, carryout regional scale mapping or run a survey; Olex offers excellent performance with tremendous ease of use. Combining standard navigational charts with precise sounding-data from commercial vessels, gives you the best possible background for further surveys or interpretation.



Olex bathymetry data from Europe

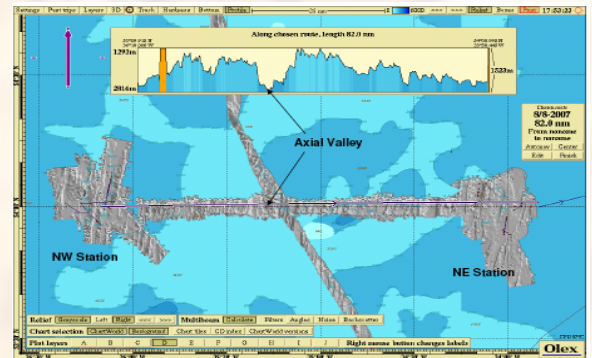
Geological Research Application



Olex provided the inspiration for a recent publication by Bradwell et al. In *Earth Science Reviews* "The northern sector of the last British Ice Sheet: Maximum extent and demise". The images to the left show the level of detail it is possible to achieve using the bathymetric data already assembled in the Olex database. The study revolutionised the understanding of the extent of past glaciation around the UK.

Biological Research Application

When OceanLab needed to undertake some difficult sampling and monitoring work at the mid-Atlantic Ridge they turned to Olex. The ship was equipped with a deep-water multibeam system and Olex provided a real-time mosaic of the data which, allowed the planning of trawl-routes through the complex terrain, as well as the location of lander sites to observe fish behavior in the deep ocean. The image on the right shows the high-resolution bathymetry gridded by Olex, overlaid on a background of a standard navigational chart.



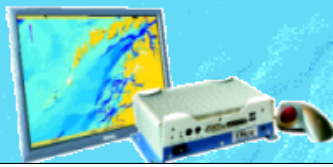
Marine Management & Policy

Scotland's Seas:
Towards
Understanding
their State

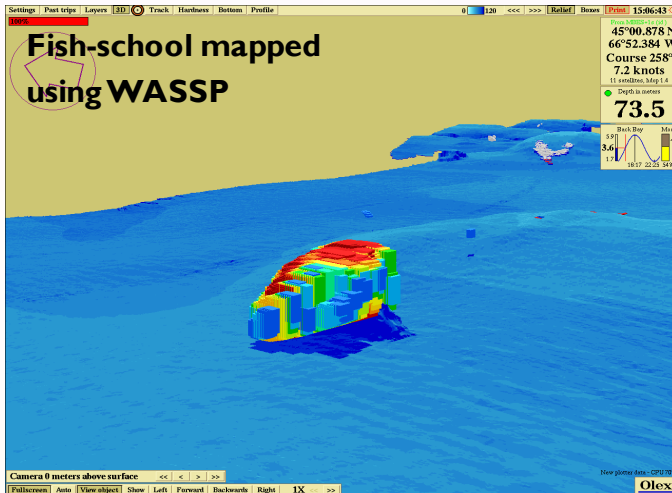


The British Geological Survey has completed a map of the bathymetry and sea level showing the morphology of the country's seas. Derived from data from 1970-2000, the map is the most detailed bathymetric map of the country's seas. The map is based on data from the Olex system, which has provided the most comprehensive bathymetric data for the country's seas. The map is available for download from the British Geological Survey website.

One of the greatest hindrances to marine research is the cost and difficulty of acquiring data in this harsh environment. Using the information collected by fishing boats we gain a massive amount of data at no additional cost. Not only is this efficient and environmentally sound but it produces a dataset with very broad coverage suitable for informing policy at a national level. In a recent report by the Scottish Government the Olex data was used to give an overview of the tremendous complexity of what lies hidden beneath the waves.

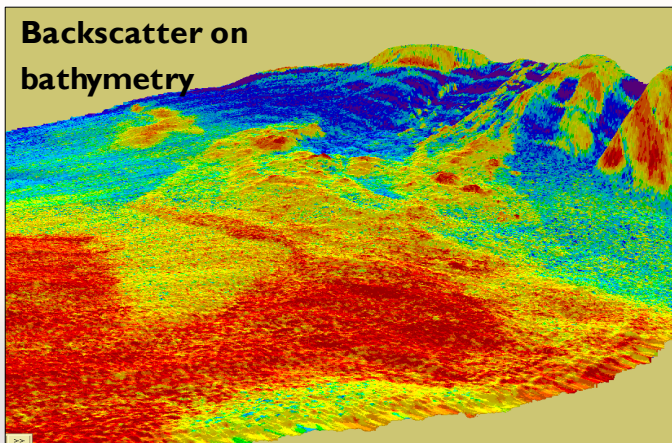


Affordable multibeam mapping has arrived!



Bathymetry, backscatter and water-column for €19,900.

The multibeam market has been dominated by systems designed to meet rigorous hydrographic specifications related to safety of navigation for merchant shipping. This level of precision is not required for habitat mapping applications and the extra cost of meeting these standards often makes multibeam surveying prohibitively expensive.



By combining Olex with the low-cost WASSP multibeam it is possible to not only survey for less but to own your own system for less than the price of commissioning a survey. Designed from the outset for those without a background as a hydrographic surveyor the WASSP allows a huge amount of useful information to be collected as simply and affordably as possible.

Olex is used by research and survey organisations globally:

British Geological Survey
Blom as - Norway
Cefas – UK
Geological Survey of Canada
Geological Survey of Ireland
Marine Institute – Ireland

Marine Scotland
NERC - UK
Oceanlab - Scotland
University Aberdeen
University of Bergen
University of Tromsø

Recent publications which use Olex data:

- Shaw, J., Todd, B.J., Brushett, D., Parrott, D.R. and Bell, T. (2008). Late Wisconsinan glacial landsystems on Atlantic Canadian shelves: New evidence from multibeam and single-beam sonar data, *Boreas*, 38, 146-159.
- Graham, A. G. C., P.T. Fretwell, R. D. Larter, D.A. Hodgson, C. K. Wilson, A. J. Tate, and P. Morris (2008), A new bathymetric compilation highlighting extensive paleo-ice sheet drainage on the continental shelf, South Georgia, sub-Antarctica, *Geochem. Geophys. Geosyst.*, 9, Q07011
- Baxter, J.M., Boyd, I.L., Cox, M., Cunningham, L., Holmes, P., Moffat, C.F., (Editors), 2008. Scotland's Seas: Towards Understanding their State. *Fisheries Research Services*, Aberdeen. pp. 174.
- Nielsen, T., Rasmussen, T.L., Ceramicola, S., Kuijpers, A., (2007). Quaternary sedimentation, margin architecture and ocean circulation variability around the Faroe Islands, North Atlantic. *Quaternary Science Reviews* 26, 1016-1036.
- Bradwell, T., Stoker, M.S., Golledge, N.R., Wilson, C.K., Merritt, J.W., Long, D., Everest, D., Hestvik, O.B., Stevenson, A.G., Hubbard, A.L., Finlayson, A.G., Mathers, H.E. (2008). The northern sector of the last British Ice Sheet: Maximum extent and demise, *Earth Science Reviews*, 88, 207-226.