

GIS and the UK Oil and Electricity Portals

The Energy Development Unit (EDU) of the UK Department for Business, Enterprise and Regulatory Reform (BERR) is the body responsible for ensuring maximum economic recovery of hydrocarbons from the North Sea and is the regulator for the North Sea. EDU works with the oil industry to maintain a GIS database of North Sea oil & gas activities, available from www.ukdeal.co.uk, and is also responsible for issuing consent for electricity generation and renewable energy.

Communications

In support of these crucial regulatory functions EDU has built the UK Oil Portal and the Electricity Portal. These portals have been designed to comply with UK government 2004/05 e-commerce targets, whilst at the same time delivering real benefits in terms of enabling more efficient ways of conducting business. EDU has moved its North Sea consent processes to the UK Oil Portal, the hub for all communications between government and the oil industry and designed with key objectives of making government-oil industry activities digital, paperless and efficient. All companies active in the North Sea use the portals. EDU is in the process of doing the same for the Electricity functions.

Open-source FOX

EDU has chosen to develop its own Portal application, building a software tool named FOX (Forms Orientated XML), a framework that allows applications to be generated using XML 4GL meta code, exploiting XML schema and Xpath and extensive database integration. FOX aims to reduce the development and maintenance effort by avoiding the need to write low-level code for many common development tasks. BERR has made the FOX framework an open-source product. Most of the functions typically have a spatial element, in that consent relates to portions of the earth, or may be defined together with a set of coordinates that may be layered onto a background map. EDU has extensive GIS systems built using commercially available software systems, and EDU has also used the services of a leading UK GIS consultancy, Informed Solutions.

GIS Components

FOX does not currently have any specific GIS components, and the link from the applications to the internal GIS system is not very sophisticated. EDU joined OGC because it will be building FOX GIS components and its preference is to use open-source products that comply with international standards. EDU is a passionate follower of standards, being an original member of the oil-industry IT standards body Energistics (formerly POSC) which has exchange membership with OGC. The current position is that Informed Solutions has conducted a market review for EDU of the options for using open-source GIS software and, resources permitting, EDU may benchmark various solutions and build the appropriate components into its FOX infrastructure.