

Background

With its extensive offshore exploration and production operations, British Gas PLC identified the need for an accurate sea bottom surveying tool for such applications as monitoring the progress of subsea excavation work and the surveying of the sea floor around drilling platforms.

The concept was of a highly flexible system, using off the shelf sonar equipment, capable of being deployed from a wide variety of vehicle types and supporting a range of seabed scanning modes and configurations.

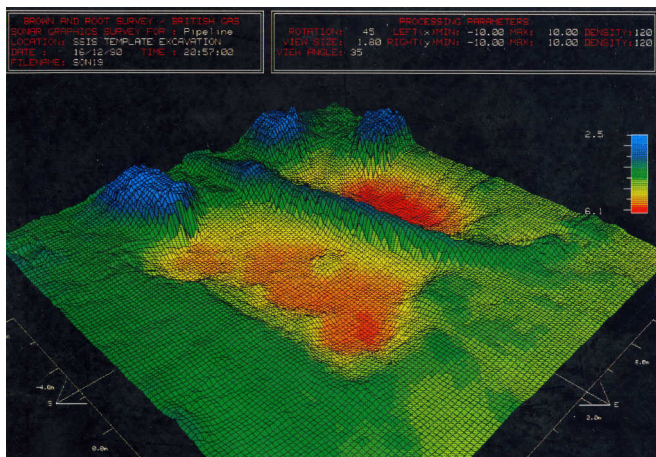


Figure 1: 3D visualisation of the surveyed area

Project Details

The project was carried out at the former British Gas Engineering Research Station (ERS) Newcastle upon Tyne and involved a major mechanical and electronic engineering effort over several years. The software development was contracted to Timestar, whose software engineering team carried out software design and development at their Newcastle offices and at ERS, and provided software support at the former British Gas subsea engineering facility at Blyth, Northumberland and during offshore trials.

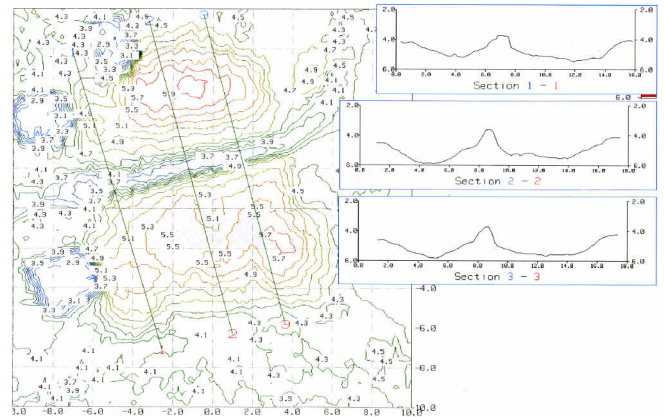


Figure 2: Contour plot and cross sectional plots of the surveyed area

The software, running on a Unix™ workstation, provided (1) realistic 3D visualisations of the surveyed area, contour plots, cross sectional plots and volume calculations (2) highly flexible facilities for editing and merging the results of multiple surveys and (3) control and communications services to manage data acquisition from the sonar system and its accurate geometrical transformation using data for the vehicle position and attitude acquired in real time from a variety of sensors.

Success in service



Figure 3: Survey in progress

The system was not only applied internally by British Gas but it also achieved commercial success for the company as a result of a worldwide licensing agreement with a leading multinational subsea surveying organisation.