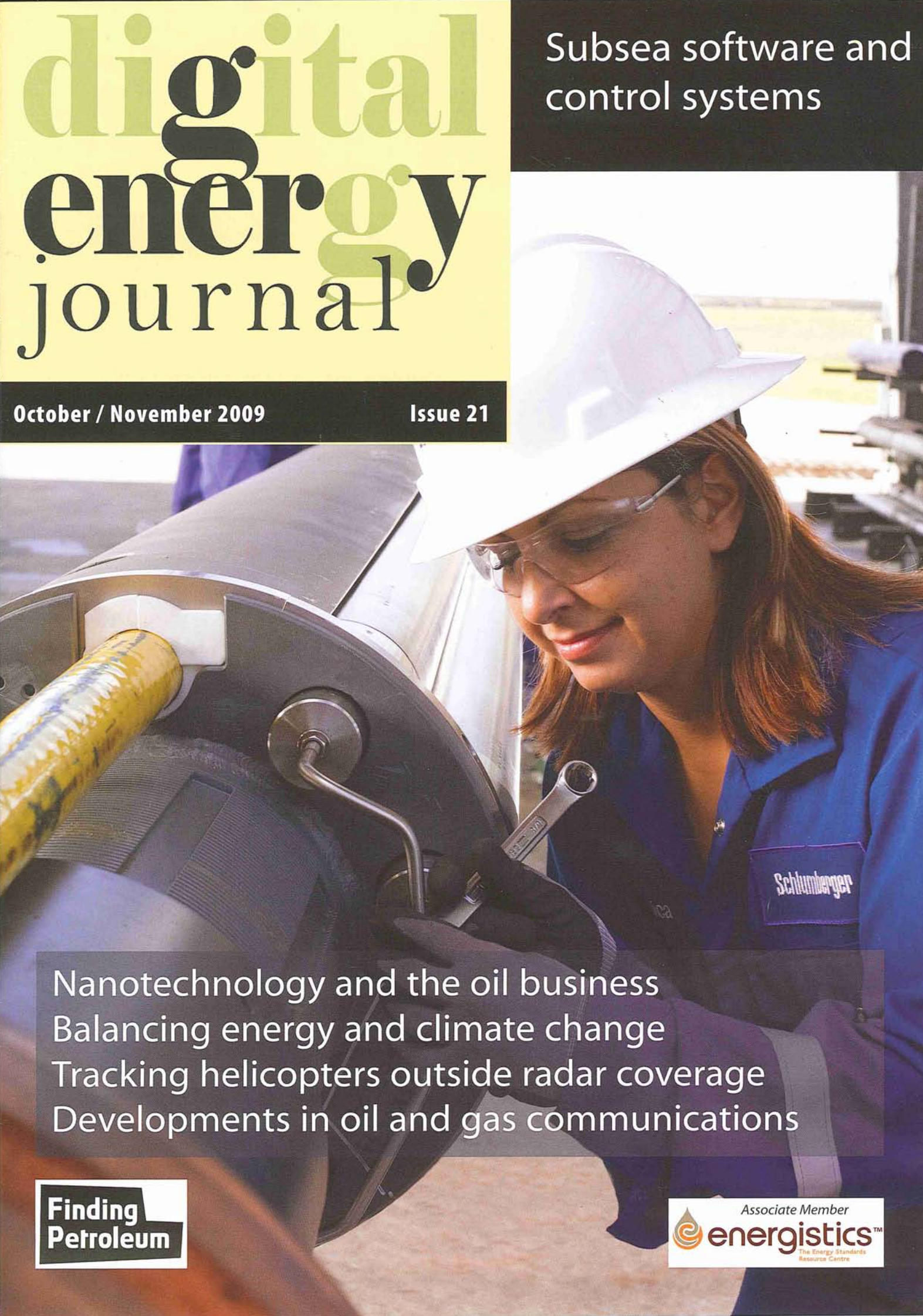


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Automating Your Fields

Houston company GlobaLogix helps oil and gas companies feed field data into office decision making systems, so they can run the fields more efficiently and intelligently.

GlobaLogix has built its business by helping energy companies turn their operational data into actionable information. Information that can be used to prevent mishaps and shut-downs, and run operations more efficiently and intelligently.

The company has seen extraordinary growth since it was founded in 2004. GlobaLogix now has 100 employees and claimed 1300 per cent growth in 2007, 50 per cent growth in 2008, and a further 50 per cent

growth is expected in 2009, despite the downturn. The company has been involved in projects all over the US, Mexico, and offshore, and even a coal bed methane field in Australia.

The company believes it has found its niche by combining several useful skills and services in one package – offering services that follow the data path from the wellhead to the Web site to help customers remotely monitor their oil and gas assets and proac-

tively address problems.

To do this, the company employs teams of project managers, field technicians, electrical, communications and IT engineers. It also has programmers and information management experts skilled in working out exactly what information and reports energy professionals in different roles need, so GlobaLogix can provide them with exactly the actionable information they are looking for to do their job – whether in terms of

alarms if something is going wrong, or reports showing performance over a period of time.

The company also provides a lot of consultancy. "We spend a lot of time with the clients evaluating what's already there," says Jim Fererro, co-founder and vice president, "and presenting plans that incorporate existing equipment into new systems."

"Most companies have made some investment in automation technology, but are not necessarily getting the most out of it. We begin by looking at what they have already bought, and then determine how we can weave that together into an infrastructure that gives them the end product they need."

Many customers appreciate the fact that they can work with one team with all the necessary skills, and all have an understanding of the business, Mr Fererro says. "With GlobaLogix, you don't ever have a situation where an IT guy is developing a screen when he's never actually seen a compressor. The programmer who works on the SCADA system is on the same team as the field technicians, both working for the same project manager."

Some companies also choose GlobaLogix because it can install a standard system across all of their wells in the world – and this is better than working with separate companies for each region to automate their field operations.

GlobaLogix also helps companies incorporate their well data into their Enterprise Resource Planning (ERP) systems, where they also manage other business data, such as accounts and personnel information.

By tying the data about employees in the ERP with data from the wellsite, it is possible to operate more efficiently. For example, a company could track field operations staff in the field, and quickly find out where the nearest person with a specific skill set is to the wellsite when there is an alarm.

The right data

Working out which data to capture in a SCADA system to meet the needs of people in various oil company roles is often the primary challenge, especially when the cost associated with the data stream is considered. The company accountants are concerned with different data than the operations or engineering groups.

"Sometimes it's assumed that all data can be captured," he says. "Sometimes they start with a wish list – the client wants everything every millisecond. Then when they understand what the cost is – they reduce that by 90 percent."

"A lot of our activity gets into helping them prioritize what has value.



A complex piece of plant generates a large amount of data - GlobaLogix helps you convert that to useful information in the office so you can make decisions

We start off by spending a lot of time really understanding what they're trying to do with the data – and then establish the priority – which of these areas are causing the most pain right now," he says. And of course different people have different priorities. "[for example] Geologists' interest in data is very different from production managers," he says.

GlobaLogix will often look at the data people have been collecting by hand – and work on the basis that it indicates the highest priority data, and the first which should be automated.

As one example of GlobaLogix work, in one offshore project, the customer was collecting large streams of data and sending them back to the office. The bandwidth required was expensive and unsustainable. GlobaLogix got involved and in talking to the engineers evaluating the data, realized that real time data was only important when the data points started changing. "We developed algorithms that monitor rate of change of data points," he says.

"For that project, we only actually transmit data in high speed packets when there's information that's changing. Other times they just get a pulse of information saying everything is staying the same. This leads to a significant reduction in communications costs."

Data Transmission and Infrastructure

GlobaLogix works independently of any one technology product or vendor so a key strength for customers is that the company can work with existing and new equipment to custom make a solution to the problem at hand. For example, for the communications component of a data automation system,

GlobaLogix can install a wide range of different communications options, depending on which one is better for the project, including WiFi, WiMAX, Microwave, serial radio, Ethernet radio, satellite and DSL.

The company can also store data on site if there is ever a problem with the communications link (e.g. due to equipment failure or solar panels being out of action for a while due to a snowstorm).

The field data (e.g. from tank level gauges, flow meters and compressors) can be provided from the equipment in a variety of different protocols, including MODBUS, fieldbus, Hart or proprietary protocols.

Regardless of the collection method, data is generally brought into a SCADA (supervisory control and data acquisition) system. SCADA is software which understands the equipment language, and turns it into useful information for people, including visual displays and reports.

The SCADA system will also sort out alarm priorities, ensuring that if there is more than one alarm at once, the user is alerted to the most important one first.

Future Growth

In general, most customers understand the benefit of automatic data capture more than they did a few years ago, Mr Fererro says, and this has helped spur GlobaLogix' rapid growth.

"We'll continue to expand our business to offer customers the data automation services they need to improve their operations," Mr Fererro says. "Our company is built on the idea that an oil or gas field can operate as smoothly as the most efficient factory floor and we'll keep working towards that goal."