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Oil Review Middle East

Covering Oil, Gas and Hydrocarbon Processing

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Challenges in seismic driven reservoir characterisation

Oilfield security in Iraq

"Restructuring work at the Zakum offshore oilfield islands has been completed in line with drilling operations."
Mr Awaidha Murshad A Al-Murar, Civil projects Division Manager, Abu Dhabi National Oil Company (ADNOC).

Reducing risk and optimising operational efficiency by means of open innovation was the theme of this year's technical get-together of Schlumberger Information Solutions' (SIS) clients. Robert Adams reports.

Technology takes centre stage

AROUND 500 DELEGATES assembled in London on 18 May for this year's SIS Global Forum. Held every two years these structured events bring SIS's own staff together with clients and partners from all over the world, including a substantial contingent from the MENA region. The theme of this year's event was 'Innovate. For the long run.'

Into just three days were packed more than 150 individual technical sessions conforming to one of the four main tracks outlined below. In addition there were some introductory workshops, a series of thought-provoking plenaries covering issues of interest to all delegates, and a panel/Q&A session which brought it all together. This was timed to coincide with the launch of the Ocean Store (highlighted).

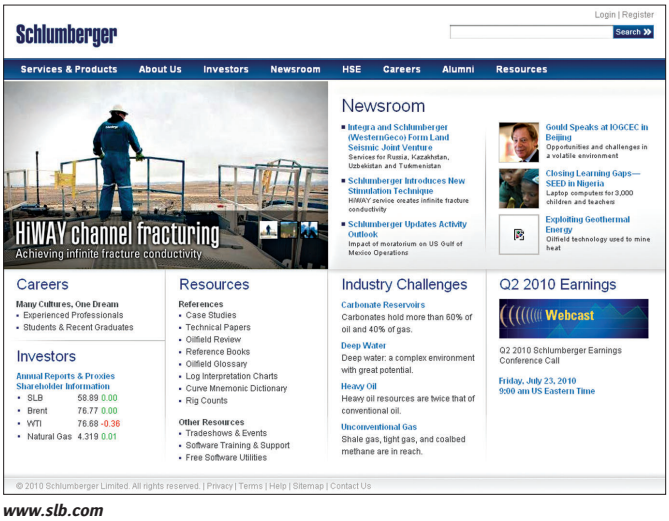
Oil Review Middle East was honoured to take part in this almost press-free event at which so many important current issues about innovation in data handling were discussed, an enormous amount of technical detail was presented and a wide variety of easily-identifiable SIS specialists made themselves available at all times to deal with technical queries.

Indeed choice of how to best use the allocated time was an issue in itself, but the Europe/US-based services company went out of its way to facilitate the dealing with follow-up matters, including contacts, afterwards. Our own delegate came across a wide range of subsurface information specialists from every continent.

Expanding range

He identified two main threads running all the way through. The first was the whole range of issues surrounding the analysis of data by means of the best use of innovative open technologies – two words that were used frequently.

For this, the Forum's keynote was set by one of the plenary speakers, interestingly from outside the world of energy altogether, who used the analogue of the iPhone as the business model that is being followed by SIS, specifically in regard to Petrel 2010.



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Along comes a brilliant idea, he said, which is then taken away by a wide range of software developers, universities and energy companies themselves, and its uses extended enormously with an ever expanding range of applications. That's what has happened with so such impact in the case of Apple's iconic product, and that's what is happening with the ever-expanding range of plug-ins1 available in the newly-launched Ocean Store.

The Ocean framework allows fast development of Petrel plug-ins to enable tightly integrated and efficient proprietary workflows. Just like the latest cellphone and its wide range of apps, "Petrel has a feel to it," the Forum was told.

Tapping the power of collaboration in this way results in the industry's most powerful platform for innovation. Many other SIS innovations were discussed in selectable technical sessions, too.

The second theme - closely related to the first, is how any busy E&P or service company in today's hectic environment handles the vast amount of data that is being generated all the time.

The plenary audience were given an example of this from Chevron, and from KOC Khalid Al-Sumaiti explained how technology providers are helping this national oil company keep on top of the vast amount of data it needs to meet its strategic goals over the next 20 years.

Complete reliability

It is to make proper use at the right time of all this information that SIS's staff worldwide are dedicated. And the result? Insightful analysis of the subsurface and accurate reservoir characterisation, with complete reliability, and all 24/7.

The simultaneous tracks offered were:

Exploration. Multiple opportunities to share best practices for using SIS technologies and learn about the latest advances that can improve and accelerate workflows all the way from basin to prospect, while fully quantifying exploration risk at the same time.

Development. Using a series of case histories from clients of SIS and showing how these long-standing and constantly-evolving technologies have enabled them variously to address a wide range of geological and simulation challenges in a wide range of subsurface conditions. All with the objective of optimising field development and managing the inevitable uncertainties more efficiently.

Production and operations. Also involving a peer-comparison series of presentations, revealing how clients from around the world have addressed their own critical output challenges, including how production solutions from SIS have delivered measurable performance improvement by means of collaboration between experts. The goal is transformation of production workflows.

Innovation and open technology. Potential customers were invited to share in the experiences of energy companies, independent software providers, academic institutions as well as SIS's specialists in developments based on the Ocean application development framework. Many examples were provided about how the industry is already using this to unleash further innovation.

As an example of just one of these presentations, within the Development series, Mr W A Habiballah of Saudi Aramco described how co-operation with SIS has already resulted in the new workflows to

optimise cost and maximise recovery of planned new wells, and to reconfigure existing ones.

The workflow he described automates and streamlines the process of designing well trajectories, completions and configurations. It employs Ocean/Petrel as a platform for data integration, engineering analysis and optimisation.

Mr Habiballah concentrated, firstly, on how Petrel is used to obtain a higher-resolution sector model that is suitable for rigorous analysis, sensitivity analysis and optimisation. Secondly, on how the Ocean framework is used to enable Petrel-Reservoir Engineering to plug in to his company's own in-house simulator. He described how major functionality of this plug-in was extended through collaboration.

Preparation

"Once this plug-in is fully functional," he said, "reservoir engineers will have a single scene/interface to fully carry out well designs, assessment and optimisation."

Workflow is currently undergoing testing and verification to ensure it suits Aramco's needs, which are of course shaped by exceptionally large fields, multiple wells and massive simulation and geological models.

We record this detail to show just how much care went into the preparation of the many technical presentations, nearly all of them supported by a very high standard of PowerPoint graphics. Taken together, this comprehensive and illuminating programme of plenary and technical sessions and social events provided a wide range of enjoyable opportunities to meet, exchange experiences and build relationships. ■

Ocean Store now open

THE POWERFUL OCEAN framework allows fast development of Petrel seismic-to-simulation software plug-ins to enable tightly integrated and efficient proprietary workflows.

This platform already gives companies the freedom to create specialised workflows to solve complex problems, profit from technology differentiation and reduce their technology adoption cycle.

The Ocean software developers' kit is an open, extensible and scalable environment that accelerates the development and deployment of innovative software solutions to solve today's hydrocarbon challenges.

The brand-new Ocean Store* is a website where users can browse, buy and download Petrel software plug-ins to extend their workflows. These apps are being continually developed by a diverse range of independent software companies and university institutions.

The Store provides Petrel users with access to diverse plug-ins from independent software developers, from seismic waveform classification to visualising microseismic data, all in one place.

"In the oil and gas industry today, with more complex reservoirs and intense competition for reserves, oil and gas companies have to differentiate like never before," said SIS's president Tony Bowman, who addressed one of the plenaries at this year's SIS Global Forum.

"The Ocean platform allows developers to rapidly innovate to solve these tough challenges…The Store provides access to a growing set of capabilities that extend the already broad Petrel platform.

He revealed that Ocean is now used by four of the super majors as well as by many national and independent oil companies

And the ultimate objective of all this? To help your company find and produce more oil and gas.

SIS is an operating unit of Schlumberger that provides software, information management, IT and related services.

The company collaborates closely with oil and gas companies to solve the toughest of today's reservoir challenges with an open business approach and comprehensive solution deployment.

* *www.ocean.slb.com* To learn specifically what's new in Petrel 2010 go straight to *www.slb.com/services/software/geo/petrel/petrel2010.aspx*