Schlumberger Information Solutions Forum Paris, September 2004



Oil company and NOC CIO's reflect on the future of IT

Highlights & themes

Study the picture above¹ – there have probably been very few occasions when Chief Information Officers from quite so many members of OPEC producers and major oil and gas companies have been present at the same time. Probably around 80% of the world's oil and gas production is represented. Schlumberger has to be congratulated on assembling such an influential group². The 270 client attendees (and maybe as many SIS personnel) heard two excellent keynotes by Shell's Peter Kapteijn and ChevronTexaco's Mike Hauser addressing the i-field³ – the theme of the show which was subtitled 'i-enabling your operational processes'. Speakers concurred that the potential of the i-field is likely greater than the CERA⁴ estimates. Strangely though, there was not a huge amount of collateral in the software area to back up the i-field theme. As the new SIS⁵ president Kjell Erik Ostdahl remarked, the company has had a G&G focus for too long. Progress is being made – on i-enabled drilling and facilities design. But production i-enablement, while ongoing, is not all 'owned' by the Information Solutions unit⁶. 'Peer Exchange' client presentations reported on real world SIS product deployment from ConocoPhillips, Saudi Aramco, Norsk Hydro, Pemex, ADNOC and Kuwait Oil Co.

On the software front the highlights are the new 'Ocean' Microsoft .NET-based development environment, a new data model 'Seabed' (to replace Finder) and the expansion of the Open Spirit middleware environment to encompass – well just about everything! Seabed is variously presented as a new database application and as a new 'logical' data model. The intent is to better leverage Oracle 9/10 functionality. On the application front Petrel has moved center stage – but is surrounded by a constellation of interpretation tools and technologies – both legacy (GeoFrame, Charisma, IESX...)

_

¹ From the left – IEA, Sonatrach, NNPC, Oxy, Saudi Aramco, ChevronTexaco, Shell, ExxonMobil, Pemex and Total.

² In some ways it is a shame that this CERA-week like gathering was not better focused on the IT aspects of the business. In an effort to offer its clients a 'hands-off' debate, the speakers were given just a bit too much free rein. This resulted in rather overly broad ranging discourse on the future, not so much of IT, but also of the oil price, supply and demand and geopolitics. Not that these considerations are not of interest, it is just that they have come to predominate over the vertical, domain-focused discussion which it would be nice to have from time to time.

³ The i-field (or field of the future, e-field or even x-field) in so far as it can be defined is the same thing as CERA's 'digital oilfield' – a nebulous concept of computerized oilfield operations and real time production optimization.

⁴ Cambridge Energy Research Associates.

⁵ Schlumberger Information Solutions.

⁶ The i-field crosses many silo boundaries - one of which is the SIS/Oilfield Services cultural divide.

and new (Gigaviz, Inside Reality...). Some rationalization is planned – notably with the availability of Gigaviz cluster-based visualization from Petrel and elsewhere. An emerging paradigm seems to be Ocean/.NET for new client applications and Linux for servers, compute-intense apps and visualization. While much is made of Linux and 'open' API's, there is a distinct move away from open standards with SIS hanging its hat on Microsoft's .NET and Oracle's 9/10 extended architecture.

Developments with oil company clients and consortia add to the already rich software meal. A new reservoir simulator – project **Intersect** – has been developed for ChevronTexaco, drilling technology from the old MoBPTeCh consortium has been rolled into the new **Osprey** application. Inevitably there is overlap between many tools. The answer to this is to 'wrap' applications into 'workflows' – The Living Model, Smart Prospect Generation etc. This makes for a degree of confusion – but no doubt helps SIS market 'solutions' as opposed to selling software licenses⁷. The joint IronMountain/SIS **eSearch** marriage of OpenRSO and AssetDB is now ready for prime time. Collaboration with other software houses – notably **Avocet**⁸ – developed with Aspen Technology – adds more functionality (and rebranding) to existing packages. Although again, this is limited to concomitant design of surface and subsurface rather than operations. IBM made a big deal of a return to Oil and Gas after its absence.

Highlights

CERA – gathering clouds
Shell's Smart Field
.Net Ocean products
New Seabed database
Technical Roadmap
IM at Saudi Aramco

⁷ We understand that the 'solutions' business is now a better earner than license sales.

⁸ Nothing to do with AVO!

Contents	
Highlights & themes	1
Contents	3
i-enabled operations – Kjell Erik Ostdahl, president SIS	
Gathering clouds (over the oil price) - Julian West, CERA	
IBM – we're back! Mark Enzweiler	
Keynote session 'challenges and opportunities for the upstream'	
International Energy Agency viewpoint – Fatih Birol	
Modern Oilfield Practices – Don Moore, Occidental Petroleum	
Shell's view of next decade - Graeme Henderson	
Panel Discussion	
SIS Technology directions – Ihab Toma	
Shell's SmartField approach – Pieter Kapteijn	
ChevronTexaco's i-field program, Mike Hauser	13
SIS software demos and set pieces	14
AspenTech HySys and dynamic production operations	
Living Asset – Martin Beardsall, SIS	15
InfoStream/Expeditor GIS Assistant - Bill Rimmer	
Osprey Reports – Susan Lundgren	
ProSource Results Manager – Paddy Dineen	15
Bird's eye view of Ocean – James Bradey	16
ORCA Production Operations Data - Floyd	16
Iron Mountain's e-Search – Steve Darell	17
Strategy and new technology	17
SIS' strategic vision – Brice Bouffard.	17
SIS Technical Roadmap – Dean Quigley	18
Seabed Data Modeling Architecture – Jay Hollingsworth	19
Peer Exchange (client) Sessions	20
E&P IM at Saudi Aramco – Ahmed Moosa	20
Inside Reality – Jens Grimsgaard, Norsk Hydro	
Maximizing technology investment – Stan Phipps, ConocoPhillips	
IM at Pemex – Jose Luis Figueroa Correa	
Information Management in BP Trinidad & Tobago – Judy Lewis	
ADNOC EXPRIS	22
Data Management in Kuwait Oil Co. – Fadel Safar and Haveluck Harrison	
GeoFrame on Linux – Mark Setrem, BG Group	23
Parallel Reservoir Simulation for large fields – Yu Shaevsky, Petroalliance	
What is Microsoft .NET?	24