

**SPE Digital Energy, Houston ‘bytes to barrels’.  
Houston, February 2006**



*Control room display from Clarity Systems*

The Society of Petroleum Engineers Gulf Coast Section’s ‘Digital Energy – from bytes to barrels’ conference was very well attended with around 600 signed up. The first theme to emerge from the keynote sessions was the inexorable rise of National Oil Companies (NOC). These state-owned companies are leveraging their enviable position regarding access to resources to go forth and compete on the international scene. Another more prosaic theme should be familiar to readers of our reports. The petroleum engineering community has woken up to data management as an ‘issue.’ This is because asset optimization mandates a ‘single source of the truth’ and ubiquitous data access. Creating such a situation is proving hard across the complex work processes and cultures of Excel-wielding engineers, planners on PowerPoint and the data streaming in from SCADA systems. Another familiar theme was the need for ‘standards.’ But for most, this means standardizing on application or workflows within an organization, rather than seeking cross-industry approval for a POSC or PPDM type initiative.

Another topic is the degree to which technologies from outside oil and gas can be brought in to ‘solve’ such problems. This question is often associated with the allegation that oil and gas is a technology laggard. Are oil and gas data problems really different to other industries? Some say they are not, but this opinion often comes from consultants and cross-industry solution vendors, who would say that anyhow! Others, oil industry CIOs who have looked into the question are not so sure. One company reported that consultants brought in to study this question left behind them a lot of ‘consultant-ese’. Another reported that ‘lessons learned from other industries and the downstream have proved hard to transfer to the oilfield’.

**Highlights**

- [Hinchman’s keynote and discussion](#)
- [Chevron’s asset optimization](#)
- [BHP Billiton’s global geotechnical deployment](#)
- [Data management ‘lunch and learn’](#)

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#### TW0604\_1 Keynote – Steve Hinchman, Marathon Oil Co.

Oil and especially gas will continue to be critical with supply and demand in fine balance. When you plot current production with a 4%/year decline against forecast demand you have a 125 mm barrel shortfall by 2020. The shortfall equals all of today’s production capacity. Meeting this demand is achievable, but ‘represents a long term problem’. A major component of the problem is access to resources. Most reserves are held by National Oil Companies, (NOCs), themselves now emerging as global players. Historically, NOCs required investment from the International Oil Companies (IOCs), but now have they have both capital and technology. They are also expanding beyond their borders. So IOCs need to adapt, to ‘differentiate and partner with NOCs’. Value add relationships become critical, and need to be ‘more open and transparent’.

Refining capacity is near the limit – more investment is needed. 48% of the workforce is to retire in 10 years. Oil and gas graduates’ tally is around 600 per year – to be set against a demand of around 1,300 – hence the move to a global workforce. New work practices mandate a ‘single source of the truth,’ hence the focus on IT-enabled knowledge sharing. Although Hinchman described petrotechnical and IT professionals ‘like ships passing in the night,’ he believes this is an ‘exciting time for the industry’. Both petrotechnical and IT professionals will contribute to better decision making even if the ‘transition will not be easy’. IT has ‘over promised and under delivered’. The competitive advantage goes beyond the digital oilfield of the future (DOFF) to leverage combined talents, standardized workflows and industry standards. Connectivity is the tissue that pulls it all together.

#### Q&A

*[Oil IT Journal] You mention standards, are you referring to standards like POSC or PPDM, or to commercial applications that your company ‘standardizes’ on?*

Coming up with agreed industry standards is hard because of the competitive nature of our business. I was referring to internal standardization on vendor applications, throughout our international operations. We need standard ways of communicating workflows and industry process to enable our global workforce to be connected and ‘on the same page.’ Marathon is not there yet. We need standard workflows and processes. I’m not sure that the data standards problem can be solved across the industry. But middleware may play a role.

*How do you get petrotechnical staff and IT to talk the same language?*

We swap people from IT to petrotechnical.

*There seems to be a shift to a new base oil price. How is this affecting investment in IT?*