Oil & Gas Communications in 2007

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There are three fundamental defining characteristics of satellite-base communications:

- **Cost Effectiveness:** The total cost of ownership of broadband via satellite solutions has been reduced by economies of scale, and globally, over one million receive-only terminals using IP multicasting have been deployed, together with nearly one million interactive terminals.
- **No Limitation of Distance, Geography or Location:** Unmatched cost-effectiveness of broadband over satellite also arises from the unique combination of broadcast capabilities within full networking solutions. With IP over DVB being the de facto standard for broadband communications over satellite, and with such systems clearly demonstrating their greatest cost-effectiveness by matching the asymmetric nature of Internet traffic.
- **Rapid, Economic and Reliable Deployment:** High-speed and secure delivery of all types of broadband applications is achieved through a single, end-to-end solution that is more reliable than terrestrial alternatives, flexible to fit with present demand, and scalable to fit all future requirements.

These defining characteristics, together with the facts of vertical market ICT requirements, will in 2007 once again be brought together to drive an annual conference dedicated to the communications imperatives of the energy exploitation sector in key oil and gas exploration and production regions of the world.

Just before the time of writing this column, I heard news of the discovery of a major oil field southeast of Ghawar, Saudi Arabia. In addition, the international business media regularly features news regarding natural gas discovery and new distribution projects. Of course, favourable fresh discovery prospects in the natural gas sector are likely to stretch much further into the future than in the oil sector, given that the widely anticipated 'Oil Peak' is thought by some to be with us right now. But, whatever the accuracy of such assessments, what is certain is that both oil and gas exploration and production sectors will continue for some time to call upon the telecommunications sector to provide and deploy the most cost-effective and reliable application solutions all around the world.

The GVF Oil & Gas Communications: North Africa and the Middle East Conference – organized in collaboration with UK Event Management Partners (UK-EMP) – will follow on the acclaim for the first Oil & Gas Communications event held in May 2006. In 2007, the conference will once again take place in Cairo, Egypt, but in 2007 at a more central conference venue (in Heliopolis), and over the 21st & 22nd May.

GVF welcomes Schlumberger as the conference Principal Sponsor for the second successive year, and we are pleased to announce that some of the major regional oil & gas operators – particularly Qatar Petroleum and Dolphin Energy – have already registered their participation at the 2007 event. The participation of Stratos Global, Alkan Telecom, and Egyptian Space Communications is also announced.

Chaired by a senior member of the GVF Secretariat, Day One of the conference will open with a Keynote Speech from a senior Ministerial official representing the policy and/or regulatory position of the Egyptian Administration in respect of the current status, and intended future development, of the elements of the national communications infrastructure that helps to promote the advance of the oil & gas sector with particular reference to those oil & gas vertical market segments represented within the national economy.

Throughout the remaining two days of proceedings the emphasis will be on promoting discussion and debate, and to facilitate this, the conference format will comprise a series of clearly themed 'InterActive' Panels. This series of 'InterActive' Panels will be punctuated with both applications case studies and showcase presentations.

Day One, 21st May, will feature a total of four "InterActive" Panels, as follows:

"InterActive" Panel 1 will provide an introductory foundation for the remainder of the conference programme, and is entitled Applications Evolution and the Dynamics of Oil & Gas Networking Communications. It will provide an appraisal of the development of applications that are central to the mission-critical networking requirements of the various exploration and production segments of the oil & gas sector, together with a ready appreciation of the dynamics of current communications technology trends. Panel 1 will assume a pan-regional focus in the form of an analysis of today's communications product and service environment within which the players in the vendor community compete to satisfy the efficiency and risk-management needs of the buyers of ICT solutions in the oil & gas environment in North Africa and the Middle East.

"InterActive" Panel 2 will take as its main focus the fact that the communications requirements of the oil & gas vertical are Internet-based and bandwidth hungry. In Bandwidth Supply/Bandwidth Demand: Optimising Price, Quality and Reliability Variables in Oil & Gas Communications the emphasis will be on assessing how the accelerated deployment of communications technologies, that are providing essential

broadband access for end-users in vertical markets like oil & gas sector, is also satisfying parallel demands for cheaper access through reduced bandwidth pricing. The objective of Panel 2 is to provide both oil & gas end-users and telecoms providers with an opportunity to put forward their respective positions and to jointly identify exactly how greater bandwidth supply and cost-effectiveness can be realised in the form of improved bandwidth optimisation and oil & gas sector-specific customisation techniques.

Oil & Gas Networking Innovation: Satellite and the Hybridisation of the Wide Area Seamless Solution is the theme of "InterActive" Panel 3. ICT solutions buyers in the oil & gas sector, or, indeed, any other, vertical – who are naturally interested in the fact (and cost-effectiveness) of the solutions they need rather than the details of the constituent mechanisms that contribute the solution – tend to be technology agnostic. Yet, the physical circumstances of oil & gas resource exploitation, and the industry requirement to link multiple sites – for example, inland and offshore – necessitate that companies in the sector buy wide area networking services which utilise various combinations of wireline, terrestrial wireless, and satellite platforms. Therefore, it is incumbent on communications industry operators and service providers to ensure that their offerings to the oil & gas sector continue to provide multi-platform, multiple technology, hybridised solutions to meet the complex and extensive voice, data, and video applications needs of this vertical environment. Panel 3 will investigate and explain how this is being achieved, and explore what more needs to be done.

The principle focus of "InterActive" Panel 4 will be regulatory. Whilst cost-effective, reliable, and scalable communications are one of the essential precursors of production efficiencies for the oil & gas sector, exploration and extraction of these essential economic resources often take place where the policy and regulatory environments that permit access to, and use of, some or all communications platforms – such as satellite, terrestrial wireless (e.g. WiFi and WiMax) – is unfavourable and littered with obstacles. The Communications Regulation and Vertical Market Growth Maximisation session panellists will explore how the economic and industrial strengths of the oil & gas sector can be used to influence the policy development of governments and the rule-making posture of relevant administrations to secure more open and transparent regulatory and licensing regimes.

Chaired by a senior member of the GVF Secretariat, Day Two of the conference, 22nd May, will open with a Keynote Speech from a senior representative of an oil & gas company active in the North Africa and Middle East regions, and will feature a further four "InterActive" Panels, again punctuated with Applications Case Studies and Showcase Presentations, as follows:

"InterActive" Panel 5 will look at "Future Evolution": Advancing the Dynamics of the IP-Based Communications Solution. Panel 3, on Day One, looked at the contribution of satellites to hybrid-based communications solutions for the oil & gas vertical. In Panel 5 the emphasis is on leading-edge, non-satellite-based, terrestrial communications technology developments and their current and potential impact on the ICT strategies in the business models of the – oil & gas sector – end-user, and in the communications solutions vendor offerings environment. An analysis and understanding of current trends in terrestrial wireless is an essential foundation for oil & gas ICT managers in the planning of future-use and purchasing decisions in the broadband, IP, applications and services marketplace. This will not be an exercise in ad hoc crystal ball-gazing, but a clear and expert overview of just how today's communications technologies and the associated business models which are facilitating their deployment are most likely to yield end-users greater operational efficiencies. This will include an examination of how the use of different communications platforms is helped, hindered, and determined by geographically determined supply factors, as well as an analysis of the potential for spectrum allocation conflicts between terrestrial and satellite solutions.

Maintaining the Mission Critical Link: Oil & Gas Communications When Disaster Strikes is the theme of "InterActive" Panel 6. It will explore the real-world realities in the oil & gas environment of maintaining and restoring essential communications pathways during – and immediately after – connectivity interruptions such as natural disasters (including earthquake, flood and storm), and human conflict situations (such as terrorism and war). The effectiveness of different communications platforms in making useful provision for business continuity/disaster recovery/emergency management in various situations, particularly the unique contribution of satellite communications in such circumstances, will be examined in particular detail.

The world is facing the medium-term exhaustion of its known supplies of oil, and supplies of natural gas become more difficult to locate, tap into and transport to its consumers.

In this context "InterActive" Panel 7, which is entitled Oil & Gas ICT: Mitigating the Resource "Exploitation" Tag, will examine how communications solutions are working with advanced IT techniques to allow oil & gas companies to exploit reserves in ecologically sensitive environments whilst adhering to international treaty obligations and alert to the pressure of public opinion. In addition, in a politico-economic environment that is increasingly influenced by discussion of climate change, Panel 7 will explore how ICT developments in the oil & gas sector are advancing evolution towards a non-Carbon economy.

Collaborative Oil & Gas Communications: Sharing the Benefits is the title of "InterActive" Panel 8. With the communications dynamics of the oil & gas sector extending beyond the geology and seismology of locating and extracting raw energy sources from underground or beneath the sea, to include the various individual segments of the industry vertical as a whole, the communications requirements of the industry are obviously very extensive. Panel 8 will explore the practicalities of extending the bandwidth employed by the 'turnkey solutions' that are so often required by ICT mangers in the sector to a true end-to-end connectivity, that is able to serve not only the entire range of oil & gas industry communications demands at any one physical location but which can also be used by organisations and agencies within the local area, such as schools and local government offices, at times when the industry's demand on the available bandwidth is low. A new take on sharing the benefits of connectivity and Bridging the Digital Divide!

Photo courtesy of ND SatCom.