

The “Business” of Open Standards in the E&P Industry

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Advances in geophysical acquisition and processing technologies combined with the drive for data application transparency and interoperability creates a fertile ground for the creation of industry standards. While petroleum producers have set interoperability demand geophysical processing products with an “open standard” as a top priority, it is not currently shared across the service industry. With the exception of safety, infrastructure and regulatory standards, standards rarely exist within the exploration and production industry – an industry where monopolies have always existed in the production of hydrocarbons and the supply of services to the oil majors. Because business and competition has evolved in such a monopolistic environment, software technology providers are intuitively interested in offering customers a complete, turn-key, integrated system to solve an entire exploration and reservoir imaging problem. Thus, the historical structure of the service industry afforded no incentive for a player to provide compatible modules to a competing imaging system or to allow competing products to be integrated into their geophysical modeling system.

The increased integration of subsurface imaging into project and financial risk management has created high economies of scale among petroleum producers. Also, the uniform application of known imaging and quantitative techniques in the petroleum industry results in a low demand for functional variety among software imaging and interpretation tools. High economies of scale coupled with a low demand for technology variety implies a high likelihood for the emergence of a software standard in geophysical imaging and interpretation tools. As a first step towards realization of this standard, BHP has developed the qiWorkbench, an open architecture for geophysical imaging and processing modules. By enhancing the compatibility and interoperability of processing packages, the qiWorkbench stands to generate value among the user base by (1) increasing the size of the user “network,” (2) reducing the risk of technology “lock-in” among suppliers and (3) reducing compatibility problems and (4) increasing innovation and price competition among technology providers.