

Latest Developments In VHR's Software

VHR is a part of Veritas DGC, which is a global provider of land and marine seismic acquisition, seismic processing, interpretation services and a multi-client data library. VHR develops geophysical software, particularly in the areas of AVO, inversion, and 4D seismic data analysis. These types of technologies are proving to be increasingly critical in the hydrocarbon exploration and production business today. These techniques, along with good quality seismic data provide ways to identify and delineate potential reservoirs, seismically distinguish hydrocarbons from brine and improve recovery rates on producing fields.

VHR is the product of 18 years of software development work by Dan Hampson, Brian Russell, its team of now 55 staff, and a large global and critically-vocal user community. The company has developed through its software business and the broad usage of the software

in industry. This is a key aspect for any software company as, without usage, there is no software maintenance and, without maintenance, there are no software updates and new products.

The seismic inversion product, which is known as STRATA, has had a simultaneous inversion algorithm added to it. The simultaneous inversion algorithm represents a six month research and development product by Dan Hampson and will be presented in a technical paper for the Society of Exploration Geophysicists' convention in Houston in November. The simultaneous inversion method generates P-wave, S-wave, and density volumes from pre-stack seismic data, which are critical attributes to identify lithology and fluid fill.

The advancement of information technology is another way to consider another angle on geological software advances. In the last two years, there has been a significant shift in the industry away from traditional UNIX hardware

to PCs. In Asia-Pacific there has been strong growth in the use of PC hardware with the LINUX operating system. The reasons for this are the significant cost savings and performance upgrades possible with this kind of hardware. For most users today this represents leading edge technology, however, 64-bit computing is on the verge of taking-over-the-world and, in fact, in some parts of the industry, this has already happened.

Software should never stand still; there is always room to develop. This development must embrace new technology from the geophysical and geological arena and must stay current with the information technology industry. But most of all it should embrace its user's requests.

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