Global seismic interpretation techniques are coming of age

The advances in seismic technology over the last few years have been phenomenal, particularly in the areas of seismic acquisition, processing and interpretation. Global seismic interpretation include a variety of different methods, such as 'Age Volumes', 'PaleoScan', 'Volumetric Flattening' and 'HorizonCube'. Such techniques share a number of algorithms in common with their aim being to correlate seismic positions along geologic time lines to arrive at fully interpreted seismic volumes.
“Paradigm has a 25+ year track record of providing high science solutions for the E&P industry and continues as the largest independent vendor in the space. Our software solutions deliver accurate results across every stage in the oil and gas E&P process.”

Arshad Matin, new President and CEO, Paradigm

“Our solutions deliver accurate results”

The oil and gas industry is undergoing transformation led by global demand and technology advancements. As Paradigm’s new President and CEO what are your priorities and thrust areas?

Our top priority is to support our customers and help them find hydrocarbons more cost effectively. In order to do this, asset teams must be able to successfully utilize the most advanced scientific techniques while collaborating across multiple disciplines. At Paradigm, we are focused on not just more tightly integrating native Paradigm products, but developing an interconnected and interoperable platform that enables asset teams to develop integrated workflows across multiple tools from multiple vendors. This ultimately allows our customers to use Paradigm solutions in a complimentary fashion with other leaders in the space.

This vision is the foundation for Paradigm’s Epic product strategy.

You are an alumnus of the Regional Engineering College, Bhopal, India. How do you see India’s E&P market for your company?

We have a long history selling advanced capabilities to the Indian geoscience marketplace. ONGC uses our products in seismic processing and imaging and they continue to be one of our top partners among national oil companies. In recent years, ONGC has broadened its reach in aggressively exploring beyond the borders of India and we are excited to be involved in this ongoing endeavor.

How is Paradigm positioning itself globally as the leading provider of upstream software solutions for the global oil and gas industry?

Paradigm has a 25+ year track record of providing high science solutions for the E&P industry and continues as the largest independent vendor in the space. With 1 in every 10 employees having a Ph.D., Paradigm has shown a long track record of innovation across all of our product lines from our industry leading Voxel-based interpretation in the ’90s to our more recent SKUA-based 3D Shared Earth Automatic Interpretation. However, by ensuring that these advanced science capabilities are usable by not just the largest operators, Paradigm is able to deliver on its promise as a high science leader while making those technologies widely available.

Paradigm’s easy-to-use technology and workflows provide customers with deeper insight into the subsurface; can you throw light on this?

This is our focus - giving our customers...
The Paradigm 2011.3 product suite, released earlier this year, delivered a powerful upgrade to our SeisEarth seismic interpretation customers. This version significantly extended the structural and stratigraphic workflows of this multi-survey, regional-to-prospect interpretation solution. It is now possible to create “real-time” subsurface scenes with dramatically faster refresh speeds and an enhanced visualization process.

How different is Paradigm’s latest version of SeisEarth?

The Paradigm 2011.3 product suite, released earlier this year, delivered a powerful upgrade to our SeisEarth seismic interpretation customers. This version significantly extended the structural and stratigraphic workflows of this multi-survey, regional-to-prospect interpretation solution, with new voxel volume rendering based on GPU rendering. It is now possible to create “real-time” subsurface scenes with dramatically faster refresh speeds and an enhanced visualization process.

“Paradigm Epic is an open and integrated platform that, once released, will allow users to unify critical workflows into an integrated single console at both the application and database levels, while still connecting easily from and to existing systems. Paradigm Epic will be released in stages, beginning with the infrastructure that will unify Paradigm’s suite of applications into a single integrated console.”

Our application suite integrates advanced science leadership in geophysics, petrophysics, and geology, as well as reservoir engineering, well planning, and drilling. Our combination of high-science functionality and multi-user collaboration makes us unique in the marketplace.

The release also incorporated multi-horizon flattening (GPU-based), horizon slicing, and proportional slicing with property extractions, so that geoscientists can better understand stratigraphic sequences and depositional histories. For development fields, SeisEarth customers can also carry out quality control and validation of time-lapsed (4D) seismic data volumes with new analysis tools embedded in the system.

Read more about these features here: http://www.pdgm.com/Resources/Brochures/Paradigm-2011-3-Release.

Paradigm recently unveiled Paradigm Epic, an open and integrated platform included in the Paradigm 2014 release. What does the new release offer?

Paradigm Epic is an open and integrated platform that, once released, will allow users to unify critical workflows into an integrated single console at both the application and database levels, while still connecting easily from and to existing systems.

It will integrate multiple Paradigm products into a single application with a common, consistent, and familiar user interface. This will make Paradigm Epic accessible to the generalist as well as the specialist, bringing the advanced science for which Paradigm is known to everyone.

Paradigm Epic will offer unprecedented interconnectivity with third-party applications, as it will integrate third-party developers’ applications into the Paradigm platform in a unified plug-in environment. Users will be able to select “best-of-breed” Paradigm components to connect into their existing primary platform.

Paradigm Epic will be released in stages, beginning with the infrastructure that will unify Paradigm’s suite of applications into a single integrated console. Connectors to third-party platforms such as Petrel®, Ikarus and ArcGIS®, will also be available, augmenting pre-existing connections to OpenWorks®, GeoFrame® and OpenSpirit®.

Upstream oil and gas companies continue to see value in the ability...
Paradigm introduces new open and integrated platform

New solution further integrates Paradigm applications, interconnects to third parties, and introduces an open database*

Paradigm® has unveiled Paradigm® Epic, an open and integrated platform included in the Paradigm 2014 release. The announcement was made at the SEG 83rd Annual Meeting, in addition to Epic, Paradigm 2014 presents game-changing workflows for full-azimuth imaging, tomography, formation evaluation, facies analysis, and modeling. Paradigm Epic will be released in stages, beginning with the infrastructure that will unify Paradigm’s suite of applications into a single integrated console, scheduled for release this year. Connectors to third-party platforms such as Petrel®, JavaSeis and ArcGIS®, will also become available in 2013 and early 2014, augmenting pre-existing connections into OpenWorks®, GeoFrame® and OpenSpirit®.

Paradigm applications are already integrated at the database level through the Epos® infrastructure. Epic will add a common user interface to this integration, reducing the learning curve between applications, and making information shareable in real time. The ability to create custom workflow templates for common geoscientific procedures will help bring advanced science to everyone; as a result, users will now be able to work with advanced workflows that previously required specialized expertise.

The new platform ensures unprecedented interconnectivity among third-party applications. Developers will be able to integrate their applications into Epic royalty-free, using either an application-level plug-in or through the underlying Epos database. Developers connecting into the platform will be free to build similar plug-ins for any other vendor.

“This is the first time that users will be able to select specific applications from Paradigm to connect into their existing primary platform,” said Diane Dupkin, executive vice-president of Technology at Paradigm. “No longer will they have to compromise on “good enough” solutions in order to enjoy efficient product integration and multidisciplinary collaboration. By enabling the use of Paradigm best-of-breed applications with existing third-party solutions, we will be closer than ever to making our advanced science available to everyone.”

The new architecture will support the first truly open database for E&P data. By conforming to modern, platform-neutral standards, Paradigm Epic will allow customers to use applications of their choosing, while maintaining a single data management infrastructure. This will simplify long-term data storage, project management, authoritative version management, data governance and knowledge management.

Paradigm’s products manage data in complex wells and create 3D models of the subsurface with multiuser capabilities. Recently a national oil company in the Middle East using the Paradigm Geolog® Geosteer® module linked with the Paradigm Sysdrill® drilling engineering solution was able to optimize wellbore positioning in the reservoir, enhancing productivity and reducing drilling risk.”