

# Publications

## Executive Viewpoint: Petris Technology



The acquisition and management of digital well information is causing a bottleneck in the petroleum industry, preventing geoscientists and reservoir engineers from effectively using their computer-aided systems. Additionally, oil and gas companies often "rat-hole" their information to maintain their proprietary advantage. Petris Technology feels the petroleum industry would be well served by opening data assets for exchange. Joseph R. Frazier, product manager for Petris, has more than 12 years of experience in operating and engineering consulting in the oil and gas business. **Petro Systems World** recently asked Frazier how WINDS can help overtaxed geoscientists better manage their data assets.

### PSW: Tell me a little about Petris

**Frazier:** Petris Technology, responding to industry's increasing demand for electronic access and management of well information, is one of the leading well data digitizing, storage and management companies. We accurately and securely deliver digital well data in a simple, timely and cost-effective format. As a result, energy companies around the world use Petris Technology for better well data access and security and to improve their financial and operational performance. This is accomplished by assisting clients with the acquisition and management of critical well information and by enhancing their information technology systems to improve productivity. Primary lines of business for Petris are well log digitizing, brokering of well data, well information management, software, information technology, professional services, and education and training. Our team of experienced professionals from the energy, geoscience and information technology fields help clients "bridge the gap" between our clients' business and technical systems. Petris has developed a product model that describes the processes associated with the use of CAEX applications in the evaluation of E&P opportunities. We call it the Whole Product. The pursuit of the Whole Product is Petris' road map to meeting our clients' needs.

### PSW: What types of logs do you work with?

**Frazier:** We handle all types of well logs and related information, such as formation tops and scout tickets. The vision for WINDS, our Well Information Network Delivery System, also extends into the map-based and seismic-based data types. Each data type is handled in paper, image or vector form. Those data types include well headers, well logs, formation tops, directional surveys, scout tickets, maps, seismic and other information.

### PSW: Do you deliver services over the Internet?

**Frazier:** Yes, we deliver services via telecommunication systems, corporate intranets and the Internet on a worldwide basis. Data warehousing and data marketing services provided over the Internet are central to Petris' strategy for the future. WINDS gives registered users the ability to search for, configure and download valuable data from multiple sources to the geoscientist's desktop. Orders can be placed for data items that are indexed, or for digitizing, editing, copying and plotting services.

**PSW: How does the Internet help solve your clients' problems?**

**Frazier:** With the minimal cost associated with getting on the Internet, producers of all sizes can afford worldwide dissemination and access to valuable datasets. The Internet has also given rise to the web browser, which provides for "platform-independent" interfaces to database servers. Currently, E&P professionals, working on various software applications that provide project data management from different platforms, request data from many data sources. The different data stores are linked at a "knowledge layer," which contains the information, or metadata, about the contents of the data stores. The search engine to the metadata is web browser-based, thus providing a globally accessible, platform independent interface to each of the data stores.

**PSW: What data formats do your clients generally request? Is bandwidth an issue?**

**Frazier:** Primarily, well log curve vector data is requested for use in the 3-D seismic analysis. The format of choice, in this case, is LAS or Log ASCII Standard. However, the data is not necessarily archived in this format. Generally, analytical software is equipped to handle the loading of generic formats of this type. WINDS, with its archival data model, is optimized to search millions of records of various data types. Therefore, WINDS is independent from the applications that consume the data and the data model burdens that go with the interoperability requirements of CAEX applications. Digital well log data is highly compressible with standard technology and transfers nicely over the web. However, bandwidth is an issue for images and raw files like field data. Technology advancements on the horizon will make the necessary bandwidth available for transport of extremely large files like well log images and full motion video. Internet and web technology is advancing at a lightning pace. Network bandwidth, data compression and communications systems are all areas that are receiving significant attention. Expected breakthroughs in these areas will continue to improve the significance of the Internet. Some clients are taking advantage of WINDS by implementing an intranet version on their internal data networks having greater bandwidth than is available on a common carrier.

**PSW: What is your feeling about the availability of digital well logs? Is there a great need for them, or is this a mature market? Are you helping clients digitize their older analog data?**

**Frazier:** In the most mature E&P basins, good coverage of digital well logs probably exists. However, additional work is necessary to complete the coverage or to make all of the data generally available. We feel all producing regions are important; in time, therefore, Petris' goal is to make data available on every well practical to every potential user of the data. E&P companies are in great need of this data, or they will be in the near future. The bottleneck in the exploration workflow is the accessibility of the data needed to feed the latest workstations and the applications they run. The familiar statistic of "70% of the geoscientists' time is spent searching for data" will only get worse. The growing gap between data collection and data consumption must be closed so that the full benefit of the productivity enhancements offered by advanced technology can be realized. What's more, the extensive seismic volumes that they acquire must be validated using information of this type so as to not compromise the integrity of the interpretation. The market for seismic with which to model the subsurface is not a mature market in terms of coverage. Consequently, the market for digital well data to support the models and to extend the modeling methods is not mature. Beyond seismic subsurface modeling, enabling analytical techniques not yet developed will be derived from simple and affordable access to complete and reliable data sets. In the same way digital production data influenced change, a virtual digital well log data library will cause change in the way E&P professionals evaluate exploration prospects and producing properties. Petris is promoting the publishing of existing well information, specifically digital well logs, in WINDS. By creating a data management solution, while in the same system providing a data marketing vehicle, Petris will build a data clearinghouse at breakneck speed.

**PSW: How does your company handle security issues - ownership rights and transaction security - over the Internet?**

**Frazier:** Security is paramount, and to that end we have installed a system to ensure that applications, computers and computer networks are secure. We use many proven commercial tools, and we have developed our own proprietary systems to keep our computer network, computers, databases, files and operating systems secure. The primary steps we have taken to ensure protection of our systems and the clients' data include both physical and logical security features. The equipment is physically secured in a locked computer, and after-hours access is controlled by electronic card key, patrols and camera surveillance. Data is protected by an advanced firewall and secure operating system with a commercial web server package with enhanced security features. The operating system has discretionary access control, limits the number of log-in accounts on the machine and checks all authorized user passwords for security worthiness. Only specified users or applications can gain access through the firewall. The Web server provides advanced security features for secure data communications and electronic commerce.

**PSW: Are you moving well-log management from the expense side (for clients) to the revenue side of the balance sheet by allowing clients to sell their well logs? How does that work?**

**Frazier:** Yes. We are reducing the cost of managing and acquiring well information and logs while providing an environment that will support data management. In essence, WINDS is a warehouse and a clearinghouse rolled up into one facility. Petris takes on the hardware and data management expense and provides data controls to the publisher for creating users within the organization and applying permissions to each user. The data publisher has the choice and the ability to make certain data public. Public data is accessible by other WINDS users and, if orders are placed, the publisher gets a share of the proceeds from the sale of the data. Each WINDS account, whether publisher or user, receives an account statement each month with a balance due. A publisher's revenue is credited against account charges.

**PSW: In what direction is your company moving? What are your clients asking for, and how are you meeting their needs for the future?**

**Frazier:** Petris sees information technology opportunities on the rise. The trend of cost reduction through efficiencies gained with information technology will continue. Focus will continue to be placed on reducing finding costs by making the E&P professional more productive. This is accomplished by providing the tools the E&P professional needs and the information required to quickly and effectively evaluate prospects. Employees of these organizations must be informed of and trained to use the enabling technologies that are available. Management will be educated on the new business processes that are required for effective implementation of these enabling technologies within the E&P organization.

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