

Industry Energizes Laser Scanning

By Monica Perin (Houston Business Journal)

A type of laser scanning technology traditionally used in historic restoration projects has found a new and potentially huge application in the oil and gas industry. James McGill, vice-president of Marketing for Quantapoint Inc., compares the concept to digital photography in describing the system as “a panoramic camera with a 360-degree view.”

Laser beams take three-dimensional pictures of every component in industrial complexes such as refineries, chemical plants or offshore oil and gas facilities. The pictures can be used to precisely plot major overhauls and expansions on older energy complexes where original blueprints may no longer exist.

Until three years ago, Pittsburgh-based Quantapoint's laser scanning jobs were mainly confined to the architectural past. Projects have included Thomas Jefferson's Monticello homestead in Virginia; Wrigley Field, venerable ballpark of the Chicago Cubs; and hieroglyphics on the walls of tombs in Egypt's Valley of the Kings. But modern industrial applications of the proprietary technology Quantapoint first began developing in 1999 were more the buzz at the Offshore Technology Conference.

Upgrading the Old

One of those already sold on the promise of laser scanning is Chris Comardo of Mustang Engineering LP, a Houston-based company that does engineering design and construction projects for the oil and gas industry. “I think it's going to revolutionize our industry. It will do what Computer Assisted Drafting (CAD) did 20 years ago,” says Comardo.

Also convinced is Dave Cardon, who runs the Houston operation of W.H. Linder & Associates, an engineering consulting firm based in Metairie, La. Cardon points out that the laser scanning technique is particularly effective in upgrading older facilities in less time at a lower cost with fewer risks. “The old-fashioned way of doing this was for people with different skills to go to a facility, take hand measurements and make drawings or mark up existing drawings,” explains Cardon.

www.quantapoint.com

Pittsburgh, PA: +1-412-653-0100

Houston, TX: +1-713-861-0883

Chicago, IL: +1-630-778-0502

info@quantapoint.com

Egypt: +20-10-124-2626

Nigeria: +234-1-270-5825

Mexico: +52-55-5536-0123



The highly detailed and accurate images allow teams of engineers and other professionals to do more work in remote offices and reduce actual trips. Explains Cardon: “It makes a big difference offshore. If we have to send a group of 10 people offshore, they have to have special training, fly in helicopters, live in cramped quarters. It's very costly. This saves cost and minimizes hazardous conditions for our employees.”

Quantapoint's first offshore scanning job was performed in 2003 for Linder on an offshore oil platform project in deep water offshore Nigeria. About 50 offshore oil platforms have been scanned to date, along with a good many refineries and chemical plants.

“When we first started doing this, we saw the potential for the oil and gas industry,” says Eric Hoffman, co-founder and CEO of Quantapoint. “But the technology wasn't ready for that yet, so we applied it to the architectural market first,” he says.

Around 2000, Jacobs Engineering Group Inc. came to Quantapoint with a petrochemical project. “It was a large project with a tight time schedule,” Hoffman recalls. As a result of that work, Jacobs became a ‘primary first adopter’ of the technology in the oil and gas industry. This, in turn, “spurred others in the sector to look into it,” says Hoffman.

Mustang Engineering has used Quantapoint's technology both onshore in a South Texas Celanese chemical processing plant, and offshore on a rig and platform complex in Equatorial Guinea. “Laser scanning allows us to go to the field one time and get enough information that we don't have to go back again to complete the work,” says Mustang's Comardo. “We also get more accurate data so we can do better design work.”

A Gulf of Potential

While Quantapoint has handled many offshore project, it has yet to do any laser scanning in the Gulf of Mexico. Linder's Cardon sees the Gulf as a hot new frontier for the technology. “There are a lot of older facilities in the Gulf, many of which have poor documentation,” explains Cardon. “This kind of survey technology could be a big help.”

Quantapoint's McGill says the company expects work in the Gulf to pick up in the next few years as the huge floating production facilities that have been erected in deep water get older and need modifications. “It's still a small market, but it's growing,” says Quantapoint's Hoffman.

www.quantapoint.com

Pittsburgh, PA: +1-412-653-0100

Houston, TX: +1-713-861-0883

Chicago, IL: +1-630-778-0502

info@quantapoint.com

Egypt: +20-10-124-2626

Nigeria: +234-1-270-5825

Mexico: +52-55-5536-0123

