

A consortium focused on RFID's use in the oil and gas industries has announced plans to expand its efforts to the Middle East, and is currently trialing the technology at a 52-acre test site in Texas.

By Beth Bacheldor

Mar. 4, 2009—The [Oil & Gas RFID Solution Group](#) (OGR), a consortium of technology vendors, academia, oil and gas companies, and industry experts working to promote the use of radio frequency identification in the oil and gas industries, has a busy agenda this year. Work is currently underway to establish a Middle East counterpart, and the group is already conducting several RFID trials at a 52-acre "live" lab facility in Texas, which includes simulated petroleum and petrochemical facilities where testing of field equipment and application systems can be performed.

Launched in mid-2008, OGR includes such members as [Texas A&M University](#) and the [University of Houston](#), RFID hardware vendors [Avery Dennison](#) and [Motorola](#), software provider [Shipcom Wireless](#) and [Merlin Concepts and Technology](#), a systems integrator focused on the oil and gas industry (see [New Consortium Seeks RFID Standard for Oil, Gas Industries](#)).



OGR cofounders Sam Falsafi (left) and Konrad Konarski on a model oil rig at the consortium's live lab.

In 2008, OGR signed up several new members, including [BP](#), [Dow Chemical](#), [Texas Instruments](#), [Identec Solutions](#), [Merrick Systems](#), [Hi-G-Tek](#), [Axxess International](#) and enterprise software behemoth [Oracle](#), whose president, Charles Phillips, was recently appointed by the U.S. Secretary of Energy to the [National Petroleum Council](#), an oil and gas advisory committee to the federal government. [Chevron](#) is also in the process of joining the consortium.

Much of the OGR's work this year will be focused on projects conducted at a 52-acre lab that is part of [Disaster City](#), a training facility created by Texas A&M's [Texas Engineering Extension Service](#). Located on A&M's campus, Disaster City features full-scale, collapsible structures designed to simulate various levels of disaster and wreckage. The site can be customized for the specific training needs of a particular group. The facility includes a model of an offshore oil rig, storage tanks and more, as part of [OGR's live lab](#).

In one current test scenario, OGR affixed RFID tags and sensors to the assets on the oil rig, in order to determine how well the technology could capture drilling rates and depths, as well as whether maintenance protocols are being properly observed. "The idea is to manage assets on an offshore platform, where network connectivity is an issue," says Sam Falsafi, a cofounder of OGR and senior director of business solutions for Shipcom Wireless. "Yet the operators that are inspecting these vessels need to have just the right amount of data from headquarters... a set of instructions and tasks that they need to execute in this challenging environment. So, using an RFID-enabled mobile reader, the inspectors could read the tag of an asset, and then pull up the associated instructions that go with that specific tag—and, in some cases, even write to the tag to record the maintenance history performed on that asset. With wireless technology and RFID, we can extend and enhance corporate data at these remote areas."

OGR has also conducted an RFID-enabled system that employs both high-frequency (HF) and ultrahigh-frequency (UHF) RFID tags to keep tabs on the maintenance and repair operations (MRO) of the flanges on pipelines. Now, according to Konrad Konarski, a cofounder of OGR and president of Merlin Concepts and Technology, the consortium is working with Dow Chemical to understand its specific needs, in an effort to scale up the system and implement it at one of the chemical company's facilities.

OGR's aim is to promote the use of RFID in the oil and gas and petrochemical industries, by providing education, sharing best practices and developing and delivering total solutions that can help companies in the industry solve their specific problems. According to OGR, safety and security continues to be tantamount to the initiatives of companies in these industries, and radio frequency identification can play a vital role in improving safety and security. The technology, for example, can be used to track employees' whereabouts at oil refineries, particularly in the event of emergencies.

Late last year, Avery Dennison began working with an oil and gas refinery (that asked not to be identified) to test one of its newer RFID tags, the AD-902—a tag compliant with the EPC Class 1 Gen 2 and ISO-18000-6C standards, and optimized for on-metal performance—to track personnel during

emergencies, as well as keep tabs on such assets as high-end laptops and specialized tools (see [Avery Dennison Debuts Extra-Durable High-Memory EPC Gen 2 Tag](#)).

RFID can also be utilized in refineries and chemical plants to collect and automatically act on a variety of critical information from tanks, machinery and other equipment out in the field (see [Oil Refineries to Test Sensor Tags](#)).

OGR is actively working to expand its worldwide efforts to the Middle East, a region stepping up its interest in RFID technologies—particularly in the oil and gas and petrochemical industries that drive the economies of many countries in that region (see [Middle East RFID Market Heats Up](#)). According to Ben Zoghi, a Texas A&M professor and an OGR cofounder who serves as its director, the consortium has presented a proposal to the college's sister university in Doha, Qatar, to help educate and share information with that country's oil and gas industry. OGR's proposal is presently under review, Zoghi says. "The timing is perfect," he states, "to further expand the gospel of RFID in the oil and gas industry to the Middle East."

In addition, OGR will participate in the [RFID Journal LIVE! Middle East](#) conference, scheduled for June 15-17, 2009, at the InterContinental Hotel Festival City in Dubai, United Arab Emirates. Zoghi will provide a presentation on active RFID's use in the oil and gas industry, and will detail a proof-of-concept project conducted at Texas A&M involving active RFID. What's more, he and Konarski will offer a lecture regarding OGR's efforts to help promote and develop a common approach to deploying the technology across the oil and gas industry.