

Remote Flow Measurement Data



CRIMTECH SERVICES LTD. profiler

Crimtech Services Ltd. is helping the energy industry reach its goals, faster — and giving the environment a helping hand at the same time.

Headquartered in Red Deer, Alberta, Crimtech specializes in field engineering, drafting, manufacturing, and measurement services. Crimtech began building well site measurement equipment in 1996 and ever since then, recognized there needed to be a better way of recording gas flows than with a mechanical chart recorder. Charts only allow the operator to calculate flow estimates until they are sent to a chart reading service to determine the actual flow. "If you made the wrong estimate, you could have made the wrong decision," says Crimtech President Craig Nykyforuk. "There are also inherent inaccuracies in the chart reading process, even when a professional chart reading service is involved," he adds.

A better way to record flow is with an Electronic Flow Measurement (EFM) device. Installing an EFM device can result in a one per cent increase in accuracy, or a decrease in measurement uncertainty of one per cent. "By using EFM, you are increasing your accuracy significantly."

EFMs are far superior to charts but require a traditional SCADA (Supervisory Control and Data Acquisition) system to communicate. SCADA systems are expensive and require extensive infrastructure — hardware, software, and personnel — to maintain.

That's when Crimtech came up with the idea to use public networks (cellular, satellite), the Internet, and a central host combined with an EFM device to create an alternative solution. In 2000 Crimtech launched its Remote Data Acquisition (RDA) network. "Ours is a simple communication network

and you don't have to have 30 wells to make it economically viable. You can do it with just one well, and that you can't do with SCADA."

When it built its RDA network five years ago, what set Crimtech apart was developing a network that could accommodate any EFM device. "When it came to EFM or RTU (remote terminal units), we wanted to be vendor neutral and communication network neutral," says Nykyforuk. "It was obvious to us early that our customers would require a network that was compatible with several different RTUs. We also realized that cellular networks were not available in all areas, so satellites would have to be used."

EFM devices communicate back to the RDA network with a cellular CDPD modem or satellite communicator. Next, the operator logs onto the website using a simple browser to verify the data from each well. After verification by the operator, the information is then exported from Crimtech's web server onto the oil company's production accounting system. What Crimtech's website does is the first step in production accounting, with information from wells coming into, and recorded on, its website. "That was huge. Nobody else was doing that when we started," says Nykyforuk, a former gas run operator, who wanted to build a network that was a highly practical tool for both the operator and company as a whole.

"A major benefit that sets us apart, is that our system is more measurement or production accounting orientated. People are spending less time doing production accounting." Outsourcing the measurement system's continual monitoring through a Remote Data Acquisition network allows operations staff to handle their other duties,

increasing the operation's overall value. The Remote Data Acquisition network saves both the operator and production accountant valuable time by allowing them to receive more accurate information, instantaneously, while maintaining compliance with AEUB measurement practices.

The RDA network helps companies in a variety of ways. For example, Crimtech has clients who don't plow certain roads that turn treacherous after a heavy snowstorm. "After we put in remote communication, they can check their wells from their desktop," Nykyforuk says. "If something is wrong, the client can make a decision whether they should respond now or after the weather gets better. The operators have more information to make real economic decisions, right from their desk or truck. That's a huge benefit."

One of the RDA network's major advantages, is that an operator won't need to travel to a well unless there is a problem. With the network monitoring the well or compressor station, it will send an alarm by cell phone, pager or e-mail for a response.

The RDA network also brings tremendous environmental benefits by reducing truck and industrial traffic in rural communities. "This is how one operator in central Alberta uses it. He checks the website from home before going out because he wants to find his problem well before he drives by it," Nykyforuk says.

Using the RDA network this way will help firms keep both truck traffic and greenhouse gas emissions down. "Again, not only is this good for the community, it's good for the oil company, too. They don't have to put unnecessary mileage on their vehicles."

Going forward, Crimtech is developing its network to stay on top of new technology. "As new EFM monitoring equipment becomes available, we can easily tie it into our network. We are also trying to keep ahead of the curve on satellite and cellular technology," Nykyforuk says.



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