

# Retiring The Clipboard

Handheld Computer Eliminates Need To Transcribe Data



Call it a missing link in the digital chain. An operator, clipboard in hand, stops at a remote wellsite to get tank volumes and other data. Meter readouts are typically in digital format, but the operator records the information with pen and paper. Later at a field office, the information is typed into a PC and uploaded to head office.

Not only does transcribing handwritten figures waste time, and hence money, but it's an easy way to introduce errors. To avoid recording the same data twice — once on paper, then on a PC — some oil and gas producers have long been using handheld computers to collect data.

As an early adopter of new technologies, Devon Canada Corporation began using handheld computers in 1995 to enable some of its operators to collect data efficiently. By 2004, however, this solution was on the edge of obsolescence. The software needed upgrading, some of the handhelds were failing and the hardware was no longer being manufactured. Devon had no spare handhelds left, so when one failed, an operator would be forced to return to manually transcribing data. Faced with this increased cost and inconvenience, Devon evaluated the existing choices for digitally collecting field data.

In December 2004, the company chose a solution offered by Calgary-based software developer HotButton Solutions Inc., which specializes in building digital bridges between handhelds and PC-based applications. The software that does this is called ArrowSync.

Devon's first deployment of the handhelds using ArrowSync was in its Lloydminster area in Novem-

ber 2005. The company now has 15 in its Lloydminster district, and will soon have 24 in its Fairview district. In all, Devon operators are now using 36 handhelds with HotButton's ArrowSync software and this will increase to 39 when the deployment is completed, probably by summer's end, says Cheryl Haworth, a production analyst with Devon Canada.

Devon uses HotButton for two applications. One is for gathering and analyzing production volumes with a field estimating system called Production Volume Reporting. PVR is widely used in the Canadian upstream sector to gather field data such as oil, gas and water production. In the PVR database, proration and allocation calculations are run on the data and oil and gas companies use PVR to estimate production on a daily basis. The application is owned by Montreal-based CGI Group Inc.

Devon's other application is for PEPR Inc.'s Production Equipment Performance Reporting (PEPR) software. The handheld version is called HotPEPR. Originally created for compressor optimization, PEPR also handles Devon's plant log data. So an operator reading meters as he walks through a plant can punch in data such as temperatures, pressures, fluid levels and pump discharge pressures.

This approach — using the same handheld to collect data for multiple applications through a single user interface — is one that HotButton hopes to repeat in other areas with other clients.

Devon's Haworth says HotButton's system is easier to use and easier to learn than the old system, which ran in MS-DOS, the text-only operating system used on most PCs until the mid-1990s. HotButton's

ArrowSync software runs in Microsoft Windows.

Uploading data is easier and faster — just drop the handheld into a dock attached to a PC and click "sync." This replaced a more time-consuming process. Synchronization also saves time in managing the data setup. In the past if a new well was added, it had to be added to the PVR database as well as to each handheld. So an administrator had to maintain two identical data setups. Now just one dataset is maintained in the main database and the handhelds are updated automatically. In other words, a single step replaced a two-step process.

But probably the biggest advantage of HotButton's system, Haworth says, is that it is easier to maintain. "Before we always had to depend on a third party for any kind of maintenance," she says, "whereas now it's in-house — I take care of probably 95% of the issues." In Devon's field offices clerical staff do the maintenance on each of the handhelds for their respective areas. "When our clerks set up a new well in PVR, all they have to do is drag and drop.... And it's there for the operators the next time they synchronize the handheld," says Haworth.

Field-data capture, meanwhile, represents a change of focus for privately held HotButton Solutions. The tiny company was actually created to offer an asset-tracking solution that used handhelds and memory buttons — tiny stainless steel discs that serve as electronic bar codes on oilfield equipment. The tracking discs (designed to be attached to pumpjacks, tanks and the like) were called HotButtons — hence the company's name (see "Going Paperless," *Nickle's New Technology Magazine*, September 2001).

"What we found is that we have a niche for any type of data capture," says Jane Glendon, HotButton's president. The company isn't shunning asset tracking entirely. "We do a little bit of it in that some companies want to know what's happening with their assets [but] we're not an end-application company at all. We're data capture strictly." She adds: "It's any type of data capture for any type of application. And that could be asset tracking. It could be production monitoring. It could be compliance data capture. It could be safety data capture. You just name it and using ArrowSync, we can help you collect it."

For its part, Devon Canada will look at how else it can use the handhelds once deployment for the initial two applications is completed. With the option of putting several applications on the same handheld, the company will look at how else its operators can use the handhelds to improve efficiency.

■ Pat Roche

## CONTACT FOR MORE INFORMATION

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