

# United Central-InfoChip partnership makes RFID Technology a Potential ‘Game-Changer’ for Mining Efficiency

by Debra McCown



Self Rescuer with InfoChip attachment.

It's a technology that is used in everything from pet identification to retail sales, and it's become so common that it can interact with most smartphones. Now, RFID technology – short for Radio-Frequency Identification – is available in a more durable form for heavy industrial use.



"This is going to be a game-changer in terms of how companies do business in the mining industry," said Steve Tomalewski (*left*), product manager for United Central Industrial Supply. "The technology's finally advanced to the point that we can apply it."

RFID technology has already been used for several years by the oil and gas industry. It's available to the mining industry through an exclusive partnership between InfoChip – the

Canadian company that developed the technology for industrial applications – and United Central, the largest distributor of mining supplies in North America.

"This is our first foray into the mining industry. There's a lot of interest out there, a lot of pent-up demand," said Chris Gelowitz (*right*), president and CEO of Alberta-based InfoChip. "Somebody probably thought of it years ago, but the technology has to catch up with the thought process."



An RFID tracking system is similar to a barcode system in that it's used to identify information about a product. But unlike a barcode, which can be the same for many items, an RFID chip assigns a unique identity to each item. And unlike a barcode reader, which only works when the barcode is clean and visually intact, an RFID chip reader can read the information from the chip just by being in the area. Only when the RFID reader is nearby does the chip transmit its identity.

"Some people describe it as barcode on steroids," said Gelowitz. "Once a barcode gets dirty, it's very hard to read. So the big advantage with RFID tags is they're small, they're strong, and they're very durable."

Gelowitz said that InfoChip has honed its industrial product through several years of work with the oil and gas industry; more than 2 million chips have been sold to the industry in the last decade. The company now manufactures RFID chips that are resistant to high temperature and pressure, corrosion, chemicals, impact, vibration, x-ray and magnaflux.

"Every chip is absolutely unique," he said. "It's completely unique, and it will be forever. You can't duplicate it."

Each chip contains only the most basic information, he said: the chip's identity. All other information about the chip and the item it's being used to track is stored in a database, avoiding the need to make any changes or updates to the chip itself. RFID chip readers are available in a variety of types and styles that make use of various technologies, from a plug-in USB to Bluetooth to Android and iPhone.

While RFID technology has been around for a while, Gelowitz said, it has taken a lot of trial and error to develop a heavy-duty version suitable for use in the mining industry, with increased durability at relatively low cost.

United Central sought out a partner who could offer RFID products to the mining industry, said Director of Marketing Carl Mallory (*right*). President Henry Looney said that, with the company's close proximity to mines throughout the US and Canada, United Central has a distribution network that can get RFID technology into the hands of mine operators, where it can create new levels of efficiency and regulatory compliance.



Gelowitz said RFID systems can be customized to fit industrial



Henry Looney

needs – as has been done for the hose and lifting industries.

“Everybody has to deal with safety and certifications and inspections,” Gelowitz said. “Why not make that a lot easier?”

Tomalewski said the RFID chips are first being marketed for tracking of self-contained self-rescuers (SCSRs), because of all the compliance paperwork that’s typically involved with tracking, inspecting and reporting on those mine safety devices. But, he said, it could prove invaluable for other items too, providing a streamlined tracking and ordering system that can help mine operators avoid the expensive downtime.

“There are literally, in mine operation offices, files and files and files of hand-written notes and information dealing with all the details and information and data,” Tomalewski said. With RFID technology, he said, that whole process can be eliminated, with data input quickly and easily and results uploaded directly to the Mine Safety and Health Administration almost instantly.

“We basically eliminate paper from the process and human error,” said Gelowitz.

With InfoChip’s RFID technology, Gelowitz said, no paper inspection forms are needed. Instead, the most up-to-date forms are available on all of the hand-held chip readers. The person inspecting the SCSRs can then fill out the form for each item or, if they are experienced, click “pass” and let the computer fill out the detailed form for each of the items that passes inspection.

For items that need repair or replacement, he said, the repair order or re-order can be done right then from the hand-held device, ensuring the shortest possible time before the repair or replacement is done. At the same time, the database is updated to reflect the item’s history.

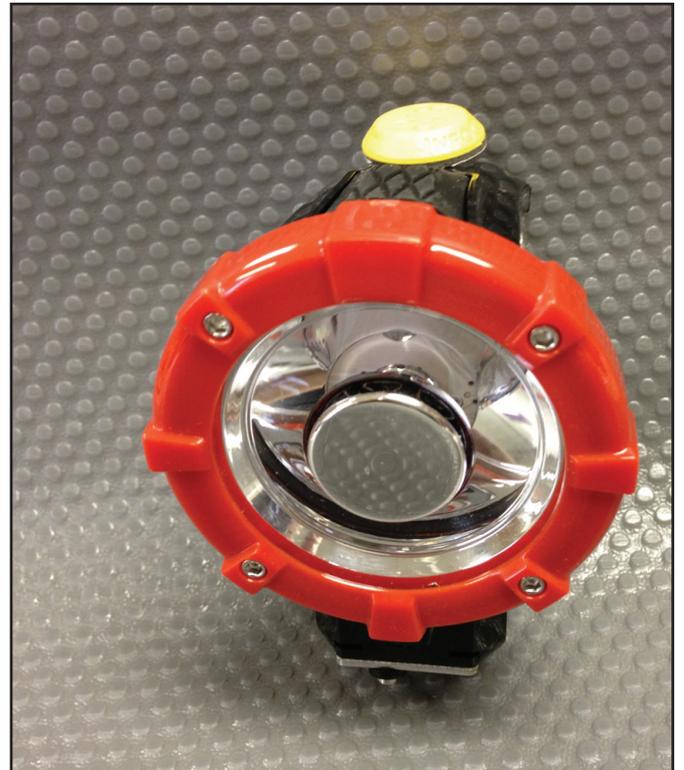
Tomalewski said there are dozens of applications for this technology in mining, all of which have the potential to improve efficiency and compliance while saving operators money. “The product is applicable to anything that needs to be tracked, such as fire extinguishers, hose assemblies, gas detection instruments, cable assemblies, and mine rescue equipment, he said.

Mallory said the improved efficiency that could be realized – multiplied by some 600 underground mines 150 surface mines and 300 preparation plants currently operating in the United States – could have a real impact on mining operations. The faster mine operators embrace this new technology, he said, the greater that positive impact could be.

“United Central has always strived to introduce products into the market that will help mine operators produce more coal, operate more safely and increase efficiency levels,” Looney said. “This is how we always put ourselves in a position to be a leader in the mine industry when it comes to distribution of mining supplies.” 



Gas Detection Unit with InfoChip attachment



Cordless Cap Lamp with InfoChip attachment.