

Mobile RFID readers GIVE LOCAL COMPANY THE EDGE

words PAM SYKES photo SEAN WILSON

GLOBALLY, RFID IS MOST PREVALENT IN THE RETAIL AND LOGISTICS INDUSTRIES. BUT A CAPE TOWN COMPANY HAS DEVELOPED ITS OWN TECHNOLOGY TO SOLVE A DISTINCTIVELY SOUTH AFRICAN PROBLEM – THE MANAGEMENT OF SECURITY PERSONNEL – WHICH IS NOW ATTRACTING WORLDWIDE INTEREST.

UPSIDE DOWN John Holmes (left) and Bernard Slabbert are looking at RFID in a different way.

FEATURES RFID

Bloodhound Technologies makes RFID systems in which both tags and readers are mobile, enabling clients to track the movements of people as well as assets.

"Active tags have their own power source so they have a much greater transmission range, which creates the opportunity for some interesting applications," says Bloodhound executive director John Holmes. "But they are expensive, so we're focussed on niche applications where there's a real return on investment."

Bloodhounds' first project was for a hospital group, using active RFID tags to monitor and track the progress of patients in theatre.

"Hospitals bill their theatre time by the minute, so accuracy really counts," says Bernard Slabbert, Bloodhound MD. "It's often up to a nurse to log patients in and out of theatre, but nurses have other tasks and times are often out. Using RFID tags to automate that billing process has a very quick return on investment – the hospital avoids under-recovering its theatre costs and there are fewer disputes."

Once the system is in place, says Slabbert, it can be used to solve other problems: "You can use the same tags to make sure you have the right patient and the right equipment in the right theatre," he says. "But if those were the only applications it wouldn't be worth spending the money; you first have to provide a clear return on investment."

Having cut their teeth in hospitals, Slabbert and Holmes turned to the security industry.

"It's a massive market with ever-growing demand, its most expensive component is manpower and managing those people can be challenging,"

says Slabbert. "Most security guards work in isolation and it can be very difficult to know that the person is where they are supposed to be, when they are supposed to be there."

Some security companies use electronic key systems where guards tap a reader as they do their rounds, "but that only gives you information when it's downloaded hours later," says Slabbert. "There was strong demand for real-time information."

The team quickly realised that reader systems needing active check-ins by guards were problematic.

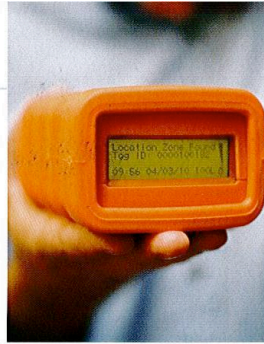
"They're not tamper-proof," says Holmes. "We had cases where people broke the readers off the walls, then just sat in their offices and 'did their rounds' by tapping their keys on the readers at appropriate moments."

The solution was to design a system that, like the hospital theatre system, needed no human action to work.

Says Slabbert: "we made the tags stationary and the readers mobile. Instead of a guard tapping his key button against a reader as he makes his rounds, he carries a mobile reader that actively tracks where it is in the network of tags, and relays that information directly to a central control room."

The Bloodhound team uses active RFID tags in its stationary networks, enabling them to be placed out of reach.

"The person with the reader doesn't have to actually do anything," says Slabbert. "As long as they're carrying the reader and walking around, the system will register that." With its readers also carrying identification tags, Bloodhound's systems can provide real-time information on where people go, how long they stay there and who else is in the



area. Newer models include accelerometers or motion sensors for additional information on movement patterns.

"We were the first people in the world that we know of to make the readers completely mobile," says Slabbert. "It provides for completely automated, real-time movement tracking."

Quality costs

Holmes acknowledges that the Bloodhound solution is more expensive than less sophisticated systems, but says most clients in the security industry

are happy with the return they get on their investment. Now that Bloodhound has solved the technical problems of creating a mobile reader network, says Slabbert, applications in asset tracking and other areas are also becoming possible.

"If a guard is walking around with a reader anyway, you might as well use it to check on your assets," says Holmes. "And if you're a fleet manager with 1 000 vehicles in a yard, you could do a stocktake in half an hour if there was an active tag on each," he says. "All you'd have to do is drive a golfcart around with a mobile reader, and you'd get a full stocktake, with a GPS location for each vehicle as well if you use the right tag."

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"They get real-time information and better productivity. We have clients managing hundreds of sites from a single control room. But there are other benefits as well, and we now understand how we can shape our solutions so our clients get information they can actually use to make management decisions."

Extra benefits include programming the readers with standard operating procedures so that guards can be prompted to, for example, check windows or make sure electrical devices are switched off for better power management.

very quickly," he says. "All our development has been client-led and we're now seeing interest from facilities managers, mining companies, utilities and the like. Whenever there's a high-value or strategic asset that can move, our system is useful. Lots of people can track vehicles, for example, but few can do that and track the cargo. Using active RFID tags we can do both at the same time."

"Tracking security guards isn't an exciting application," concludes Holmes, "but there are 300 000 registered guards in South Africa and every one of them needs managing. With RFID, it's the boring applications that deliver the most value." **B**