THE DATA WHISPERERS

RFID technology advisory center

Fido has one under his skin, marathon runners have them on their shoes and many of us have them in our passports. The RFID tag, which is the size of a grain of rice, can identify living beings, record competition times or store personal data. RFID expert David C. Gürlet, CEO of Berne-based RFIDnet, talks about the potential and future trends of the minichip.

What can RFID technology do?

«It can be used to help prevent shoplifting at the Manor department store, for personalized access badges, for locating an object in a three-dimensional space or even for coordinating an entire supply chain. Its uses range from extremely simple applications to highly complex ones.»

To which industries is RFID relevant?

«According to the EU it is used in nine main areas: the consumer goods industry, trade, traffic and logistics, the automotive industry, the chemical industry, pharmaceuticals, healthcare, sports and animal identification. RFID is used in different ways in each industry. Tracking and tracing is also used in each of these nine categories. This system can be used to track anything from a person moving through a city to the path of a falling rock. For example, the University of Berne has undertaken a study of debris avalanches in the Bernese Oberland. The researchers split some rocks, inserted RFID chips and allowed the rocks to roll down the mountainside. This enabled them to ascertain precisely how and at what speeds the rocks fall, where they get stuck, where they turn and where they ultimately end up.»

FACTS & FIGURES

David C. Gürlet (59) is co-founder and CEO of RFIDnet Bern GmbH. An engineering graduate, Gürlet has been involved in ICT/IT and RFID as an entrepreneur, consultant, CEO and lecturer for the past 20 years. He has set up and run three companies in these fields and is one of three partners in the consultancy ocha GmbH (www.ocha.ch).

Could RFID be described as the successor technology to the barcode?

«No, RFID is much more complex. The barcode never identifies itself, for example. But the difference is not just technological: with barcode technology, people are not worried that their personal data could be read by an unauthorized person. Unlike owners of biometric passports, who tend to be very concerned that someone could access their details.»

Can you at the RFID Centre do anything to combat these fears?

«Yes, that is what we are aiming to do. We also want to clarify what is and what is not possible at this point in time. RFID has immense potential, and it would be bad news if this progressive technology were to fail because of ignorance and fear.»

What else do you want to achieve at the new centre of excellence?

«I would like to generate awareness of the opportunities offered by RFID and encourage acceptance of the technology. I am planning a series of events, training courses and talks for representatives of industry and business and for students. In doing so I hope to bring the Berne University of Applied Sciences' know-how and the needs of business and industry together. I also want to show companies when and how RFID can be used effectively and efficiently.»

In what situations can the use of RFID save money?

So when is it profitable to use RFID? "A good example is in bed management at the Inselspital in Bern. We have tagged all the hospital's beds and mattresses. The customer wanted to optimize its bed man-

UPSIDE : BERN'S INSELSPITAL USES RFID TAGS FOR ITS HOSPITAL BEDS AND MATTRESSES, WHICH SAVES BOTH TIME AND MONEY.

agement process for its fewer than 1,000 bed spaces and reduce the 1,600 existing beds. With 300 spare beds alone it has managed to achieve investment savings of 300 times CHF 5,000, or a total of CHF 1.5 million. In addition, the bed management process is also enabling significant savings to be made in time and cleaning products: the Inselspital is saving CHF 200,000 across its 45,000 cleaning sessions per year. RFID also helps reduce mistakes. The value of RFID lies in the way it enables processes to be adjusted and improved."

How big is the Swiss RFID scene?
«There are a lot of companies in Switzerland selling third-party solutions, but only 30 to 40 companies offering in-house solutions. RFID tags are only made locally by the Swatch Group, which produces about 200 million chips a year. And then there is Sokymat (now Assa Abloy ITG), which casts chips into carriers and manufactures inlets. The Chinese are way ahead of us in terms of chip production: the Chinese already produce more than one billion chips per year. But when it comes to the software applications, every Swiss company has the opportunity to get a foothold in this market.»

"But the question of ethics is much more complex."

How will RFID be used in the future?
«Soon we will no doubt be doing what they are already doing in Asia: paying for soft drinks or public transport tickets with a chip in our mobile phones (NFC). In the next three to five years we could also see polymer-based postage stamps being produced in the form of RFID chips. This will make it easier to track and trace letters – which will be amazing when you think back to the anthrax letters incident. And we would no longer need to register letters.»

To what extent is RFID compatible with data protection?
«The Swiss Federal Government's RFID report states that we will not have to reinvent the wheel in data protection terms for RFID. All we have to do is apply our existing laws properly. The point at which data collected in a chip is linked to personal data is the critical point. At that point we have to comply with the existing laws. But the question of ethics is much more complex: can we, and should we, record all patient movements in a hospital, for example? Will that really benefit the patient? We have a National Council Ethics Committee charter, but that does not cover the use of such highly developed technologies. Swiss politicians will have to come up with a national ethics charter for the technologies of today.»

Information
www.tcbe.ch
www.rfidnet.ch

FACTS & FIGURES

RFID stands for Radio Frequency Identification. RFID is an automatic, contactless radio identification process used to locate objects, people or animals. Depending on the application, RFID tags take different forms and have ranges varying from one centimeter to 300 meters.

RFIDnet GmbH was established on 5 May 2008 as an independent RFID consultancy. Its services include consulting, presentations, training courses and events on the subject of RFID, and it facilitates the transfer of knowledge between the Berne University of Applied Sciences and industry. RFIDnet networks the Swiss RFID scene with the rest of Europe and is a member of the international industry association AIM. The company is owned 50 % by the Berne University of Applied Sciences and 50 % by tcbe.ch – ICT Cluster Berne.