Enigtix delivers digital security

Hardware system developed by German university complements software-based anti-hacker security systems

Gelsenkirchen, Germany. Friday 2 June 2017 – The magic word for these modern times is digitalisation. Digital progress changes manufacturing, the way we work and our private lives. In factories, production lines are already communicating with each other against the backdrop of the Industry 4.0 trend. In the automotive industry, cars are wirelessly interconnected, so that they can almost move in traffic on their own. Digitalisation is also making its presence felt in medical technology and healthcare. For example, staff in hospitals can check and edit patient records on a tablet. And smart home technologies are interlinking digital applications in some private households.

Digitalisation and interconnection make our lives easier – but they can also be a source of danger. Cyber-criminals attack communication systems and network infrastructures. A recent example is the WannaCry virus that attacked computers worldwide, causing a lot of damage and exasperation – in British hospitals in London and Blackpool as well as on display boards in German train stations. But help may be at hand, thanks to the Westphalian University of Applied Sciences in Gelsenkirchen, Germany. Under the leadership of Prof. Dr. Udo Jorczyk, the university has applied for patents for two digital security systems. The first enables organisations to add hardware-based security to existing networks, while the other provides secure communication with mobile devices like smartphones. They are designed to significantly increase the security of applications like online banking and should work on all operating systems. “We’re assuming that users won’t want to change the way they interact with their smartphones or tablets,” explains Jorczyk. “That’s why our method doesn’t require any additional hardware for the device. The tactile usage stays the same, but access from it to, say, company data in the cloud is much more secure.”

“The problem with only using software for encryption is that there’s a risk that attackers can use a Trojan to take control of the software keys required for coding,” adds Jorczyk. “Security must therefore ensure there’s no way unauthorised people can get hold of the keys. That’s what we have achieved with a combination of software and tamper-proof hardware.”

The developer team at the university has already received some feedback from the industry. Heinz Gerstokrax from the US firm Avnet Silica is convinced that digital security will remain an important topic and that the electronics industry will have to devote more attention to it. “We consider secure communication systems and data security to be extremely important and support Professor Jorczyk’s work,” he says. Udo Jorczyk’s team is working on a prototype for the idea they have registered at the German Patent Office. And it already has a name too: Enigtix.

German press release: https://www.w-hs.de/erkunden/zentrale-einrichtungen/oeffentlichkeitsarbeit-pressestelle/pressemedien/nachrichten-lesen/news/detail/News/enigtix-sorgt-fuer-digitale-sicherheit/

Translation: source: Heinz Gerstokrax