

» Application Story «

Mobile Computing in Military



Technology still far ahead of reality in Germany

Mobiles Computing for the Police

From a technical standpoint it's not too much to expect: detectives in an unmarked vehicle key the license plate of the car approaching a house under surveillance into their in-vehicle computer and the owner's name appears on screen in "real time". A further search for the name in the security authority's database shows the owner has a record and is wanted. His mugshot arrives simultaneously. The officers react immediately and stop the car, before it reaches the place they're watching.

However, in many cases things actually look like this: the officer radios the base to report the license plate and request the owner's details. As things are busy, it takes a while for the operator to process the inquiry. As it's a difficult name, it has to be spelled out as well.



Once the name has been transmitted correctly, the detective has to request help again to feed the name into the statewide database. Once again the information is conveyed orally via analog radio to the police car. The officers on duty don't get to see the mug-shot. The car has long since arrived at the house under surveillance and they've missed their chance to stop it as it approached. Even in routine operations there is a huge gap between what is technically feasible and reality: armed with a pen, notepad and camera, officers record details of accidents, which can run into hundreds on a morning with icy roads. Back at the station officers spend time keying their handwritten notes into their PCs. Meanwhile, the mobile police station – a PC in a patrol car – is no future pipedream anymore.

Mobile computing today – pilot projects and isolated applications

The advantages of mobile computing are manifold, obvious and hardly disputed, especially for the police and organizations with security responsibilities (BOS). Mobile solutions are ideal in operation planning, back-up and deployment, as so neatly illustrated above. All the required technology – hardware, software and communications technology – is theoretically already available. However, there have only been pilot projects or initiatives in a few German states, which have tested or introduced mobile computing. In Bavaria more than 400 police cars are equipped with mobile PCs. Hesse is currently developing

mPol software to use with mobile devices. After testing, mPol will be in permanent operation from November 2004.

Communications – technically simple, politically complex

Digital communication technology, as required for BOS agencies, is everywhere today. Suppliers such as Motorola, Nokia, Siemens or EADS already operate functioning digital BOS networks in Europe and are currently touting for business in Germany. But the long-overdue launch of digital BOS radio in Germany is becoming a never-ending saga. Even the minimum objective of launching digital radio before the soccer World Cup in Germany in 2006 is no longer achievable, as the Interior Ministry officially announced in July 2004. That makes Germany the only country apart from Albania to have this communications gap until 2012. The isolated applications in operation today work with the existing infrastructure of commercial mobile communications providers; mPol in Hesse communicates via GPRS.

Mobile software – smooth development, federal implementation difficult

With platforms such as Microsoft's dot.net, developers mastered the software-related challenges of mobile computing some time ago. The main issue here is adapting the GUI of each application to various devices. Of course, a database access template has to look different on a handheld or a in-vehicle computer with a smaller display than on a desktop PC with a 19-inch monitor at the station. However, once again, the variety of software Germany's states use makes development of an integrated solution difficult: the other never-ending story of Germany's Inpol federal database software certainly seemed to have a happy ending in 2003 when it was launched nationwide. But the project that cost more than 60m Euro over 10 years will go down as one of the most disastrous in software history. Not all the states are near ready to connect to Inpol yet, as some of them have their own very modern applications, while others are very out of date. By the end of 2004 all the states are supposed to have their own versions of Inpol ready to create a nationwide integrated solution, onto which a general mobile solution can be added.





Mobile hardware – ready to use systems on the market

Besides standalone handhelds, which are only made more robust for the police, mobile computing hardware for BOS use consists above all of systems for use in patrol cars or mobile units. Companies like Germany's Kontron AG already have a complete range of rugged notebooks, convertibles and tablet PCs with docking stations plus permanently installed in-vehicle computers. Kontron systems currently support forces all over the world – from peacekeepers in Kosovo to California's police. They are based on modern PC technology such as Intel's Centrino Pentium M chips, so officers can use the same software on the road and at the station. They are protected from voltage swings and designed for use under harsh conditions – heat, cold, dirt and shocks. Interfaces for wireless communication and connections for the usual police peripheral devices, such as speed cameras, ensure integration with hard-wired PC-networks and a wide range of uses. Speedy methods of instantaneous installation and dismounting without tools make in-vehicle computers suitable for flexible planning of police resources. Authorities have various car installation options: keyboard, monitor and housing can be installed where most appropriate for the make of vehicle and intended purpose. Complete with docking-stations at the police department, mobile PCs become workstations officers can use anywhere.

Mobile computing – political hurdles for technology that's ready to deploy

All the components for a general introduction of mobile computing to the police and other BOS agencies are available. Unlike other solutions, as was the case with the Autobahn toll solution, they are based on tried and trusted technologies in other industries. As long as the political will exists and financing is secure, there is nothing to stop mobile computing for security authorities from becoming a reality.



About Kontron

Kontron is a global leader in embedded computing technology. With more than 40% of its employees in research and development, Kontron creates many of the standards that drive the world's embedded computing platforms. Kontron's product longevity, local engineering and support, and value-added services, helps create a sustainable and viable embedded solution for OEMs and system integrators.

Kontron works closely with its customers on their embedded application-ready platforms and custom solutions, enabling them to focus on their core competencies. The result is an accelerated time-to-market, reduced total-cost-of-ownership and an improved overall application with leading-edge, highly-reliable embedded technology.

Kontron is listed on the German TecDAX stock exchanges under the symbol "KBC". For more information, please visit: www.kontron.com

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