In Siemens Corporate Technology's transportation vision all modes of transport and their users are seamlessly interlinked and have access to the same information, regardless of time or location.

Networked transport systems avoid delays and are environmentally friendly and efficient.

Katharina Wojtowska sets up to pick up her son at a kindergarten in Vienna, Austria, only to discover that her car won't start. She calls ÖAMTIC — the Austrian automobile club. Half an hour later, roadside assistance specialist Andreas Brezina arrives. He discovers that the alternator in Wojtowska's car isn't working and proceeds to jump start the vehicle. With the engine now running, Wojtowska can drive to the nearest repair shop. While Brezina inserts Wojtowska's ÖAMTIC membership card in his portable reader she talks about how thrilled she is by the club's service. “I was really impressed by how quickly ÖAMTIC got here,” she says. Such praise is a source of pride for the club and its roadside assistance team, the “yellow angels” (dubbed so because of their yellow cars), especially as Brezina and his colleagues are called into action nearly 800,000 times every year.

Sometimes the job can be anything but heavenly for the angels. For example, during many nights in January 2006, a thick layer of ice covered thousands of cars out in the country. “We’re constantly on the go in such situations,” Brezina says. In these and other types of travel of every individual train, ensuring maximum safety, and shorter intervals between services and perspectives based on a photo, are absolutely necessary if we want to make transportation as customer-friendly services will become a reality. But one thing is clear: The technologies to make it happen are here today. “Networking of services and different modes of transportation is absolutely necessary if we want to make transport in densely populated regions more convenient, punctual, environmentally friendly, and as efficient as possible,” concludes Moninger.

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of emergencies, ÖAMTC needs to plan driver assignments as efficiently as possible and make sure they realize they’re of the utmost importance to us, while at the same time focusing on keeping costs in check.” The club is able to do this through a harmonious interplay between motivated employees and IT solutions from Siemens.

Around ten years ago, all calls received at ÖAMTC’s Vienna headquarters were noted down by hand and sent via a convoy belt to a dispatcher on the mobile radio. The dispatcher thus always had to know where all drivers were at any given time. Not infrequently, there were misunderstandings that either resulted in long waiting times for stranded motorists, or drivers being dispatched to wrong places. “The software solution from Siemens has enabled us to consistently boost efficiency over the last few years,” Koller reports.

Today, the ÖAMTC headquarters is housed in a new building in a residential area on the outskirts of Vienna. The ground floor is home to the stationary roadside assistance and technical testing departments. One floor up is the call center, where staff members take calls and receive information from vehicle locations. This data, along with a preliminary diagnosis of whatever problem has been reported, is displayed to dispatchers on digital street maps in an adjoining room. Two other screens show them the current status of assignments, enabling them to find the right driver to handle each call. Certain routine jobs are automatically assigned by the system to specialized drivers, whereby the dispatcher only needs to confirm the assignment and provide information. Drivers have touchscreen displays in their vehicles that show them their next assignment. If they’re only a few minutes away from the vehicle in question, they simply touch a point on the screen to connect them automatically with the vehicle’s telephone number via mobile radio.

Since the driver knows exactly where the vehicle is, club members also no longer have to wait long for their drivers, but can look forward to an OAMTC specialist to show up. “I can enter the entire operation—including my diagnosis and repair attempts—right into a mobile organizer,” says Brezina. “This saves time with documentation and also allows us to move on to the next assignment more quickly. The mobile radio shows me whether or not a member has paid his or her annual dues.”

Constant contact between headquarters and drivers via GPS and a Siemens modem ensures that everyone involved in the process has the same information. The system also makes it possible to collect and process breakdown statistics more rapidly and accurately, which in turn improves the efficiency of both short-term and long-term personnel planning.

Data with a Smile. Insurance services offered by OAMTC are also linked to the comprehensive software solution. That means members don’t have to tell their story over and over again—for example, if their car is taken to a repair shop by OAMTC and they then have to call in additional car-rental coverage they have with another provider.

Staff in Vienna simply see everything on their screens. Moreover, if the member happens to be a long-time customer, the system also automatically display the most important service numbers in the country, which means call center staff don’t need to waste time looking those up.

“One key advantage of the software solution is its flexibility,” says Ralf Mahnkopf from Siemens. “OAMTC has provided software support to OAMTC from the beginning. OAMTC is also constantly coming up with new ideas on how to further improve its processes. In such situations, Koller likes to incorporate new ideas into the system as quickly as possible—and with such flexibility, it’s no surprise that Siemens specialists are reprogramming everything.”

Easy-to-use masks enable trained informa- tion technicians to change features such as the colors or symbols used to display available service vehicles to dispatchers.

“It’s only when things get really complex that we need to call in Siemens for help,” says Koller. Similarly flexible software solutions are increasingly becoming available across all the centers all over the world. And to an increasing extent, emergency call center services are coming together into a single, central location.

On one country with such a setup is Finland. There, Siemens provided the infrastructure that enables the centralized dispatching of police, fire departments, and ambulance services. “The benefits here aren’t limited to cata- strophic situations,” says Peter Löfller, research and development manager at Siemens Building Technologies. “Operational centers are increasingly becoming decision-making centers where people are subjected to per- manent stress. To ensure optimal interaction between software and the people who work with it, it’s necessary to make routines as quick and flexibly be adapted to new requirements.”

The networking of operational centers and field staff as practiced by OAMTC creates addi- tional benefits, as do systems that bring together several operational centers. That’s be- cause the data collected can be used to simulate serious incidents. “These scenarios are becoming more and more precise and can help with staff training, assignments, and resource planning,” says Löfller.

In addition, there’s a lot more high-quality information available these days from sensors in temperature monitors and smoke detectors in buildings, for example, as well as from video cameras that autonomously register and report movements (see Pictures of the Future, Spring 2007, p. 25). “In a few years, we’ll be seeing cameras that automatically recognize patterns—for example, in the way a passerby approaches a neighborhood— and then inform the authorities of a poten- tially dangerous situation,” says Löfller. “This could involve criminal activity, something as mundane as traffic jams that police cars, fire trucks, and ambulances need to avoid. One thing remains the same, however, our team. Intelligent systems are there only to provide assistance to trained personnel when it’s necessary. And although some of the technologies employed is already on the market, they had never before been combined in such a user-friendly way and in an operational control center of such complexity. “Using the software architecture developed by Siemens and other partners, our project showed that a user-friendly interface may help to determine security solutions in the not too distant future,” said Mogensen.

Palcom’s Palpably Better Security

“The most powerful things are those that are effectively invisible in use.” This vision of invisible computing was penned around 20 years ago by Mark Weiser, former head of the world-renowned Xerox Research Laboratory. Weiser’s vis- ion is getting very close to reality today—and at the heart of Europe’s Palcom project, some 100 researchers and developers from academia and industry are working to deliver the idea a step further and giving it a new name: “palpable computing.” The term refers to software architecture that makes even more extensive use of palpatory technologies. Palpable computing unfolds through the idea that computing power is always readily available, and thus becomes more tangible and more precisely understandable to users. It gets its name from the fact that computing power is always readily available, and thus becomes more tangible.

But palpable computing extends beyond the concept of computing power that is always available. It also makes ever more extensive use of user地坪-friendly interfaces, with the result that the term is also a member of the Palcom project, employed this software to develop a pioneering operational control system for the July 2007 Tall Ships’ Race in Scandinavia. Researcher Preben Mogensen and his team used their cooperation with the Randers Police and Randers Fire Department to develop a solution that met the requirements for the July 2007 Tall Ships’ Race in Scandinavia. Researcher Preben Mogensen and his team used their cooperation with the Randers Police and Randers Fire Department to develop a solution that met the requirements.