A pioneering traffic concept that encompasses all forms of transport — from cars and trains to planes and ships — is designed to make travel as easy and convenient as possible.

If only Steven Meyer had consulted his travel assistant earlier. Now he's stuck in a traffic jam near a construction site. A sales director for energy-saving motors, Steven is en route from Nuremberg to a trade fair in Paris, France. His travel assistant, an intelligent application in his mobile phone, had recommended it to friends by marking the establishment with "digital graffiti," a virtual note that "sticks" to the shop, remaining invisible to other passersby. But if one of Steven's friends passed the store, his or her travel assistant would convey the original message left behind.

Regardless of how we travel in the future, everyone will find that traveling is much more comfortable and convenient. In the comfort of his or her home or office, anyone with a digital assistant — either in a mobile device or a personal computer — will be able to plan and book trips using all forms of transport. What's more, a single electronic ticket will cover the entire trip. "Whenever possible, a trip should only require moving from building to building or from one level of terminal or station to another," says Moninger. "Ideally one ticket should suffice and the connections should be seamless, allowing no more than current technology, could make traveling easier and faster. But, due to the many connections between different forms of transportation, travel is often a journey into uncertainty. "The system transitions have to be designed for maximum fluidity, and networked in an integrated traffic management system for what's called ‘inter-modal’ traffic," says Friedrich Moninger, head of Innovation Strategy at Siemens Transportation Systems. This would enable the electronic travel assistant of tomorrow to have at its disposal all relevant travel-related information, including arrivals, departures, delays, platform and airport gate numbers, as well as convenience services such as tourism tips or help with bargain-hunting.

Universal Ticket. Steven has arrived at the suburban commuter station, and his travel assistant directs him to the nearest empty parking spot. It got any information from a parking management system developed by Siemens, which is already installed in many parking garages — for example in Munich, Toulouse, Oslo, and Singapore. An automated, driverless subway brings him to Nuremberg's central rail station. Before boarding the high-speed ICE train to Frankfurt, Steven strolls through the station. Suddenly his electronic appointment planner reminds him to buy a birthday present for his wife, so he stops at a boutique. He likes the shop so much that he recommends it to friends by marking the establishment with "digital graffiti," a virtual note that "sticks" to the shop, remaining invisible to other passersby. But if one of Steven's friends passed the store, his or her travel assistant would convey the original message left behind.

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the platform, Steven quickly finds the shortest route by using a newly developed augmented reality solution, which superimposes arrows in the correct perspective on a live image seen on the travel assistant, pointing to the destination. Such technologies, which can determine locations and perspectives based on a photo, are available now.

Once at the station platform, Steven boards the ICE. A further development of this high-speed train is the Velaro, the world’s fastest mass-produced train. It has been running between Madrid and Barcelona since May of 2007. Even when carrying half of its passenger capacity, the Velaro uses only about two liters of gasoline per passenger seat and per 100 kilometers, emitting two thirds less carbon dioxide than a typical airliner.

Steven is able to quickly find his seat with the help of his assistant, which uses WLAN positioning to determine where he is in the train. A friendly voice guides him in the right direction. “Now to the right, please.” As soon as he is about three meters from his seat, the seat’s display greets him with the words, “Welcome Steven!” Then a greeting image appears, like those commonly seen in hotels, announcing the films and Internet radio stations that are available. Now Steven can read and sort his e-mails.

Standardized Rail System. Steven’s ticket, although tucked away in his jacket pocket, is automatically “punched” by means of RFID (Radio Frequency Identification). Now Steven can enjoy his trip to the airport at 300 kilometers per hour. His train is monitored by Trainguard ETCS (European Train Control System), the standard rail safety system throughout Europe. The system monitors the position, speed, and direction of travel of every individual train, ensuring maximum safety and shorter intervals between trains. Backed by all this technology it’s not surprising that Steven reaches the airport on time. Thanks to a Vicos CM cargo management system installed at the Hamburg South rail station, the exhibits departed on time and are safely on their way. “One of the most formidable challenges in freight transport is to create a uniform, electronic bill of lading for all transport systems and countries—a system that can overcome technical and regulatory obstacles,” says Moninger. Effective control of the global flow of transport requires overarching logistics management combined with GPS tracking and the ability to identify a freight shipment and provide its up-to-the-minute position. Electronic bills of lading are being called for by security authorities in the United States, which want to know exactly what is in each container. The European Rail Agency (ERA) is responsible for uniformity throughout the EU. “This task includes ensuring the uniformity of technologies that form the basis of freight hubs, where goods can be transferred back and forth between different forms of transport, including ships, trains, trucks, and aircraft,” says Moninger.

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

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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.

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On Call Around the Clock

Whether they’re run by police, fire departments, or traffic assistance services, control centers benefit from comprehensive networks. Intelligent Siemens software handles complex requirements and ensures that help is rushed to wherever it’s needed.

Katharina Wojtowska sets out to pick up her son at a kindergarten in Vienna, Austria, only to discover that her car won’t start. She calls ÖAMTC — 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 ÖAMTC 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 ÖAMTC 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