

Faster maintenance for traffic control systems

May 6 2014, by Dr. Norbert Aschenbrenner



Intelligent traffic information and guidance systems mounted on large overhead sign gantries reduce accidents, relieve traffic congestion and reduce air pollution, thus helping to make travel by car safer and more environmentally friendly. The new InterUrbanService app cuts the time needed for working on large gantry-mounted signs nearly in half – regardless if the work involves commissioning, maintenance, power updates, troubleshooting or remote applications. Via Bluetooth, the cellphone connects the technician with the outstation, which provides him with all the details of the installation and the necessary diagnostic

tools. Whether he's on the roadside or up on the gantry, the technician has all the information constantly at hand on his smartphone.

A new app from Siemens halves the time needed for technicians to service intelligent traffic management systems on highways. The automatic display panels on sign gantries are controlled by sensors, and the exchange of data among sensors, signs, and the traffic management center takes place via roadside controllers. A technician making changes to the equipment on the gantry has to climb down to the roadside controller repeatedly to confirm his or her commands. With the InterUrbanService app, all the information is now displayed right on his or her smartphone. For more complex jobs, the technician can use the app to link up to the traffic management center too. The solution reduces the time needed to put the equipment into service and maintain it, and it makes the work less strenuous.

Some sections of highways are used by up to 190,000 vehicles per day. Intelligent traffic control systems ensure that everything continues to flow smoothly, even with such high traffic densities. Sensors measure traffic volumes, weather and visibility, or road conditions and report this data to a roadside controller. The controller transmits the information to a [traffic management](#) center, which evaluates it and sends back appropriate switching commands for the displays - such as traffic jam warnings or speed limits. The roadside controller forwards the commands to the display panels. If a sign gantry is being set up for the first time, sensors and actuators are installed individually one after the other and not simultaneously. Since a technician can only retrieve the current state of a sensor or actuator at the roadside controller, every setting he or she makes at the gantry must be verified at the controller. In a typical case involving approximately 12 sensors and lots of signs per gantry, he or she ends up climbing up and down the ladders a huge

number of times.

The InterUrbanService [app](#) puts an end to all of this back and forth. The app connects the technician's smartphone to the roadside controller via Bluetooth and establishes a real-time Internet connection to the traffic management center. Now, the technician on the gantry can check the status of sensors and actuators at any time. That saves time and makes the work easier and safer, because there is no need to climb up and down the ladder so often.

If the on-site [technician](#) can't make a diagnosis, he or she can get an engineer from the traffic management center involved through the app. The smartphone has the same user interface as the traffic management center. The fault can thus be diagnosed, and new parameters can be entered into the system right away. Since the roadside controllers are sometimes up to 100 meters away from the sign gantry, Siemens also supplies a Bluetooth Booster that bridges this distance. The InterUrban-Service App is distributed under license for use on Android smartphones and tablets.

Provided by Siemens

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