

# FRENCH CONNECTION

2013 will see France introduce a truly hybrid tolling system. This deployment looks set to pave the way for the eventual rollout of the European Electronic Tolling Service

➔ In recent years, the term 'hybrid' has often been used in connection with electronic tolling schemes. Nationwide truck tolling schemes have now been introduced to six central European states; in most cases, the choice of tolling technology was heavily discussed during the acquisition phase of these projects. Of these six countries, three have implemented microwave-based systems: Austria, the Czech Republic and Poland. Satellite-based technology has been deployed in Switzerland, Germany and Slovakia. In mid-2013, France will be the next country to introduce a nationwide truck tolling scheme on 15,000km of national and regional roads that have not yet been subject to tolls. This new tolling system will be also satellite-based, thus bringing the score to 4:3 in favor of GNSS technology.

It has often been suggested that a hybrid tolling solution, i.e. one that would use both microwave (DSRC at 5.8GHz) and GNSS technology, could take advantage of both of these technologies simultaneously. For decision-makers in countries currently contemplating the implementation of nationwide tolling schemes, this may sound rather tempting. However, once a GNSS-based system is in operation, the construction of additional microwave-based roadside infrastructure is costly, unnecessary, and thus pointless. Being freed from the limitations of roadside infrastructure, Slovakia's tolled road network included all of the country's major first-class roads (in addition to all of the motorways and expressways) from the very beginning. This past year, Germany added more than 1,000km of first-class roads to its tolled road network. No costly roadside infrastructure was needed for this extension, of course. On the other hand, Austria and the Czech Republic have been contemplating the extension of their nationwide tolling schemes to the first-class road network for many years. But until now, this simply has not happened.

The French situation, however, is unique and the approach chosen is highly



⬇ The Siemens hybrid plug-and-play OBU

innovative. France has a long tradition of concession-based tolled motorways, and the new GNSS system will be operated in parallel to – and in combination with – the existing (traditional) tolling systems. The new *Écotaxe* project will be the first instance of implementing a real hybrid tolling system.

More than a dozen concessions have constructed motorways throughout the country, and toll plazas have been installed to charge for the use of these roads. Over the years, these traditional toll plazas have accommodated microwave (DSRC) technologies with ETC lanes so that drivers can install microwave tags for automated payment of the road tolls. There are now a handful of operators that supply tags to their clients, allowing drivers to travel on all roads in France with a single tag and a single invoice.

### MANDATORY OBUS

By the middle of 2013, all trucks in France above 3.5 tons will be equipped with new hybrid OBUs that will use GNSS technology for the automatic payment of tolls on the new tolled network. These mandatory OBUs also contain a microwave interface, allowing for the automatic payment at all of the existing toll plazas of motorways already subject to tolls (approximately 8,000km in length). It is anticipated that over 800,000 new hybrid OBUs will be distributed to the trucks driving in France.

Siemens has been a key supplier of GNSS technology to all of the existing nationwide satellite-based tolling schemes, and France is no exception. Major toll providers will



be offering the Siemens plug-and-play hybrid OBU to their clients from 2013. The new units can be installed by the driver in a matter of minutes, and will be provided free of charge to the vehicle owners.

### THE BASIS OF EETS

By making the new satellite-based *Écotaxe* system interoperable with its traditional tolling schemes, France will establish the basis of what should eventually evolve into the European Electronic Tolling Service (EETS). In spite of all the efforts at the European level to establish EETS by the end of 2012, France will now take a leading role in what will doubtlessly become a forerunner to EETS. Europe is thus about to witness not only the first realization of a hybrid tolling system, but also the actual implementation of an electronic tolling service that has been theoretically discussed within the European Union for many years.

The French concept of interoperability will surely act as an important role model for other European countries that are preparing to introduce nationwide tolling projects, such as Hungary, Belgium and Denmark. Thanks to the French initiative, these new projects will most likely be implemented with European interoperability in mind. ■

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