Smart License May Cut Car Theft

Infineon Technologies has teamed with two other German companies to create an intelligent license tag, or "iltag."

Oct. 11, 2002 - There's one group of people that really hate radio frequency identification technology -- car thieves. First, vehicle immobilizers, which use RFID, made it much tougher to swipe a set of wheels. And now three German companies have come up with a windshield label that will make it harder to hide the identity of a stolen car.

Infineon Technologies of Munich teamed with Erich Utsch, a provider of vehicle license plate technology, and Schreiner ProSecure, a maker of holographic labels, to create the intelligent license tag, or "iltag." The high-security windshield label is hard to duplicate visually because of the hologram.

The smart tag allows police to view electronic data verifying the ownership and operating status of a vehicle. If a thief tries to transfer a valid label to a stolen car, the smart label is disabled because the connection between the antenna and chip is designed to break.

In Germany alone, more than 40,000 vehicles were reported stolen in 2001. The three vendors believe governments and insurance companies will be willing to pay more for the high-security labels -- they will cost around ten euros each, depending on volume -- because they could have a major impact on this kind of crime.

"When a car is stolen, the thief switches the license plates, which makes it difficult for the police to locate the car," says Ingo Susemihl, VP and GM of Infineon's contactless systems business unit. "With the iltag, readers can quickly determine if the car was stolen, or even if the taxes on it were paid."

Infineon supplies the 13.56 MHz RFID chip with an antenna to Schreiner ProSecure, which integrates it with a special hologram film and self-adhesive label that secures the tag to the inside of the vehicle windshield. Erich Utsch supplies mobile readers and the back-end systems needed to manage the data. Utsch is also marketing the iltag internationally.

The label, which is about the size of an identity card, contains visible printed information, such as the car's license plate number and registration expiration date. The chip can store up to 1,000 characters, enough to record the names of all authorized drivers, as well as registration data and information on vehicle taxes and insurance.

This information can be read at border checkpoints, inspection stations and other locations by stationery readers from about 70 centimeters, or a little more than two feet. Police can use a handheld device equipped with a mobile phone to scan parked cars. The tag's microchip uses a 64-bit key to secure the data, and it features an intelligent memory management system that lets memory sectors be split up for different purposes.

Some key information for the authorities could be encrypted in one memory partition. Other areas could store public information, such as the authorized vehicle drivers. And the remainder could be used by private companies for additional services, such as individual access permits to parking lots, or to pay for fuel using

electronic funds stored on the chip.

The iltag is available today. Governments in South America, the Middle East and South East Asia have expressed interest in the concept, according to Wolfgang Bilger, COO of Ustch. "In some of these countries, 20 to 40 percent of the cars are not registered and the taxes haven't been paid on them," says Bilger. "The additional revenue from these taxes will more than pay for the system.

Last year, around one billion private cars and commercial vehicles worldwide were officially registered, and more than 50 million new cars are sold and registered around the world each year. It's a sizeable market. Car thieves, however, are hoping the technology doesn't catch on.