

RFID-Enabled Billboards Talk to Mini Motorists

Mini USA is distributing RFID key fobs to Cooper owners in four U.S. cities, where interactive billboards will read the tags and flash personalized messages to drivers.

By Mary Catherine O'Connor

Jan. 29, 2007—Ever since BMW subsidiary [Mini USA](#) brought the updated, sporty Mini Cooper to U.S. motorists in 2001, the wee car has been turning heads and generating a fervent fan base. Mini owners often nickname their Minis and detail them with custom paint jobs. Now, as part of a pilot program recently launched by the automaker's USA division, select Mini drivers in New York, Chicago, San Francisco and Miami can utilize RFID key fobs to initiate personalized messages on billboards containing LED displays.

"It is something different," says Robert Gehrig, a Chicago-based Mini driver and pilot program participant. "I love the marketing that Mini uses. I am also a tech geek, so any chance to demonstrate this is always welcomed."

The program is an effort to display Mini drivers' brand loyalty and sense of community with others—Mini Cooper motoring clubs and fan Web sites abound—while at the same time generating marketing buzz about the diminutive cars. When drivers carrying RFID-enabled key fobs drive past the billboards, readers housed in the signs read the identification number encoded to the driver's fob. The interrogators can read the tags from as distant as 500 feet. Once an ID is captured, the interrogator sends it to a central server, which looks it up in a database and decides what message to display. It makes this decision based partly on how the driver answered a questionnaire before receiving the fob, and partly on other factors, such as the city it is in or the current day or season.

For example, according to a statement distributed by Mini USA, a driver could receive a special message on that person's birthday, or the system might generate a pithy comment based on one's occupation. If, for instance, the driver were a lawyer, the billboard might say, "Moving at the speed of justice!"

The tags and interrogators used for the pilot program are provided by [Wavetrend Technologies](#) and contain battery-powered 433 MHz transponders in a custom-designed key fob. Software engineering and systems integration firm [California Software Laboratories](#) worked with Mini to install the readers and deploy the back-end software system.

Mini USA says it is using cryptographic tools to prevent unauthorized interrogators from reading the identification numbers on the tags. The company says, in its prepared statement, that it has taken this approach to maximize customer privacy. It also notes that no personally identifiable information is stored on the fob itself.

Still, on [MotoringFile](#), a Mini owner's Web blog, some postings reveal perceived concerns regarding drivers' personal privacy—specifically, that Mini might be turning into Big Brother by distributing and reading RFID tags. Other Mini drivers, however, are excited about the program—which is completely voluntary—so drivers

concerned that their privacy could somehow be compromised can simply chose not to participate.

RELATED_ARTICLES A Mini USA spokesperson indicates that more than 700 Mini owners have signed up to take part in the pilot program to date, and the company expects that number to grow. It sent a total of 4,500 invitations to Mini owners in the four test cities, and it says the fobs should arrive in enrolled participants' mailboxes this week.

Mini USA plans to run the pilot trial for the next three months before deciding how to expand the program. Among the potential choices: increasing the number of RFID-enabled billboards in the first four cities, expanding the system to additional cities or employing the fobs in other applications, such as personalizing a driver's experience during visits to a Mini dealership.

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