

Car Dealership Finds RFID the Key to Increased Sales

Bob Lewis Automotive is using RFID-enabled car keys to automatically track test-drives, improve security and simplify key access for salespeople at its Volkswagen showroom in San Jose, Calif.

July 27, 2006—Bob Lewis Automotive Family, a car retailer in California's San Francisco Bay area, is using an RFID key tracking system for vehicles at its San Jose Volkswagen sales lot. The automotive dealership began using the system in February to allow sales people quicker access to keys for automobiles on the lot as well as to track the activity of the salespeople and the cars each day.

Previously, the retailer had used a system in which sales people had to retrieve keys from the office for each vehicle test-drive, as well as another system that stored car keys in lock boxes located in the lot, says Steve Lewis, president and partner of Bob Lewis Automotive Family. The first system, however, required salespeople to take the long walk from the lot to the office for each test-drive. The second did nothing to track who had what vehicle, and when.

The KeyWhere RFID system the dealership is now using, however, offers automatic tracking of test-drives, as well as improved security and easier key access on the lot for salespeople, Lewis says. Developed by a Palo Alto, Calif., company named Performance Analytics, KeyWhere uses Texas Instruments RFID tags and transponders while Performance Analytics provided lock boxes for the keys. Firetide, a privately held wireless mesh technology company based in Los Gatos, provided a wireless mesh system to collect and forward data from the boxes back to the dealership office.

Performance Analytics CEO and founder Dennis McGinn says he was approached by several large dealerships about four years ago for a key tracking solution that would make it faster and easier for salespeople to access a vehicle that a customer wishes to test-drive, as well as to secure the vehicle against theft on the lot. At least one other dealership has piloted the system, McGinn says, but Bob Lewis Automotive was the first to install it.

About 60 of Bob Lewis Automotive's vehicles for sale have an RFID-enabled lock box attached to one of their windows. The box is equipped with a 16-bit processor and RFID antenna. The vehicle's ignition key is stored in the box when the vehicle is parked. The key is attached to a plastic key fob about an 1 inch by 2 inches in size, that contains Texas Instruments Tag-it passive 13.56 MHz RFID tag, compliant with the ISO 13596 standard. Bob Lewis Automotive salespeople carry a plastic card embedded with a similar Texas Instruments passive 13.56 MHz RFID tag and encoded with their unique identification number.

When a salesperson at the San Jose lot begins the day, he presents his card to an RFID interrogator in the office. That ID number is then sent to the vehicle boxes allowing him access to ignition keys when he is on the sales lot. When he wishes to use an ignition key, he inserts the card the box, then uses a keypad on the box to punch in a PIN number, which offers Bob Lewis Automotive an extra layer of security.

When he hears a "happy tone," McGinn says, he can open the box and access the key. A transceiver inside the

box transmits the vehicle identification, its place in the lot, identification of the salesperson, the time and other related information via a Wi-Fi connection to one of four Firetide wireless mesh network nodes. The nodes feed the data wirelessly to an Internet-based application.

To access the application, Bob Lewis Automotive's management team can log onto a password-protected Web site set up by Performance Analytics and then track not only who has a vehicle and how long he has it, but also how often a vehicle is test-driven, which vehicles are not being test-driven, and how often each salesperson is taking vehicles on test-drives. At the end of the day, Bob Lewis Automotive can set the system to deny access to all of the vehicle key boxes. If an employee attempts to open a key box after hours, the system records who that employee is and when he attempted entry.

"This system gives us tons of information about what's going on with our inventory," Steve Lewis says. The dealership uses the system on used cars, which experience the most test-drives. He says he uses the information to determine what cars are sitting on the lot without test-drives, and what vehicles are test-driven frequently but not purchased. Most importantly, he says, it encourages sales by making test-drives more convenient for sales people. "If you're a dealership and the salesmen are inconvenienced by getting keys for the vehicles, it's hurting your sales," he says. "I have not doubt about that."

Previously, when shifting from a manual lock box on vehicles to requiring salespeople to retrieve keys in the office, Lewis says, he saw a 10 percent reduction in sales created by the inconvenience of obtaining car keys inside. He intends to expand the KeyWhere system to all of his company's dealerships, although they have not set a date for that expansion. The monthly cost for the KeyWhere system access and support is \$1,799.

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