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At Nelson Lodge, RFID Will Unlock More than Doors

Topics/Verticals: Security and Access Control, Payment Systems, Retail

At the new hotel, located at Canada's Revelstoke ski resort, guests use RFID key cards to access their rooms. In the future, they will be able utilize the cards—or even cell phones—to ride lifts, rent equipment and partake of meals, spas and other amenities and services.

By Mary Catherine O'Connor

Mar. 19, 2009—If VingCard, the hospitality unit of Assa Abloy, achieves its goal, the ubiquitous magnetic-stripe key card that hotels issue to guests will soon be a thing of the past. The company says its Signature RFID contactless door-locking system—which it launched in 2006 (see NFC-enabled Phones to Unlock Hotel Rooms)—is its fastest-growing product launch in recent history, with orders up 200 percent for 2008 compared with those from the year prior.

A majority of those orders come from the European market, though the system is also being utilized to secure thousands of guest rooms at hotels in the United States and Canada. One such property is the newly opened Nelson Lodge at Revelstoke, a ski area in British Columbia, Canada, now in its second year of operation. The hotel's general manager, Peter Nielsen, believes the RFID-based guest-room access system will provide benefits to guests and hotel operations staff alike.

Nelson Lodge, a hotel at the Revelstoke ski resort in British Columbia, Canada

"We just opened the hotel," Nielsen says. "It's a phased opening, and we're in the first phase. There are

rentals happening now, and the RFID system is in place, but there are only 59 suites open. In the third [final] phase, we'll have 221 guest rooms."

The plastic cards that Nelson guests receive upon check-in very much resemble the magnetic-stripe cards issued by most hotels, except that they lack a magnetic stripe and are more rugged, because they need to last longer than mag-stripe cards—and because the housing must protect each card's embedded high-frequency (HF) 13.56 MHz RFID inlay, which is compliant with the ISO 14443 A (Mifare), ISO 14443 B and ISO 15693 standards.

To open their room door, guests hold the card up to the lock. Currently, Nielsen says, that is the extent of the card's usefulness, though Nelson Lodge has greater plans in store. "The main reason we chose to use the RFID system instead of a mag-stripe system is the future possibilities it holds," he explains. "We plan to use them for interaction with other resort facilities, and for accessing ski lifts."

In the future, Nielsen says, guests will purchase a package deal that combines lodging with meals, lift access and other services. Guests will present their RFID card (or wristband, which could eventually be offered as well) to RFID interrogators installed throughout the resort—from the ski lifts to restaurants and concession stands, to pools and spas. Based on the ID number encoded to the tag, as well as on the package purchased, a resort-wide computer network will determine whether the guest is authorized to partake of a specific amenity (in the case of ski lifts or spas), service or meal.

In addition, the Signature RFID system accommodates the use of cell phones containing RFID interrogators compliant with the Near Field Communications (NFC) standard. Such a phone contains an RFID module that acts both as a reader and a tag, depending on the particular application. For use with Signature RFID, a guest owning an NFC phone will receive a text message from the Nelson Lodge in order to confirm a reservation. This message will contain an identification number captured by the phone's RFID module. Upon arrival at the resort, the guest will then use the phone—just like an RFID card—to access his room and any services purchased when booking his accommodations.

"The idea," Nielsen explains, "is you'd have all that stuff on your phone before you get to the hill." This way, he says, guests would not need to wait in line to check in at the hotel. If they wanted to get a jump on skiing or snowboarding before unloading their cars, in fact, they could access the ski lifts simply by presenting the phones to RFID readers mounted at the base of the lifts.

Exactly when all of this additional functionality will become available is still uncertain, Nielsen says. Although the resort issues conventional bar-coded lift tickets rather than having the Signature RFID card or wristband serve that function, the resort does plan to transfer to an RFID-based system—possibly as soon as next season. However, he adds, not enough guests own NFC-enabled phones to merit the hotel's use of the technology at this juncture. "Before we invest in the software needed to support the NFC applications," he states, "we'd like to see a higher penetration of NFC phones in the North American market. But for us, NFC applications are one of our motivating reasons for using RFID-based locks."

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One benefit Nelson Lodge and its guests will receive immediately is a more dependable key. Magnetic-stripe cards are easily demagnetized—especially when placed near a cell phone—rendering them unusable and requiring guests to return to the check-in desk for a new card. RFID cards, however, do not suffer the same weakness. What's more, while the magnetic-stripe readers require occasional repair and cleaning, the RFID readers need less maintenance.

More stable cards will save time and frustration for guests and employees alike, Nielsen says. In addition, housekeeping staff members are issued master key cards, used to access and clean guest rooms, in a wristband form factor. "This makes the key more difficult to lose," he says, citing lost master keys as a major liability for hotels. "You are only as secure as your key cards are."

But the RFID-based system comes at a premium, Nielsen says. "The cards are more expensive," he explains, "but they are supposed to be more durable, so they have a longer lifespan. Plus, there is less potential for the locks to stop functioning." That's not to mention all of the resort-wide applications currently being planned.