

Snö Mountain Skiers Use RFID to Play and Pay

At the Pennsylvania resort, employees, visitors and rental equipment all wear RFID tags, which visitors can use to make purchases and access the lifts

By Claire Swedberg

Jan. 30, 2007—Snö Mountain, an alpine ski resort and summer water park located in Pennsylvania's Pocono Mountains, has implemented an RFID system allowing visitors to use RFID-enabled plastic bracelets to rent equipment, pay for food and other items, and access lifts. In the fall of 2006, a privately held consortium purchased the former Montage Mountain resort, renovating it and then reopening it as Snö Mountain on Jan. 12. One new feature is the addition of a Precision Dynamics (PDC) Smart Band RFID system for automated ski lift passes and cashless point-of-sale. In the summer, visitors to the resort's Snö Cove water park will be able to access the same system to gain entrance to the park, and to pay for food and other purchases.

Upon arrival at the resort, skiers can buy either a season's pass (in the form of a photo ID card allowing seasonal access to ski lifts), or a day pass they can attach to a wrist or ankle. Both the season pass and the day pass contain a 13.56 MHz RFID tag compliant with ISO standard 15693, and made with a Texas Instruments chip. When visitors buy a day pass, they pay with cash, credit or debit card for lift access (either for the entire day or for four hours), as well as ski rentals and other options. They can also prepay money onto the bracelet for food or other items they might want to purchase later. That payment is then written onto the bracelet's tag, allowing them to keep their wallets in their pockets the rest of the day.

Inside the park are 35 point-of-sales locations, where visitors can present season passes and bracelets to buy items, food or services. Micros Systems designed and provided the RFID hardware and software used for those 35 locations. Employees at the six ski lifts utilize handheld read-only readers designed by Northern Apex, which attach to Motorola (formerly Symbol Technologies) handhelds running software provided by Databrokers.

At each of the resort's ski lifts, says Jim Held, Snö Mountain's IT director, operators bring an RFID reader within 3 inches of each bracelet or season pass to determine that every skier has paid for a lift ticket for that specific time. Skiers simply point out the band's location to the operator, who waves the reader close to the band, whether it is on a wrist or an ankle. Once the skier's lift time has expired, that person is sent back to the ticket office to purchase more lift time, if desired.

According to Irwin Thall, RFID manager for PDC, the system design work began a year ago but was installed in the two-month period the resort was closed before reopening in January at the prime of ski season. Since Jan. 12, visitors have been using the bracelets to access ski lifts. By next week, Thall predicts, visitors will use them for food and concession payments. In the meantime, the company is working on adding ski school lessons to the system.

At POS locations, the amount of money recorded on the bracelet is reduced by the cost of an item or service purchased, using an RFID reader to encode the new amount onto the tag. Reader data, Held explains, is sent to the resort's back-end system via wireless connections and some cable connections. Skiers who still have

money left on their bracelets when they leave the resort can receive a refund from a POS location; Held says they will also eventually be able to do this at a kiosk that has not yet been installed.

The resort has integrated the RFID system into other areas of the resort as well, including tagging skis and other equipment at the rental store. In this case, the clerk can capture the ID number of the ski, as well as the ID number of the renting party's bracelet, then associate that skier with that equipment in the resort's system. When the skier returns the equipment, the clerk can again scan the RFID tags on the equipment and the skier's bracelet, ensuring the correct items have been returned.

In addition, Snö Mountain provides RFID-enabled badges to resort employees, each of whom is assigned a unique ID number so management can better track their movements. A lift operator, for example, would scan his badge when beginning a shift and again when ending it.

Held says he is using a total of six different types of interrogators—about 50 in all. Snö Mountain, he adds, has some stationary devices and handhelds at the lifts, while store clerks are using mostly handheld models. "As far as I know, we are the first ski resort to integrate RFID into all aspects of the business," Held says. While visitors initially were unenthusiastic about the bracelets, he says they have since changed their minds. "Now, they think they're cool."

RELATED_ARTICLES The greatest benefits, according to Held, have been better monitoring of employees and better knowledge of how visitors are using the lifts and how money is spent at the restaurants and stores. He says they chose PDC because "they were the biggest manufacturer in this area, and they had the resources for development." He adds, "They've been great."

Snö Mountain expects more than 175,000 visitors to the ski park this winter season, as well as approximately 500,000 visitors during the summer season at the Snö Cove water park.

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