

Ski Race Organizers Use RFID to Speed Access

At a World Cup event in Sestriere, Italy, passive RFID ID cards and car tags made sure athletes got the green light to proceed to the slopes and other restricted areas.

By Mary Catherine O'Connor

Feb. 14, 2008—Innate skill, years of training and fearless determination won U.S. Ski Team downhiller Lindsey Vonn the World Cup overall points lead and a tie for the U.S. record for World Cup downhill victories on Saturday in Sestriere, Italy. RFID, however, got her onto the course.

The World Cup races took place Feb. 9 and 10, concurrent with Piemonte Mondiale, a winter festival held at the resort town. To ensure that athletes, coaches, reporters and special guests were able to access restricted areas, event organizers deployed an RFID-based credential system.

Italian systems integrator [Alfi](#), which specializes in RFID-based access and ticketing systems for ski resorts, implemented the system used in Sestriere. Tag maker [UPM Raflatrac](#) supplied RFID inlays, while Italian firm La Modulistica converted the inlays into plastic photo ID cards and paper-based windshield passes used to identify vehicles that were granted access to restricted areas. Alfi worked with hardware reseller [Brightpoint Italy](#) to supply a total of 50 handheld RFID interrogators, used by event workers at 16 ID checkpoints and four restricted parking lots throughout the resort to check the ID cards and car tags.

The RFID inlays operate at 13.56 MHz and are compliant with the ISO 15693 air-interface standard. To encode the inlays, says Alfi's VP, Gianluca Colombo, organizers used card printer-encoders provided by [Evolis](#).

"The event organizers asked for flexibility," Colombo says, as they wanted to be able to prepare a portion of the RFID credentials before the event, to speed up check-in procedures, as well as process others onsite, when some visitors, who had not preregistered, checked in. Employees used the Evolis printer-encoders at three check-in stations to issue the ID cards and car tags.

Colombo says that when race participants and attendees approached a checkpoint, either by foot or in a car, a worker used a handheld interrogator to read their card or windshield tag. The unique ID encoded to the tag included a section referring to the tag holder's class (athlete, coach, special guest), which determined the type of access to be granted. A flashing green light on the reader indicated the person or vehicle could proceed past the checkpoint, while a flashing red light signified the person or car was unauthorized for that area.

RELATED_ARTICLES Because the handheld interrogators relied on data encoded to the card to determine access, Colombo says, they could operate offline—that is, without a wireless connection to a database that would have been constantly updated as more and more people registered. In previous, similar events, Sestriere event organizers used personnel and car badges utilizing color codes to grant access; a red badge signified all-access, whereas a blue one allowed access only to specific areas. But those passes, she notes, proved easy to fake and too tedious for checkpoint workers to verify.

"When you deal with masses of people...they will always try to enter restricted areas just to have a better view of the event, closer to the slopes, or even just to have a free lunch," Colombo says. "Having an electronic control is always a deterrent. Control is done by a machine, and control personnel needn't be trained to check whether a pass is a fake." A total of 5,000 ID cards and 1,000 car tags were issued during the Piemonte Mondiale festival and World Cup races.

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