

Italian Alpine Resort Takes Near Field Communications for Ride

Tourists will be loaned NFC-enabled phones to download information and special offers and make reservations, or receive NFC-enabled contactless smart cards encoded with promotional coupons.

By Beth Bacheldor

Nov. 21, 2008—Just before Christmas, several hundred tourists visiting ski resorts and hotels in the Italian Alps will be able, among other things, to obtain weather and other information, receive coupons and promotions, and make reservations, using mobile phones and smart cards equipped with Near Field Communications (NFC) inlays. The tourists are participating in a region-wide NFC trial sponsored and run by the Store Logistics and Payment with NFC (StoLPaN) consortium.

StoLPaN is a pan-European group of companies and academic institutions focused on facilitating NFC, and supported by the European Commission's Information Society Technologies (IST) program. NFC is a passive, high-frequency RFID protocol for mobile electronic devices, and the industry association NFC Forum has established standards regarding how NFC tags and interrogators share data. NFC systems have a shorter read range than ultrahigh-frequency (UHF) and microwave systems that use far-field communication.

The Italy trial is being managed by research company Ennova Research, with support from the University of Rome's CATTID (Television and Distance Learning Techniques Application Centre), the Veneto regional government, and AFF, an NFC applications and systems research and development company located in Hungary. The project will employ various types of NFC-enabled phones; contactless point-of-sale (POS) terminals from Ingenico; NXP Semiconductors' NFC-compliant RFID inlays based on ISO 18092, and Mifare technology based on the ISO 14443 RFID standard, which NFC supports; Ennova Research's back-end services and software for managing and disseminating the data; and security systems developed by Austria's Graz University of Technology.

The trial is slated to run from December 2008 to May 2009, but will likely be extended if successful, says Francesco Prato, executive VP of Ennova Research. "In fact," he notes, "we are working with other partners to extend it later in 2009, in other Italian regions as well."

The University of Rome has devised tourist profiles covering different backgrounds and technological experience, which are being used to decide who will be offered the NFC-enabled mobile phones and smart cards. The infrastructure of Ingenico POS terminals, Ennova's back-end services and software, and related security software are now being installed, and interoperability and performance tests are being conducted (both on site and in labs) through the end of November. According to Prato, the trial is expected to officially commence just before Christmas.

The local government of the town of Falcade has selected several hotels, ski resorts and restaurants in that area that have expressed interest in participating in the trial. Initially, only a few hotels and two or three ski resorts near Falcade will have NFC infrastructure up and running in the trial, but Prato says infrastructure will

be rolled out continually throughout the winter, and possibly into the summer as well.

At the start of the trial, as tourists arrive at the ski resorts and hotels, they can receive their NFC-enabled phones—mainly the 6131 and 6212 models from Nokia that support ISO 18092, or contactless smart cards supporting ISO 14443—when they check in. Approximately 100 phones and more than 500 smart cards will be issued early on, which tourists will turn in upon leaving the resorts or hotels, so that the phones and cards can be reused. Additional phones and cards will then be added as the trial expands.

The main purpose of the trial is to test the interoperability of NFC services, software and infrastructure, as well as to test how Near Field Communications can work with other existing technologies, such as contactless smart cards and bar-code systems. Services will include such things as weather updates and snow reports, as well as the ability to make reservations. Tourists can access this information by tapping their phones on smart posters with NFC inlays embedded in them. In addition, participants will be able to access special promotions and coupons, as well as utilize the phones to make calls and send text messages.

The smart cards the tourists receive will already have coupons downloaded onto their RFID inlays, which the users can redeem at participating locations by tapping the cards onto the POS terminals. Although the smart cards will have limited capability, Prato says, the consortium wanted to include them to study how the different groups of tourists (those with mobile phones, and those with smart cards) interact with and utilize the NFC-enabled systems.

The trial will also include up to 100 smart posters containing NFC chips, identified by an NFC logo on the face of each poster. "The tourists who will participate in the trial will be instructed how to use the phone, and where," Prato says. "The [smart posters] are printed on a type of plasticized cloth that is resistant to any type of weather and temperature, and will be visible in the halls and reception areas."

"There will be posters with one theme (for example, weather) and posters with multi-themes (for example, coupons and promotions, or making reservations)," Prato explains. Glued to the poster's back side, at the spot where the NFC logo is printed, is an NFC tag encoded with a URL where information or services touted on the poster can be accessed. By touching their mobile phones up to the logos on the posters, tourists will be able to download the information, services or coupons onto their phones.

"We will also be able to change promotions in real time," Prato says, "without changing the infrastructure."

Coupons and promotions that are downloaded onto a phone can then be redeemed at participating restaurants, and at other locations that have been equipped with NFC-enabled POS terminals. The pilot will begin with 20 POS terminals, then ramp up to 50 within the first three months.

RELATED_ARTICLES "There is also the idea, at the beginning, to show the coupon in the phone in those places that are not yet equipped with the POS," Prato says. In some cases, the coupon culled from an NFC-enabled poster will contain bar codes because, as he explains, some places will not be equipped with NFC POS, but will have bar-code scanners, and those coupons can be redeemed by holding the phone's screen—displaying the bar-coded coupon—up to a bar-code scanner.

Again, the purpose of the trial is to test interoperability among a variety of products and services, so StoLPaN opted to include bar-code and contactless smart card technology—which are existing technologies already in commercial use—to determine how the different technologies could work with, and be a part of, a larger solution focused on Near Field Communications. "This is the reason why we are using phones, cards, bar codes, SMS, etc. from different makers," says Prato.