

Sports Fans Use RFID to Pay and Play

A group of season ticket holders at Atlanta's Philips Arena can use RFID-enabled cell phones to download video clips and pictures of players—and, eventually, to make purchases.

By Mary Catherine O'Connor

Dec. 16, 2005—A select group of sports fans at Atlanta's Philips Arena can now use cell phones to do more than call friends to give them play-by-plays. They can also use them to download video clips and pictures of their favorite players—and, starting next month, even buy hot dogs and peanuts. Approximately 250 season ticket holders of the Atlanta Thrashers hockey team and the Atlanta Hawks basketball team have joined a trial of near field communication (NFC) technology. This technology trial uses radio frequency identification to enable phones (and other small personal electronic devices, such as PDAs) to make electronic payments, download or exchange data, or perform other applications.

The trial is underway. Approximately 100 fans have already received an NFC-enabled phone (model 3220) from Nokia, which they can use to download news, graphics (such as pictures of players or wallpaper images) and promotional video clips from specially branded "smart posters" throughout the arena. Passive RFID tags are embedded inside the posters. When a fan holds an NFC-enabled phone within a few inches of the poster, an RFID interrogator embedded in the phone reads a special URL from the tag. The phone's Web browser then opens that URL, allowing the user to select content. This URL is not made available to the general public, so the pilot's participants are the only ones with access to this content. The payment functionality—which will enable fans to use their phones to make purchases by holding them up to RFID payment terminals at the concessionaries—will not be available until January 2006. The trial will last throughout the Thrasher and Hawks seasons.

"The immediate reaction from our fans, when we introduced this trial, was one of shock," says David Lee, vice president of business development for Atlanta Spirit, the parent company of the Atlanta Hawks, Atlanta Thrashers and Philips Arena. "They were shocked that, first, the technology is available to them now and, second, that they would have access to things that are unique and exclusive to them.

"Our goal is to give our fans ways to expand upon their experience with us while they're in the arena, and even outside our four walls," he says. "And we're getting direct feedback from the fans. They're saying 'this is great, and this is what I'd also like to see,' and this is helping us with our development."

The Nokia phones are fitted with a shell containing Philips' NFC chip (enabling the phone to transmit and receive data over radio frequency) and Smart MX microchip (which securely stores payment data and is used to process financial transactions). The participants must have a Visa credit card account through a Chase bank in order to use the phones to make payments.

Cingular Wireless is providing the cellular service for the phones, which includes an Internet link and Web browser, necessary in order to use the phones to download photos and other files. ViVOtech, an RFID payments specialist, is providing a software application that runs on the phone's main processor. This software directs the NFC chip on how to exchange data between the phone and the smart posters, as well as another

application that runs on the phone's Smart MX microchip. This enables it to transmit encrypted payment data to the RFID interrogators linked to point-of-sale terminals in the arena, which ViVOtech is also supplying.

According to Lee, sports properties are not always the first to adopt new technologies. However, Philips—the title sponsor of the arena—approached the Atlanta Spirit two years ago with the idea. "They're a great partner for us, and they helped bring in the other partners to deploy the technology. We [Atlanta Spirit] became ground zero for these partners to dive in and see how the technology would work in the real world."

Philips and ViVOtech first announced their plans to collaborate on an NFC trial in September of 2004 (see [Test Set for RFID-Enabled Phones](#)). Philips says this is the largest NFC technology trial in the United States to date. Erik Michielsen, director of RFID and ubiquitous technologies for market research firm [ABI Research](#), predicts that more than 50 percent of all mobile handsets will incorporate NFC technology by the year 2010. In Japan, mobile phone manufacturer Docomo sells NFC-enabled phones.

The Nokia 3220, the handset being distributed for the Atlanta trial, is the first phone Nokia has made commercially available that can be NFC-enabled, says Tom Zalewski, Nokia's head of payment and ticketing, Americas. The Philips chips are embedded in a shell that can be attached to the phone in place of its factory-issued shell. Right now, participants in the Atlanta trial are using these phones with this NFC shell, but only the software that runs the NFC chip is installed. Once the RFID payment systems within the arena are operational (which is scheduled for next month), the payments software from ViVOtech, as well as the participant's credit card data, will be downloaded to each phone's Smart MX chip, enabling it to be used to make purchases in the arena.

Mohammad Khan, president and COO of ViVOtech, says that consumers will eventually be able to order their phones with the ViVOtech software already installed, then use the phone's Web browser to download their credit card information securely to the phone.

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