

**Schematic believes its giant RFID-enabled touch screen can be a useful tool for providing information to attendees at events, and to consumers in retail stores.**

By Mary Catherine O'Connor

July 13, 2009—[Schematic](#), an advertising agency specializing in interactive media, debuted its multi-user, RFID-enabled, touch screen-based media tool, the Touchwall, at the [Cannes Lions International Advertising Festival](#) in France, late last month. While its purpose at the event was to provide attendees with a means by which they could collect session information and meet up with other attendees, Schematic also hopes its clients will find the Touchwall to be a new, useful marketing tool for communicating with consumers armed with RFID-based loyalty cards and RFID-tagged products within a store environment.

Among the consumer brands on Schematic's client list are Coca-Cola, Dell, Clinique, Sony, SanDisk and Nokia.



*Standing at the Touchwall, users identify themselves via RFID, then use their fingers to select and drag text and objects.*

"The ways that organizations can use something like the Touchwall are limitless, just as the ways they can use the Web are limitless," says Schematic's CEO, Trevor Kaufman. "Some examples we thought about include interactive shopping. You can imagine walking in a retail store and picking up a product, and being able to tell the [Touchwall] who you are and what [the products] are and ask for more information about them. The impact on retail is potentially significant."

The Touchwall is a large, touch-sensitive screen, measuring 12 feet wide by 5 feet tall. Multiple users can interact with the wall by selecting and dragging text and objects—using their fingers instead of a mouse. The interface is powered by back-end software developed by Schematic's engineers. RFID plays a vital role in its use, by providing a means by which users can identify themselves and begin interacting.

Here's how the system was used at the Cannes event: Inside each attendee's conference badge was a passive EPC Gen 2 RFID tag—the 9662 Squiggle tag, manufactured by [Alien Technology](#)—encoded with a unique identifier linked to that person's listing in the attendee database. Attendees close to the wall saw an image—a circular target accompanied by the word RFID—that indicated where they should hold their badge up to the wall, so that in the event that the reader did not automatically sense the tag, they could purposefully initiate the interaction with the Touchwall. Once a person's tag was detected, it would automatically trigger the software to look up that individual's name, causing the screen to display that name, along with a greeting and a small avatar representing the attendee.

To ensure that the attendee's name and avatar would appear as close to directly in front of the person as possible, the Schematic engineers mounted four different reader antennas behind the screen (all linked to a single interrogator) and used software to analyze the tag's signal strength, in order to determine that person's location. Jeff Maki, Schematic's solutions architect, explains that the engineering team initially hoped the RFID reader would detect the tags worn by the attendees from a distance of many feet, and that this connection would last until a wearer began interacting with the screen. But they found, during testing, that the tag's proximity to the body often interfered with the RF signal (due to a human body's high liquid content).

Once the software detected an attendee and displayed the greeting and avatar, that person could choose from a menu of actions offered on the screen that would let him do things like learn how to get to specific meeting rooms, or specific locations within the city of Cannes, by utilizing an interactive map. The attendee could also use a social networking application to find the listing of another person at the event, then share contact info by touching that person's name and dragging it to his own personal avatar. This would trigger a command in the software to send introductory e-mail messages to both attendees, or set up a meeting time and place between them. The user could also employ a scheduling application enabling him to drag the names of specific events or sessions to his avatar. This action would send those events to a calendar application that the attendee could later access via the Internet, through his smart phone or laptop.

In a retail setting, Kaufman explains, software would be designed with different types of features and capabilities, though the basic functionality would be similar. Instead of a conference badge, consumers in a retail environment would hold up an RFID-based loyalty card, for instance, to the touch screen. This would trigger the software to pull up that shopper's database, which may contain his shopping history or product and brand preferences—or, perhaps, a listing of food allergies. By holding RFID-tagged products to the screen, the patron could then learn more about the products and find out about

promotions or similar products, or download recipes. All of this information could be sent to the consumer via e-mail, using an address saved in the store's database. With a smart phone, he might also download promotional offers or coupons, redeeming them on the same shopping trip.

Outside of retail settings, the Touchwall could also be used at other events and conferences, or in such locations as airports, where travelers might be able to use RFID-enabled tickets or frequent-flier membership cards to identify themselves and interact with the system.

Kaufman says it's no coincidence that the Touchwall uses EPC Gen 2 tags and readers—he wants the system to be aligned with the RFID standards being utilized within the supply chain.

While Kaufman notes that many of his clients have already approached him to begin discussions regarding the Touchwall and how they might use it, nothing in the way of a pilot program or other test has yet been scheduled. Ultimately, he says, consumers will determine the success of such a system within a retail setting.

At the Cannes event, the Touchwall was a hit, Kaufman reports. Upon seeing their names and avatars pop up, many attendees immediately asked colleagues to take photos of them standing next to the screen.

"People's reaction tended to be delight or disbelief," Kaufman states. "A fair amount of people said, 'How does it know who I am?' We'd encourage them to look inside their badge holders, and then [we'd] explain how the RFID tag works. They were really impressed. Most of these people, being in the marketing industry, had heard of RFID, but they had never seen it work."

That said, there is a significant difference between interacting with a system that displays one's name in a setting of one's peers, and doing so in a public place, such as a store. In Cannes, attendees wore badges printed with their names and headshots, so anonymity was impossible. Many consumers have expressed concerns that RFID might be misused in a manner that would invade their privacy, and consequently, some might feel uncomfortable carrying loyalty cards with embedded RFID tags. Nonetheless, a number of retailers have found their customers to be receptive to the concept (see [Coffee Republic Brews Up RFID Loyalty Cards](#), [RFID Is TOP Priority for Store Loyalty Cards](#), [French Jean Boutique Adopts RFID to Boost Loyalty](#) and [Dairy Queen Serves Up Personal Discounts With RFID](#)).

This video shows the Touchwall in action:

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