

Arts and sciences join to develop greener, more efficient conferences and exhibits

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Santanu Majumdar spent his years as a graphic design graduate student developing a project that might sound counterintuitive for a student of fine arts - a software program made to simplify information gathering at conferences and exhibitions. With the help of researchers at LSU's Center for Computation & Technology, or CCT, Majumdar developed Exhibition Next, a system that's inexpensive, easy to use and an event organizer's dream come true.

"The beauty of Exhibition Next is that it's easy to use, tailored to the individual, friendly to the environment and doesn't involve the storing of one's personal information," said Majumdar. "It allows you to have information about artists or displays that you personally find interesting e-mailed directly to you, without the need for huge amounts of paper or energy expended."

Majumdar's software system, which has already been tested at an LSU Museum of Art exhibition to rave reviews, relies on what's known as RFID, or radio frequency identification, technology.

Brygg Ullmer, a professor with the LSU Department of Computer Science, leads a research group at CCT, where he has a joint appointment. His group has been researching RFID's implications for tangible visualization, which has become a driving issue in technology with the advent of the iPhone and other such personal electronics.

The LSU School of Art and CCT are also part of the [Arts](#), Visualization,

Advanced Technologies and Research, or AVATAR, Initiative, a multidisciplinary hiring initiative at LSU that establishes a university-wide faculty focus on the intersections among art, technology and computation, creating new research areas in virtual environments, digital art, electroacoustic music, animation, video game design, scientific visualization and more.

"More and more, people want things that they can touch and are inspired to physically engage with," said Ullmer, who oversees the Tangible Visualization Laboratory, a CCT and LSU Department of Computer Science joint project. "Santanu and my graduate student Rajesh Sankaran put their heads together on this project, and Rajesh developed the RFID cards that Exhibition Next utilizes for the transfer of knowledge."

Majumdar and his CCT colleagues went to LSU's Office of Intellectual Property, where Associate Vice Chancellor for Intellectual Property, Commercialization & Development Pete Kelleher and his team evaluated the technology and advised the group on potential next steps, commercial value and methods of securing technology rights.

"We serve in an advisory capacity to campus innovators," said Kelleher. "Our role is to assist faculty with preparing any advancements they might create and determine the appropriate path. Sometimes its licensing and patents, other times its copyright. Exhibition Next is a wonderful innovation that has great potential to change the way exhibits are approached."

The card system works something like this: a patron enters into an art gallery, where he or she is already expected to register and share personal information. Instead of the usual registration process, the patron is then asked to enter some details into a computer, which then attaches the individual's profile to an RFID card he receives. In some cases, a

photograph of the person is taken for verification purposes. As the patron peruses the exhibit, instead of picking up pamphlets at interesting displays, he or she simply touches the RFID card, which then automatically e-mails a PDF file of additional information to the patron's inbox. Not only does this minimize waste and maximize what exhibit-goers get out of attendance, but it also enables organizers to determine which pieces received the most interest. This allows for tailoring of future shows and an increase in successful exhibits. Also, the card is wiped clean at the end of each visit, so individual's e-mail addresses and other private information cannot be added to mailing lists or used in any other way. The RFID cards can be reused for the next visitor, or used again at the next exhibit.

"This work represents a true collaboration between arts and technology, as it is something neither side could have done fully on their own," said Ullmer. "But it is something that, in coming together, they were able to create, and it benefits both sides. It is a testament to the exciting work and research going on with the AVATAR Initiative."

These cards, which are approximately the size of a driver's license, are inexpensive and easy to use. Since the technology was designed for art museums, which typically do not have a great deal of expendable funds on-hand, cost was as much of a factor as efficiency and user-friendliness. The RFID cards would cost approximately \$1.25 per card and are reusable, while the card reader would cost around \$65.

"Normally, designers respond to a problem of their clients. Artists work on their own projects," said Rod Parker, thesis advisor for Majumdar's project and director of LSU's School of Art. "What's amazing about this project is that Santanu solved a problem museums had not yet realized that they had."

And the software isn't limited to art shows or even the arts world.

"The great thing about [Exhibition](#) Next is that it could be used for just about any type of event where people come together to exchange information," said Majumdar. "Tourism, business, any kind of [conference](#) or convention would receive added value by employing this program, and would ensure that the next event was organized in an even more efficient manner. It also gathers data automatically for the exhibitor without having personal information of the visitor, which helps in expanding or reducing a section, and for having exact feedback for grants."

Source: Louisiana State University ([news](#) : [web](#))

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