

Investigating Technology to Connect Children With History at the Chicago Historical Society

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(Presented by D. Lynn McRainey and John Russick)

The Chicago Historical Society (CHS) will mark its 150th anniversary in 2006, rededicating itself to communicating the importance and relevance of history to the broadest possible audience. To help meet this goal, CHS is developing an exhibition to attract a new audience, eight- and nine-year-old children and their families. From the outset, the CHS project team understood that developing a gallery designed to offer children meaningful and memorable experiences with history would require establishing new relationships and embracing new ideas.

Early in the project, we identified three priorities to guide our work. First, the needs, interests, and abilities of the audience would shape the design of the gallery and the exhibit development process. Modeling our approach after one typically used in children's museums, we created a developmental framework to identify key characteristics of eight- and nine-year-olds and the implications of those characteristics for messages, experiences, and desired outcomes. Second, the city of Chicago would serve as our primary artifact, offering opportunities for children to extend their gallery experience beyond the walls of the museum and make personal connections to the city. Finally, the opportunities to use technology to connect children to history would be thoroughly investigated. We sought to use technology to create truly unique experiences for children, beyond the everyday experiences available to them at school and home. To advance this aspect of the project we collaborated with two innovative and technology-savvy partners, Amaze Design Inc. of Boston, Massachusetts, and Michigan State University in East Lansing.

In January 2004, we hired Amaze Design to help shape the gallery experience from the beginning of the project. Amaze embraced the open process of collaboration and discovery, and shared our desire to push the boundaries to engage and challenge the minds and imaginations of children. They also helped us think about the role of technology in the gallery, emphasizing not only budgetary, maintenance, and pacing issues, but also identifying opportunities to create unique and meaningful experiences through technology-driven activities.

In spring 2004, CHS and the Department of Telecommunication, Information Studies, and Media at Michigan State University formed a partnership to investigate opportunities to employ current and emerging technology to communicate notions of history. We met weekly with a team of seven graduate students through two-way video conferencing using the distance learning facilities at CHS and MSU. In these discussions students were encouraged to identify the breadth of technology options, no matter how costly and cutting edge. While we recognized that other

factors such as budget, space, and the larger institution's commitment to technology would affect our choices, we wanted to stretch our thinking in terms of possibilities and applications. The relationship with MSU forced the CHS team to consider how history content could be communicated using technology that was unfamiliar to us. And the MSU team was challenged to revisit its relationship with the subject of history to help them imagine ways to apply technology to deliver experiences with history content.

Students identified applications for technology both within and beyond the gallery. Through our discussions, we identified the various roles technology could play in creating experiences, interactions, dialogues, and sharing of discoveries. For example, a powerful application for technology is its ability to foster social navigation through initiating exchanges and dialogues among visitors. MSU students grappled with the ways technology might encourage children to interact with one another to share their experiences, perspectives, and discoveries. The idea that hand-held and other wireless technology might allow the user to "take CHS along" wherever they went was considered an obvious tool for expanding the museum experience and was a frequent topic of discussion. The outcome was a report outlining eleven possible applications for technology. Examples ranged from the more traditional web interfaces offering deeper content and games, to Radio Frequency Identification activating robots that would engage in conversation with children through voice recognition technology.

Su Kwak, one of the MSU students, used the work she had researched on Personal Digital Assistants (PDAs) to prototype a handheld wireless tour of the other exhibitions inside CHS for her master's thesis. Designed as a scavenger hunt, the program was accessible to young visitors. Through text, audio, cartoon characters, and still imagery, the scavenger hunt extended the family-friendly learning we were developing in the children's gallery to activities throughout the museum. Ms. Kwak and CHS staff tested the prototype over the summer and the analysis of the feedback will be used to develop a subsequent version of the program.

In August 2004, CHS and Amaze Design completed the concept workbook for the gallery and were ready to advance our new theme, *Sensing Chicago*, and its two key messages, "History is all around you" and "Your senses can connect you to the past." Brian Winn, also in the Department of Telecommunication, Information Studies, and Media, and Kris Morrissey, professor in MSU's Museum Studies program, joined our technology research team. Brian, a principal investigator in MSU's Communication Technology Lab, helped to translate the interactive scenarios suggested by the team into specific hardware and software recommendations to aid in the development of prototypes. Kris brought several students into the group to broaden our discussions as we sought to apply technology to the *Sensing Chicago* theme. Combining the technology and museum studies, students brought a new collection of concerns and perspectives to the table. We found ourselves thinking more about what constituted a unique exhibition experience and whether technology should be visible in the gallery or if it should be undetected by the visitor.

Now the team changed strategies for applying technology. Instead of looking at many different technologies in search of opportunities to deliver valuable experiences with history, we channeled our collective energy into one activity and sought the best technological solution. We

determined that as a concluding experience we wanted children to consider how they perceived Chicago and their relationship to it. The idea took the form of an activity in which children would design their own postcard, incorporating their face and selected images of Chicago that represent their five senses. Each postcard could be further personalized by using a light pen to draw or write out a digital message about the city. Lastly, the postcard could be printed in full-color and mailed to a friend or family member from the museum store or e-mailed directly from the exhibit kiosk. We discussed the possibility of saving some cards with interesting impressions provided by visitors, to be displayed to new visitors either in the museum or on the web, as a way to enhance visitor-to-visitor interaction. These discussions led us to consider a range of new issues such as how to filter inappropriate contributions, how to maintain privacy, how to obtain permission to use content generated by visitors, and how to efficiently archive such material.

This work continued into 2005. Nishreen Upletawala, one of the previous semester's graduate students, pressed forward with her own thesis project based on the postcard concept. By the end of April 2005, an initial prototype of the activity gave CHS a platform from which to discuss and develop a rich interactive concluding experience.

As we enter the next phase of the exhibit development process, our relationship with MSU continues. And as the exhibit design becomes more defined, so does the energy and focus of the MSU team. The work to move the previous postcard prototype forward has become the effort of graduate student Amanda Flowers and two faculty advisors, Steinfield and Winn. The next phase of development requires even greater attention to the emerging design of the gallery, the other technological applications being pursued, and the process we've established for finalizing the exhibition content.

Developing technological applications to provide meaningful and memorable experiences with history for children and their families is challenging. It requires much experimentation, and many ideas inevitably lead to dead ends. However, the benefits to CHS are clear. We are far more able to understand and integrate new technology into our thinking. We have developed a body of knowledge about current and emerging technology. And we have built a valuable new relationship with MSU that can benefit the entire museum in the future. The benefits to MSU are acknowledged too. The students developed both real world skills working with clients, and created programs for their portfolios that have potential for future development. And the risks are manageable. If there is time to work this way, the process can benefit all without costing huge sums of money as we strive to create successful, new applications of technology in exhibitions.

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