Designing for Place in Urban Cemeteries

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INTRODUCTION

We rarely think of cities in terms of building and roads, instead it is the intangible qualities that arguably shape our understanding of urban environments. Historical events, peoples' memories, and a city's aura shape the urban experience because they create a sense of *place* rather than *space*. In this paper, we contend that as new technology infiltrates urban environments, there is a need to understand the qualities that make cities *places*. We outline our attempts to identify and incorporate place properties into our initial design of an electronic tour guide for a local site, the historic Oakland Cemetery in Atlanta, Georgia. We present our research methods for discovering the site's shared social understanding and discuss how it drove our device's design and led to a richer user experience. Our initial prototype lays the groundwork for how technology can create civic engagement and preserve historic urban settings that are often overlooked.

MOTIVATION

In *The Geography of Nowhere*, James Howard Kunstler writes that we have become a nation of look-alike suburbs, where there is little sense of having arrived anywhere, because everyplace looks like no place in particular [9]. The qualities that give places their character and identity are too often overlooked or paved over in today's urban environments. Our society values the new, rather than embracing older settings' unique historical qualities. We focus on relishing urban spaces' temporal and cultural relevance and using it as a resource for design. Technology can revitalize and draw attention to areas in cities that are threatened by homogeneity. Retelling the history of a place, through media-enhanced tour systems, is a powerful and graceful way to educate users about the urban landscape.

Cemeteries are often overlooked in the monotonous sprawl of cities. The cemetery's role as a repository of the history and memories of the local community is fading [13]. Preserving peoples' final resting place is important-as evidenced by the fact that most historical cemeteries are protected by the National Historical Registry. We believe there is an opportunity to connect people to the past, by retelling the deceased's stories with technology. We want to expose people to the richness buried in historical cemeteries and motivate others to recognize these urban spaces as *places* or gems for learning. Unlocking the qualities of place is vital, because when people feel connected to a place – emotionally, culturally, and spiritually, they are more apt to care for it.

DESIGNING FOR PLACE VERSUS SPACE IN URBAN SETTINGS

According to geographer Edward Relph in his book *Place and Placeness*, place does not come from its location, the community that occupies it, or the superficial experiences which take place in it, but rather the essence of place is its role as the center of human existence [11]. In this paper we describe our attempts to uncover that essence in a particular urban setting, focusing on its history and other intangible qualities to inform design. It is the distinction between space and place that guides our design of technology in the urban environment.

As Harrison and Dourish argue, the critical properties of place that technology developers must understand are rooted in sets of mutually-held and available cultural understandings about behavior and action [8]. Space is organized not just physically but culturally; cultural understandings provide a frame for encountering space as meaningful and coherent. Because technology causes people to re-encounter space, it is important to understand and to respond to users' needs for a sense of place. As the workshop points out, access, authorship, and agency are important properties of place, and essential for the design of technology in urban environments. "Space is the opportunity and place is the understood reality" [8]. An old historic cemetery, tucked away in downtown Atlanta, Ga., provides the opportunity for investigating place. Now we turn our attention to how we uncovered the *place* reality to inform the design of our media-enhanced tour guide for Oakland Cemetery visitors.

WHAT MAKES OAKLAND CEMETERY A PLACE?

Cemeteries are often associated with spatial attributes like manicured lawns, interchangeable tombstones, and wilting flowers. Oakland alters one's preconceptions of cemeteries. Its hodgepodge of monuments, cozy setting, and winding roads give it an unplanned beauty lacking in today's memorial garden style cemeteries. But it is the unquantifiable qualities that define the Oakland experience. For example reading a child's tombstone's allows visitors to briefly understand death's impact on families, or strolling through the segregated grave lots gives tourists a sense of the South's troubled relationship with race and the tension which existed between

A view of Oakland Cemetery

rich and poor. This 150-year-old cemetery's intangible aura gives it its sense of place. Visitors cannot leave it without wanting to learn more.

Oakland has distinct historical components that also contribute to its sense of place. Cemeteries are a window through which a city can view the hopes, fears, and designs of the generation that created it and is buried within it [13]. Oakland's notable figures include esteemed Southern writer Margaret Mitchell and golf hero Bobby Jones. Civil War soldiers and the Civil Rights leaders also occupy the land and shape Oakland's and Atlanta's history. Although the cemetery serves as the final resting place for people involved in historical events, Oakland is not necessarily a historical place (i.e. a Civil War battlefield). It is perhaps more similar to a museum, because it houses antiques and provides a starting point to learn more about a setting's larger cultural relevance. The majority of the deceased are typical Georgians whose lives were defined by personal achievements and family.

Moving through the cemetery and discovering shared characteristics with the people is the strongest link visitors have to Oakland. Although Oakland has been an inactive burial site for over 50 years, many living citizens of Atlanta have ancestors there. For those people who don't have family ties, Oakland is a site for thought about our own mortality and the impact we make during our own lifetimes. Its a place for reflection.

As we thought about designing technology for Oakland, we focused on the place qualities that should be preserved for future visitors.

DESIGN CONSIDERATIONS FOR OAKLAND CEMETERY
Place is difficult to define and measure because it is subjective. Research approaches that acknowledge subjectivity's role in design have driven our preliminary research. "Deep hanging around" in the cemetery, meetings with Oakland's director, reviewing other tour guide systems, and exploring the history of other American cemeteries constitute our human-centered approach to designing a tour experience for Oakland Cemetery.

The current human-guided tours of Oakland are unreliable and inflexible. Tour buses have had to be turned away because volunteer tour guides have been sick or cancelled at the last minute. Tours are given only on the weekends making it difficult to fit into people's schedules. Moreover, the human guides provide dates and facts, but are limited in their ability to recreate the character and intrigue of the past. We propose using audio and visual media to enhance the experience for visitors. Also by opening a new revenue channel, this idea has the potential to help fund preservation efforts. Oakland cemetery, like many historic cemeteries, no longer receives income from selling burial plots.

To explore this opportunity, we sought out the intangible qualities that attract people to Oakland and how those qualities can inform and inspire the tour guide device. Inspired by cultural and urban probes [4, 12], we attempted to uncover what people would need and desire from a tour guide system. For example, we asked participants to walk around the cemetery space with a digital camera and an audio recorder and to document points of interest. The people were generally interested in the human elements; a tombstone with final professions of love sparked a participant to discuss her personal interest in stories of desire and tragedy.

We reviewed other tour-guide systems [1,3,5]. One of the most compelling examples is the audio experience created for Alcatraz prison [2], which uses actors' voices and sound effects to engage visitors in the place. We felt that designing cemetery-specific media was the best approach to communicate those important place qualities, and we could draw on sounds, imagery, and stories from historical events and people in Oakland. We chose to present Oakland's rich layers of historical information through the compelling voices of the deceased rather than a dry commentary style. The initial design and results are present below.

INITIAL DESIGN
Our initial design for using technology to engage the public in the cemetery and Atlanta's history is a self-guided audio tour. Professional actors recorded their voices for a script developed by historians and media theorists. Our understanding of the place qualities was instrumental in developing the dialogue and sound design. The audio media was placed onto a small portable computer equipped with headphones and audio segments were controlled by a "wizard" operator who monitored the experience nearby.

The experience places the visitor among historical characters from the cemetery. Franklin Garrett, Atlanta's former official historian, guides users to the most interesting graves located in the original six acres of the cemetery. His southern drawl and authoritarian manner lend authenticity to the character and responds to users' desire to feel connected to the deceased. For example, you visit the grave of Dr. James Nissan and hear, from his perspective, about being the first man buried in Oakland.

Participant testing the audio tour guide prototype

"Back in those days you feared getting buried alive more than death itself. I asked the physician to cut my jugular before I was buried to ensure I didn't wake up six feet under"

We used sound effects throughout (such as cannon fire) to enhance the experience making it possible to envision events such as the Civil War battles. The experience reaches a dramatic arch near the end of the guided tour when the visitors realize that the narrator, Garrett, is actually an inhabitant of the cemetery.

"Ok, down this path a little further over on your left. See that grave with the name of Garrett? Yep, that's my grave."

To inform the design of technology in the cemetery grounds, we used the Wizard of Oz (WOz)[1] method to understand what design ideas best fulfill user needs and desires. WOz allowed us to take a human-centered design approach by allowing us to evaluate concepts with participants before making the technology actually work. We are exploring the use of the Global Positioning System (GPS), which would enable us to deliver media based on where the user is located in the cemetery. Since GPS is error prone and fairly unreliable, we rely on a wizard operator to simulate the GPS sensor. Our tools for WOz simulation are designed to be very flexible so we can imitate a wide range of computer sensing, from tangible devices to computer vision [6, 10].

INITIAL RESULTS

We are currently conducting user evaluations of the experience in the cemetery. We have received useful feedback from participants during interviews and "think aloud" brainstorming sessions. Users wanted more control over the content, a way to stop/start the audio, skip ahead if they get bored, or go back if they miss something. Others desired more freedom in the general navigation of the space. Currently, the voice of Garrett guides the participant to several interesting locations, but our users want to be able to

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[1] WOZ is an experimental user interface evaluation method in which the user of the system believes that he or she is interacting with a fully implemented system even though the system is controlled by a human or "wizard."

explore graves on their own and probe for history in physical elements that they find intriguing. Designing agency into the system is important for engaging people and enabling them to feel in control of their experience.

During our experiments, we also recorded quantitative measures including GPS location, head rotation, and time spent at each location. This data will help us decode patterns in user behavior and improve the experience for visitors. The GPS data will also help us convert the system from Wizard of Oz operation to a truly autonomous system. GPS could be a useful technology for designers of other outdoor urban technology projects, so we hope to be able to share some of our data analysis in time for the workshop.

FUTURE RESEARCH

We will continue our inquiries into Oakland Cemetery to discover more place qualities and incorporate it into the design. Using urban probes, we hope to further understand what is necessary and what is desired by visitors for a rich experience [7]. Experience prototypes can inform the form factor of the device people will carry and provide us more of an overall understanding of place in the urban spaces [4]. By allowing users to participate in the design process early, we are providing citizens of the urban environment access to the concepts and technology, an essential step for maintaining the properties of place.

Many of our new design ideas will lead to technology with properties of authorship and agency. We are curious how the experience will work if visitors can leave short audio stories for future tourists. This provides people with an outlet for constructive contributions and will leave visitors with a stronger emotional bond with the place. We, in part, address agency in the notion of self-guided tour spaces; visitors can explore what is interesting to them within the space, and the experience of the place becomes more personalized. We have many questions of how this will work with actual groups of people. How can the experience be personalized and collaborative at the same time? How does that relate to non-linear and linear storytelling? We are a long way from a finished design of the Oakland experience, but by using urban probes to identify the right content and motivation, and by creating prototypes using rough media content and WOz evaluations to design the interaction, we are working towards designing technology for *place*.

CONCLUSIONS

Today the sense of place in our urban environments is being threatened by homogenous land development. In fact, the land surrounding Oakland Cemetery is quickly being sought after by condo developers. It is important to preserve Oakland and other locations that embody the place values of a city. Technology can help this cause, but it must be driven by this sense of place. Place shapes who we are and what we become. It is the accumulation of our shared memories, experiences, and dreams. It is a place of family and community ties, of

roots that stem from our connection to a particular location and its people.

Our contribution to this workshop is to recognize how urban cemeteries play a role in our understanding of urban environments. While there have been numerous efforts to develop technology for other cultural institutions such as art and natural history museums few, if any, efforts have been made to use advanced technology to enhance visits to any of the 200 cemeteries tucked away in America's cities. Technology can revitalize and draw attention to cultural institutions that have been largely overlooked and in need of recognition. The tour guide that we are developing for Oakland Cemetery has the potential to spur greater concern for the preservation of cemeteries and other unique settings in our American cities. During the workshop we hope to share samples of the audio content we created for the cemetery, as well as some of the data from user evaluations.

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