In Between: Phoenix, AZ Homeless Teens, Art, and Technology

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Abstract
The homeless teenage population of Greater Phoenix, Arizona is eager to engage in social networks, share their stories and connect to the larger world. They are affected by technology in the urban environment, even if they do not have regular or any access to it. In this paper, I discuss *In Between*, a proposed project that allows homeless teens to tell their stories by creating videos, photographs, audio samples, and written stories that are geo-tagged and placed on an interactive map. The project culminates in an embodied, touring art exhibit.

Keywords
Teen, homeless, technology, storytelling, art, exhibition, embodied

ACM Classification Keywords
H.5.3 Information Interfaces and Presentation: Group and Organization Interfaces – collaborative computing, computer-supported cooperative work, web-based interaction; H.5.4 Information Interfaces and Presentation: Hypertext/Hypermedia – architectures, navigation; J.5 Arts and Humanities: Arts, fine and performing; K.4.2 Social Issues: Miscellaneous

General Terms

Teenage homeless, social networks, interactive maps, self empowerment, self expression, telling one's story, exposure to art, inclusion in society, urban social interactions

Introduction

This paper is the formal component of a final project in the class Experiential Media Methodology and Theory I in the Arts, Media and Engineering department at Arizona State University. The class was asked to form groups and was tasked with "proposing and designing an experiential media system." We were given three weeks to formulate our ideas and create a working system prototype. My group consisted of three graduate students: myself, a MFA candidate in Interdisciplinary Digital Media & Performance at the School of Theatre & Film and Arts Media and Engineering (AME), a Music Composition DMA candidate with an AME Concentration, and a MS candidate in Computer Science with a concentration in AME.

We have based our project upon the existing research about the use of technology in homeless and marginalized communities [1, 7, 8, 9, 10, 11, 12, 13, 18].

In our fast-paced, digitally connected world it is argued that technology has the potential to improve all aspects of everyone's life [10]. What about people that do not have either a job or a home? We must consider how technology, or the lack of it, affects their lives. La Dantec suggests that when thinking about Human Computer Interaction (HCI) design "we need to explore new social contexts and re-examine our assumptions about the relationship people have to technology" [10]. As designers of systems we have an ethical obligation to consider how technology is used among the homeless.

In Between, is a theoretical, interactive installation designed for homeless teens, age 13-20, in Greater Phoenix, Arizona. We hope to address the question "what it means to walk a mile in someone else's shoes." Our goal is to design a system, experience, and installation, which offers a voice to the teenage homeless population, who often remain in the shadows.

It was beyond the scope of the class assignment to fully realize this project within a three-week timeline. The project plan takes place over the course of one full year. For the purposes of this paper and the test system, we created a sample data set, which is discussed in further detail under "sample data set" later in this paper. The full project plan as well as discussion on the sample system is discussed in greater detail under "Proposed Project, System, and Exhibition."

Population

Homeless youth are individuals under the age of eighteen who lack parental, foster, or institutional care. These young people are sometimes referred to as "unaccompanied" youth [6]. Causes of homelessness among youth fall into three inter-related categories: family problems, economic problems, and residential instability. Many homeless youth leave home after years of physical and sexual abuse, strained relationships, addiction of a family member, and parental neglect [6]. Leaving home is, in many cases, a matter of survival. Others are "thrown away" by their families because of overcrowding in the home, pregnancy, sexual orientation, or because they are

perceived to be "old enough" to be on their own. This has become more common due to the economic crisis [5].

Homeless youth face many challenges on the streets. Because of their age, homeless youth have few legal means by which they can earn enough money to meet basic needs [6]. Homeless adolescents often suffer from severe anxiety and depression, poor health and nutrition, and low self-esteem [6]. Furthermore, homeless youth face difficulties attending school because of legal guardianship requirements, residency requirements, improper records, and lack of transportation. As a result, homeless youth face severe challenges in obtaining an education and supporting themselves emotionally and financially [6].

It is nearly impossible to quantify the number of unaccompanied homeless youth in Arizona. Many of the youth are highly mobile, distrust adults, and choose to remain disconnected from conventional networks of support, all of which present barriers when collecting data. Many avoid shelters, service providers and systems. While there are several sources of data, none are comprehensive [5].

Approach

When thinking about technology we must consider the effects it has not only on everyday users, but also on non-users. Our urban social interactions are rapidly changing by the digital technologies that constantly connect us. The homeless, who share our public spaces - and arguably could lay more claim to them, as they call the streets their home - must be considered when designing systems. If we do not, we "inadvertently set the stage to create an even larger rift between ourselves and the poor, homeless, and otherwise marginalized members of society with whom we share our urban environments" [10].

Our approach is informed by value sensitive design and designing for dignity [3]. By providing access to good design for those who could benefit the most from it, but have the least access to it, and by accounting for human values in a principled and comprehensive manner, we hope to create a shared experience, which empowers the homeless teenage population.

Working with a homeless teenage population is challenging, has pronounced risks and multiple ethical considerations [2]. Homeless teenagers are an especially difficult group, as they typically do not like to share their experiences with adults, and are a transient, marginalized population.

When thinking about working with underserved individuals, our first reaction is to hit the streets and meet the teens in the places they inhabit. But upon reflection and research, encountering the teens on the street is neither safe for them nor the researcher/system designer [10]. Instead, we will partner with different established organizations in Greater Phoenix, which are already servicing the homeless teen population.

One such organization is Tumbleweed Center for Youth Development (TCYD), whose mission is to serve abused, abandoned, troubled, and neglected youth in the Greater Phoenix community [15]. Arizona State University Department of Theatre and Film already has an existing partnership in place with TCYD, and in speaking with Ashley Hare, the current ASU Artist in

Residence at TCYD, we believe that such a partnership will be possible [Hare, Ashley, personal interview].

The homeless youth who use TCYD's services are concrete thinkers who are interested in activities using photos, video, and writing, and have the mindset that they cannot do anything or cannot complete any given tasks [Hare, Ashley, personal interview]. Our project, with a proposed duration of one year, will provide consistency by meeting on regular days and times.

We will use TCYD's Flip Cameras since the homeless teens are already familiar with the technology and have an established system for check out and return of the cameras. By trusting them with the technology and not assuming they will sell it and never return, we establish a sense of responsibility and trust. Our activities will be designed to be completed in the allotted 2-4 hour blocks that we will be at the center on each day. The directives are designed to build accomplishment and a sense of self-worth.

Proposed Project, System, and Exhibition

In the first few sessions with the homeless teens, we will ask simple demographic questions, which will remain completely anonymous. Then, the homeless teens will be given Flip cameras and asked to create media that includes photographs, videos, audio samples, and written or mediated stories about places in Phoenix where they hangout, eat, sleep, use the bathroom, and use electricity. Once the homeless teens collect the data, we will review each piece of media that they create with them. We will gain consent for the use their data in the final exhibit. If they want, they will be provided an opportunity to edit their media. The only person who will alter the content in anyway is the person who created it.

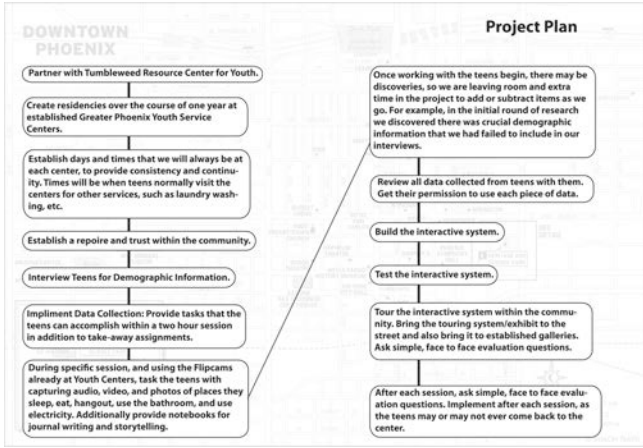

Figure 1. Project Plan and Timeline.

The touring exhibit will be housed in a portable, pop-up tent. The media and the demographic data will be geo-tagged and placed on an interactive map. The map will be projected onto the floor and the audience will be able to navigate it in an embodied manner, by using sensors to trigger where on the map they are standing.

By making the user-interface embodied, it allows the audience to experience the locations, how they relate to each other, and how they are used by the homeless teens. We created a prototype system using a wii remote to stand-in as the interactive tool to navigate the data on the map.

Figure 2. Sample screenshots of prototype system map.

Sample Data Set

Our sample demographics set was created based on newspaper articles, promotional videos for Phoenix area homeless shelters, research papers, and an interview with a Resident Artist at Tumbleweed Center for Youth Development. The sample data set includes fifteen example respondents.

The sample media data set was created by using existing images, videos, audio, and stories of homeless teens, which were found online. These were supplemented with additional media that I took on the streets of Tempe, AZ where homeless teens are known to hangout. The data was linked to a location on the map and also to the ID of a sample user in order to create demographic information about each location.

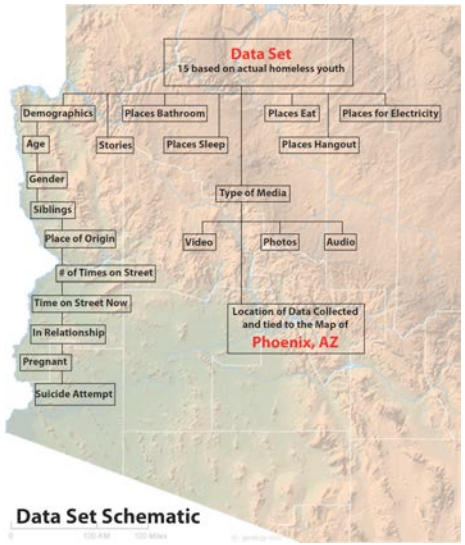

Figure 3. Data Set Schematic.

Evaluation System

Since we cannot assume that any given teen we come into contact with will return to Tumbleweed Center for Youth Development again, our evaluation system is designed for short, in person interviews with simple, direct questions to be asked whenever we encounter the teens.

Multi-Step Evaluation System:
After Activity: How was the experience? Would you do it again? What would you change? What did you learn? Do you think you told a story?

At the Exhibit: How was the experience? What would you change? Did you contribute media? Did you understand how to work the system? Do you think the

use of your data was accurate/fair? What did you learn about other people in your community? Was a story told?

Post Exhibit: In case teens do not attend the exhibit, we will return to the center for a wrap up session, at which we will ask the same questions as we did at the exhibit.

Scope/Growth

After participation in the project, the homeless teens will hopefully have gained simple media capture and manipulation skills, storytelling skills, a sense of accomplishment, a feeling of trust between each other, the audience and the visiting artists, an opportunity to express themselves, and most importantly inclusion in society by creating an art installation.

Looking beyond the tour of the installation to local Phoenix homeless teen hangouts and a local gallery, the exhibit could have a life in other galleries or on other streets in various institutions and cities around the country. Using this project as a pilot, the entire process can be repeated with homeless teen populations in different cities. If the project were to grow to include other cities, the map would become more populated with data and ties and connections could begin to be formed.

Building on existing projects, *In Between* has the ability to expand, to include digital traces at each specific location which the teens recorded data [4]. This way the visitors/users of each location has a continued understanding of the many uses that location has, including the ones that may only appear in the shadows when no one is bothering to look.

Conclusion

Having a teenage homeless population live on our streets effects all of our social interactions in these urban spaces. *In Between* is an opportunity for the greater population to learn about marginalized, homeless teens living on the streets of Greater Phoenix, AZ. It provides homeless teens with the ability and skills to interface with digital technology and to tell their stories of how they live in and use our shared urban environment. By showcasing the media created by the homeless teens we legitimize their experiences, give them access to technology, and include them in artistic events that happen within their community. While the scope of the sample project took place over the course of four weeks, a longer duration would be needed to truly implement this system.

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