

The Connec-table: Visualizing Social Information to enable Proximal Interactions between Strangers

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ABSTRACT

In this paper we describe a research prototype, “Connec-table”, designed to facilitate conversation and connection between strangers in a networking situation by providing social information about the people who are immediately present in the physical environment. Visualizing personal information on the public display creates varying layers of interaction sphere around the table. The prototype lowered the social barrier between strangers to begin conversation.

Author Keywords

Interaction design, design planning, prototyping.

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

It's a normal part of modern city life: every day, we encounter hundreds of people we don't know – on the subway, at the market, in the buildings where we work. Though the details are unknown to the casual observer, each of these people have an informational presence defined by their life experiences, interests, thoughts, and feelings. But this information is, of course, invisible to the people they encounter during daily life. In this research, we describe our initial attempts to understand what would happen if such information were available to the observer.

Understandably, such interactions will require a complex interactive system in place, linking information that the user chooses to provide at the public level to information portals embedded in the environment. Information portals activated by the proximity of users will enable them to interact and develop relationships. In this paper, we describe a Wizard of Oz prototype to explore such a system. The research questions we wanted to answer through this prototype are: How would people react to social information portals in a public environment? What kind of proximal interactions

develop when personal information moves from invisible to visible? Would this change the social norms around interaction between strangers in public spaces?

RELATED WORKS

There have been explorations of bringing the information and the physical environment to stimulate conversation as well as building theory around this. SenseTable [5] and Sparks concepts [2] both facilitate salient conversations by linking strangers with similar interests together. McCarthy et al. used public wall displays to create conversation opportunities, and proactive displays that senses and responds to people nearby in an academic conference [4]. In this sphere, Brignull and Rogers [1] as well as Vogel and Balakrishnan [6] describe behavioral observations and frameworks for proximal interactions in public spaces; and Greenberg et al. [3] describe a theoretical frame around the design of proxemic interactions between users and interactive objects.

DESIGN CONSIDERATIONS

We used a physical object (a table) as the information display portal to present the “right information” to stimulate conversation between people who didn't know each other. Information was displayed on the horizontal surface of the “Connec-table” to limit the visibility of the information beyond people immediately present at the table. The size of the table is small enough to allow people around the table to hear each other, and large enough to let people feel comfortable just hanging out. Also, information we choose to display had to be meaningful so that people are able to relate and ideally act on it, but not so personal that people feel uncomfortable sharing it with strangers.

To optimize people's experience of using social information to interact with strangers in the public place, a Wizard of Oz method was adopted. To the participants, it seemed as though their information simply popped up without any immediate opt-in factor, e.g. badging in with RFID tags.

PROTOTYPING

The prototype for Connec-table displayed information about the people who are immediately present around the table at the exact moment when they approached it. It was deployed in the wild at the cocktail reception of the Design

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DIS 2012, June 11-15, 2012, Newcastle, UK.

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Research Conference (DRC) in Chicago. DRC is a premier conference on Design Research and brings together around 250 designers, social scientists, and others. During registration, we asked attendees to participate in our research and had them take an online survey. The survey consisted of five questions that were to be displayed on the table as their personal information, which asked: hobbies/activities, design-related interests, past workplaces, favorite media, and “something unusual about you”. On submitting the survey, the answers were stored in our database and assigned a number. We then put a sticker on the participant's nametag with this number. During cocktail reception, “wizard” used database manager to control whose information gets pushed on the table and whose information gets removed (based on who walks up and who walks away), while team members standing by the table sent the numbers of the participants' nametag via instant messaging.

The Connect-table displays snippets of information of the people standing around the table in the form of “post-its.” Up to six people could share their information at the same time and the post-its were color-coded by person. Participants' names were displayed along the sides of the table in the same color as their “post-its”. We used three pre-set modes of auto-clustering information: random ambient movement, information clustered by person, and information clustered by questions (e.g. all the favorite movies together).

EVALUATION

Out of 83 participants who took our online survey, we had a total of 43 people who approached our table. This number excludes people who serendipitously discovered the table at the reception and joined on the spot. Data was gathered in video clips, photographs, database manager, and exit survey in which we received 26 responses.

Analyzing the “fly on the wall” video recording, five level of interaction spheres (see Figure 1) observed were: 1) looking at the screen of the table from far, 2) standing closer to the table with their eyes on the screen (i.e. passive engagement), 3) interacting with the table by pointing, touching, taking pictures and putting drinks on the table, 4) starting conversations with others, 5) continuing conversations that drifted off to have conversations separately (i.e. active engagement). Although the prototype was located in a relatively empty corner of the main reception hall, users in active engagement spent a lot of time interacting with the table and/or people at the table.

While we expected people to use the information in front of them to start conversations, 75% of the exit survey responses indicate that the conversation was unrelated to the specific information on the table. Instead, they talked about: how cool it is, the mechanism behind the table, how it could do more, and the logic behind the information cluster. One participant mentions “it would be awkward to



Figure 1. Participant interactions at the Connec-table

bring up personal stuff with a stranger, even though it was in print right there!” On the other hand, others said “I talked to one person about a movie he had said was one of his favorites. I had just re-watched the movie.”

CONCLUSION AND FUTURE WORKS

Connec-table prototype enables to lower social barriers, and served as a means to make people feel open to connecting with others. While we focused on the very specific context of a conference, the idea of displaying personal information in public places is widely applicable.

What might happen if our interface supported deeper interaction with the information? What if users were able to manipulate the information on the table – finding patterns or passing information to others, for example? Would these changes enhance connections between users, or remove the awe element? In public spaces, privacy is also a big concern and additional research is required to understand what is viable, feasible, and desirable for such installations.

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