DESIGNING AN INTERACTIVE SYSTEM FOR SHARING WITH NEIGHBORS IN COMMUNITY: ACCEPTANCE AND CONCERNS

Social Mobile Investigation

Lei Lei Vong

Introduction

- With the increase of settlements from villages to towns and cities, the relationship between neighbors became alienated.
- A good relationship with neighbors can be beneficial for the residents to build a sense of community and perceive social support.
- Resource sharing is one of the examples that enhance people community involvement through exchanging items and information in a neighborhood.
- A variety of applications have been developed for people to exchange things in order to improve their community involvement. However, little research has been conducted to examine human concerns and acceptance when designing such social application.
- The aim of this paper is to investigate human concerns about an interactive system for sharing with neighbors in community, as well as the factors that influence the acceptance of the system.

Background

- Foth [1] indicated that **privacy, identity and sense of belonging, and diversity** are the factors that people might concern.
- Foth [1] found that the majority of residents trusted their neighbors (even if they don't know them) and are **willing to share their personal information** on the online platform such as name, phone numbers, e-mail.
- The identity and sense of belonging are from the feeling of being connected to friend group, rather than from the feeling of being co-located at the same place [1].
- The interactive system should allow the residents who have different interests and needs to find and form a specific social community [1].
- The factors that influence people's willingness for shariing knowledge with others included its **cost, perceived benefits, the system of incentive, motivation, social capital and social cognition** [2-3].

Methodology

Participants

- The participants were recruited randomly from the University of Queensland:
  - Six female and four male
  - Age of participants ranged from 20 to 31
  - Live in different suburbs of Brisbane
  - Half of participants are living alone
- Apartment dwellers
- More than five years experience with the use of social networking application

Prototype

- A interactive system called ShareTown were used to to investigate people's attitudes regarding their acceptance and concerns about the system.
- ShareTown is a social and mobile platform created to help people who live in high-density housing, such as apartments and units, to share resources with their neighbors to boost the neighborhood relationship.
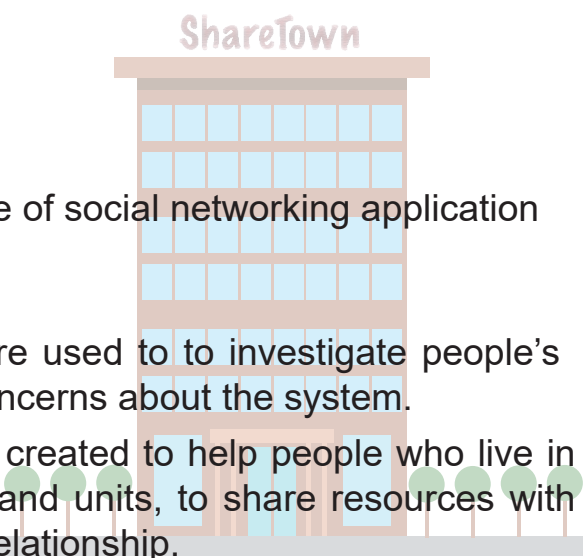
Semi-structured Interview

- Conducted when finished exploring the system
- Interviews lasted 15-20 minutes
- Sample questions:
  - What information do you like to share with neighbors in this system?
  - How much are you willing to share information with neighbors in system?
  - Imagine you share a pizza in this system, and one of your neighbors use the system to contact you, what will you do?
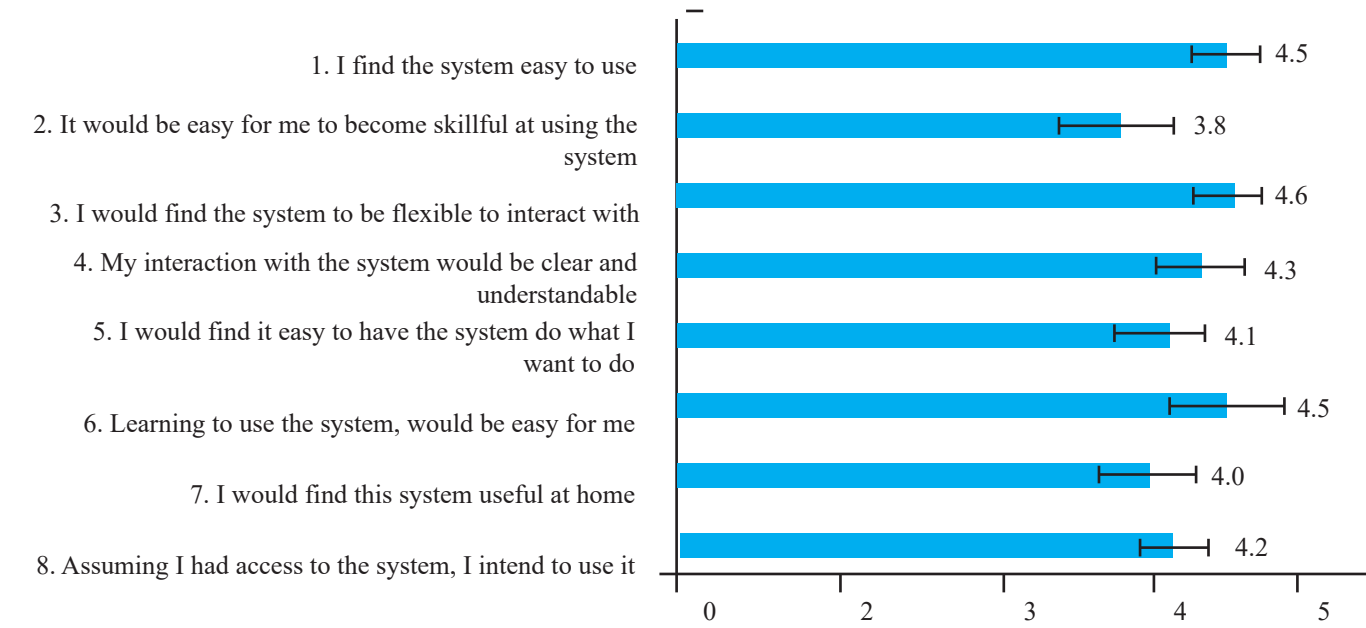 - To what extent do you trust the information displayed on the system?

Questionnaire

- A questionnaire included eight items was designed for the participants regarding the acceptance of the system.
- After the participants finished the semi-structured interviews, they were invited to fill the questionnaire

Findings

The Acceptance of the System

	Value
1. I find the system easy to use	4.5
2. It would be easy for me to become skillful at using the system	3.8
3. I would find the system to be flexible to interact with	4.6
4. My interaction with the system would be clear and understandable	4.3
5. I would find it easy to have the system do what I want to do	4.1
6. Learning to use the system, would be easy for me	4.5
7. I would find this system useful at home	4.0
8. Assuming I had access to the system, I intend to use it	4.2

The Concerns about the System

- **Privacy.** Some participants worried about their privacy space (including personal information) would not be controlled by them.
  "I would like to borrow items through the system, but I don't want to leave my name here." "It seems like I am monitored by someone." "I don't want my personal information to expose to the strangers."

- **Safety.** Some participants will not share items with their neighbors due to safety consideration.
  "I think I would only lend or share items with someone who I already know in the physical world. It is so dangerous that I open the doors for the strangers."

- **The cost of items.** The cost of items might influence whether people are willing to share resources. The participants would like to share nonexpendable items such as kitchen tools, home improvement tools, stationeries, etc.

Discussion and Conclusion

- The overall acceptance of the system is positive. People were willing to use the system and perceived usefulness and ease of use when they were using it.
- Consistent with the previous study [1], the main concern of the system use is privacy, which causes people worried about their privacy space (including personal information) are uncontrollable.
- As half of the participants are living alone, the safety problem would be raised and might also cause them unwilling to share resource to others. However, the information sharing would not be influenced by safety concern because it doesn't need people leaving their home.
- The concern of cost is conformed to the findings from the previous research [2-3].
- The limitation of this study is lack of consideration of participants' living status. This variable might influence the factors affected (e.g., safety) by people. The future work will separate participants into two groups to analyze what the difference of human concerns among people live alone and live with someone else.

Reference

[1]   M. Foth. 2006. Analyzing the factors influencing the successful design and uptake of interactive systems to support social networks in urban neighborhoods. *Human Computer Interaction:* 589–604. http://doi.org/10.4018/978-1-87828-991-9.ch039

[2]   Gee W. Bock and Young-Gul Kim. 2002. Breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing. *Information Resource Management* 15, 2: 14–21. http://doi.org/10.4018/irmj.2002040102 Gee W. Bock, Robert W. Zmud, Young-Gul. Kim, and

[3]   Jae-Nam Lee. 2005. Behavioral intention information in knowledge sharing: examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS Quarterly* 29, 1: 87–111