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Abstract

Many design firms within fast-paced environment would easily ignore the importance of user-centered design mainly because of their limit of time and access to users. This thesis would try to propose a new way of finding right user sample groups and establish a framework that enable designers to reach their target users quickly and easily. By searching keywords and adding features of users’ information, designers can easily reach their target users in regardless of their limitations. On the other hand, users can create their personal profiles, receive fresh design ideas and new design product rewards if they attend user tests. Both users and designers can bring in information to the pool and take away what they find useful. Therefore, it is called a content management system with collaborative components.

Key words

Web-based, Persona Circles, collaborative, user-experience test
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# Table of Content

**Chapter 1 Introduction of thesis** ................................................................. 1

1.1 Introduction- Current situations in Chinese Design firms ........................................ 1

1.2 Thesis objectives .................................................................................................. 3

1.3 Thesis contributions ............................................................................................ 4

1.4 Thesis overview ................................................................................................... 5

**Chapter 2 Usability and user experience testing** ............................................... 7

2.1 Usability is essential to product success ............................................................... 7

2.2 Methods for user testing .................................................................................... 12

2.3 User testing methods are out of reach of small design firms ......................... 16

2.4 Small design firms cannot compete without user research ............................ 19

**Chapter 3. The media of user-designer collaboration** ........................................... 21

3.1 Collect consumer profiles ................................................................................... 21

   3.1.1 *Introduction of PCUI* .................................................................................. 21

   3.1.2 *Introduction of APUI* ................................................................................ 22

   3.1.3 *Benefits of APUI to user researches* ......................................................... 23

3.2 Main concept of this thesis .................................................................................. 25

   3.2.1 *Introduction of Persona Circles* ............................................................... 25

   3.2.2 *Technique supports for Persona Circles* ............................................... 26

3.3 “e-sight” - the main application of Persona Circles .......................................... 30

3.4 Websites research .............................................................................................. 32

   3.4.1 *Ratings and Reviews on relevant website* .............................................. 32

   3.4.2 *Research on online survey websites* ..................................................... 38

**Chapter 4. The new collaborative model** .......................................................... 41
Chapter 1 Introduction of thesis

1.1 Introduction- Current situations in Chinese Design firms

The idea of this thesis research came from my experience of an internship at a design firm in Shanghai China during the summer of 2011. I was working as a design researcher at the company. Even though the company was small and everybody had a good load of work in hand, they all had very high efficiency - this amazed me a lot. The whole design process was quick and simple: benchmarking, sketching concepts, and then finalizing 3D renderings. All these happened in one week. Then a team leader would evaluate the concepts to determine if they can go further. And this was a complete design cycle.

Conventionally, design firms would show their clients good-looking layouts on research work, but most of which are not practical and useless. However, small design firms like the one above usually care a lot more about reducing cost and increasing efficiency, which are usually based on the good understanding on users and the product itself. This had motivated me with the idea to ease the process of researching users.

When I came back to graduate school, several studios that I attended inspired me even more on the topics of finding consumers’ needs. These studios had taught me different methods of user-centered design, which were ignored by most domestic Chinese design firms that I know of. In the design studios, for example, we would have conversations with groups of people of different background to share insights; we would have home interviews on selected consumers; we would present our concepts to potential users and modify design according to their feedback; we would invite some users to our usability
test, etc. Normally a cycle of user research conducted by these studios would take approximately 10 weeks. Within this period, many detailed users’ background would be studied. Meanwhile, some new bold ideas would be proposed and developed round by round. These researches, which were worked to better understand the product users and hence reduce unsuccessful designs, would definitely benefit the design firms mentioned above. But why didn’t they draw the prospective attention? The reason is quite complicated yet can be categorized into three factors – ignoring the importance of user experience research, small budget, and limited time.

Then I wonder how I can adapt the methods I have learned in classes to those small design firms, with consideration of their limitations. As the data from 2008-2012 “National University Enrollment Book” showed [1], the number of enrolled students who major in design in China increases rapidly year by year. This indicates that more and more designers in China are receiving higher education before stepping into the industry. However design, especially industrial design higher education in China started only twenty to thirty years ago. The systematic education for industrial design is still immature. According to my experience of undergraduate study in China and prior internship, although most designers in the industry nowadays are creative and considerate, their knowledge of design methods stays at a comparably low level. Most of them are unfamiliar with user experience testing methods. This would often lead to the ignorance of user experience research. On the other hand, small design firms desire a better portfolio of their organization in order to bring in more projects. However, instead of putting effort on doing user experience research of a particular project, they would
rather invest less time and money and try to find a faster way of earning. It is understandable that they do not have many investments from stockholder. They may have several projects holding on hands at the same time and have to see the benefits as soon as possible so as to proceed to the next project. The world of those design firms is cruel simply because more projects mean more money. Lily Lin, one of my designer friends who is working as a designer at a small design firm, once said “I would like to do the researches related to users, but we do nothing about users and I feel bored working here.” Moreover, clients of design firms have their own ideas and requirements. Quite a lot of clients I have been in touch with knew little about design. What they love was fancy layouts, big but not that big surprise, and a product to be considered luxury. Usually I would hear from them “We want a unique and new product that can beat our competitors”. Their understanding of “new” and “unique” are closely related to better looking. This significantly discourages the design firms to consider user experience research when thinking about a new product. Instead the design team would concentrate more on layouts and appearances and decrease the effort towards user-related research.

1.2 Thesis objectives

I have asked some designers who were working/had worked at small design firm that whether or not their company does users research. Most of them would give me negative answer. And the mostly mentioned problem was the lack of resources of users. Some designers do not have a large connection net of people. They have tried different ways to invite people to attend their user tests, including distributing leaflets, email invitation, and
newspaper advertising etc. However, few people would be willing to get involved. If those designers can reach their target users faster and easier, the time and cost would not be an obstacle of their design process. Same cases would sometimes happen to small design firms as well. Therefore, the objectives of this thesis would be to work on a framework that would allow individual designers and small design firms to focus more on users during the whole design process within a fast-paced environment.

1.3 Thesis contributions

In the interest of human factor design, combining the experience from practical working environment and observations of daily life, the primary goal of this thesis study is to design and develop a collaborative framework between users and designers/design firms. The target beneficiaries of this study are designers who are either in school or at design firms that would like to concentrate on user-centered design. To summarize, the contributions of this thesis include:

1. Researches on user psychology and existing user experience testing methods; Comparison of different content management systems (CMS); Surveys on consumers’ web browser preferences and preferred popular applications.

2. Design and create a framework to showcase the improvements and benefits that this thesis can provide to current fast-paced environment.
1.4 Thesis overview

Chapter 2 firstly introduces unsuccessful designs of portable computer and mobile operating system. By analyzing the examples, we can have a basic idea of the design methods that were used, thus to observe the negligence and avoid the same problem. Based on the conclusion of example, the topic will then emphasize on users’ information collecting. How to collect user information and how to deal with the collected information is the body of this chapter. In the end of the chapter, some case studies and the general methods on user test will be discussed.

In Chapter 3, the primary concept of this thesis will be introduced. By proposing the concept of Persona Circles, an information pool is intended to be established. The information pool, Persona Circles, can enable both designers and users to reach each other faster and more conveniently. A web-based collaborative system is a new idea that is never used in general content management system (CMS). Several surveys on user preferences and non-competitive benchmarking conducted during thesis process research will be discussed later in this chapter.

Chapter 4 includes the development of the main application of my concept, marketing research on how to attract users, and the detailed website map. Users’ loyalty is the aorta of a product. There will be further discussion on marketing sides in this chapter to ensure that people would accept and use this system. The second part of Chapter 4 will be a showcase of the website. The process and benefits of this system will be disserted.
Finally, Chapter 5 concludes this thesis and gives the outline of future work.
Chapter 2 Usability and user experience testing

2.1 Usability is essential to product success

Just as Jan Carlzon, the former dynamic president and CEO of Scandinavian Airlines proposed in his book *Moment of Truth* [2]:

“*As SAS we used to think of ourselves as the sum total of our aircraft, our maintenance bases, our offices, and our administrative procedures. But if you ask our customers about SAS, they won't tell you about our planes or our offices or the way we finance our capital investments. Instead, they'll talk about their experiences with the people at SAS. SAS is not a collection of material assets but the quality of the contact between an individual customer and the SAS employees who serve the customer directly (or, as we refer to them, our "front line").*

*Last year, each of our 10 million customers came in contact with approximately five SAS employees, and this contact lasted an average of 15 seconds each time. Thus, SAS is "created" 50 million times a year, 15 seconds at a time. These 50 million "moments of truth" are the moments that ultimately determine whether SAS will succeed or fail as a company. They are the moments when we must prove to our customers that SAS is their best alternative.”*

The concept of Moment of Truth (MOT) describes the moments that ultimately determine whether a company will succeed or not, the moments that a company must prove to...
customers that this company is their best alternative. For those companies who sell service (like SAS), first-line employees are the base of a company’s pyramid. Those employees directly deal with customers and to a large extent will affect the corporation’s public impressions. Thus we can say that every time the company’s representatives talk to customers, it is a MOT. For design firms, concepts and products are considered to be their trademark. Therefore every time their product is used by consumers, it is a MOT. For instance, consumers will have moment of truth at least twice a day in terms of them using tooth brush and tooth paste, several one-minute of using a microwave, numerous times using their cell phone, up to 8 hours sitting in a chair or using their computer, and etc. These products, which consumers closely relate to (or rely on) in daily life, appear to be normal items. But from the point of view of one product (or the company that makes that product), every time the item is used is a precious moment – it can determine a company’s future, if not so exaggerated.

Regarding how to capture the MOT of their products, the Apple Inc has some “good” unsuccessful cases to study. For example, the Macintosh Portable that was released in 1989 has been described as a representative “bad” design of Apple. In effect, it was even picked by PCWorld to be one of “The 25 Worst Tech Products of All Time” in 2006. Macintosh Portable (Figure 1) was the first personal computer that proposed the concept of portable. Despite all the publicity and the improvements on display screen, the sales achievement of Macintosh Portable was far from satisfactory only because it was too heavy. Users were frightened by the 16-lb “portable” weight. Macintosh Portable was soon replaced by other newer models and faded from the market. Although it was the
very first portable computer that Apple has announced, it did not catch the principle of portable – lightweight. Users did not need a portable computer, which they were not able to carry with, even if it would have had a retina screen.

Figure 1, Macintosh Portable by Apple Inc

On the other hand, users do not expect a perfect product as well. Still take the Apple for example. Their i-series products have so far gained a large popularity around the world. According to a recent survey by Forrester [3] targeting to global market (Figure 2&3), one in five people from IT industry owns one or more Apple products. Meanwhile, the number for IT support to MAC personal computers is significant and rising. Why are there so many people inclined to choose Apple’s products nowadays compared to the end of last century? Is it because they hire more renowned and talented designers and businessmen? But it seems their competitors do the same thing. Is it because they have better quality of their products? A known fact is that they also have a lot of problems that annoy worldwide users. The newly released Maps App for iOS may be an example for this. Even in an open letter from Apple’s CEO Tim Cook, he apologized for the Maps App: “With the launch of our new Maps last week, we fell short on this commitment. We
are extremely sorry for the frustration this has caused our customers and we are doing everything we can to make Maps better.” Then why does Apple receive a better public praise nowadays?

Globally, one in five info workers use one or more Apple devices for work.

More senior, higher paid, and younger workers are more likely to use Apple devices for work.

Figure 2, Visualized results for survey by Forrester

IT support for Apple Mac personal computers is significant and rising.

In 2011, IT decision-makers forecast a 52% increase in the number of Macs they will issue in 2012.

In companies that issue Macs, 7% of all personal computers issued are Macs.

Figure 3, Visualized results for survey by Forrester
Before seeking for the answer, let’s look at a story happened to one of my friends. It was about himself, his mother and his mother’s smart phone. He lives in the US and his mother is in China. She wanted to chat with him using an IM program in her cell phone, but she did not know how to download an application. She was using an Android system for HTC. My friend first told her to enter the HTC official market to download the application. She found it but could not download because she did not have a Google or HTC account. The registration was too complicated even for young people sometimes, no question it was quite apart from an old lady with her presbyopia lenses. They soon gave it up and changed to download the application from web browser. The other problem emerged that Android system could be installed with various web browsers and markets. She did not know which one to choose. After an hour talking over the phone, they got half the result with twice the effort. What he told me last made me think for a while: “Android system is terrible, if it was Apple, things will be much easier!”

Is iOS really better than Android without doubt? Does Apple exactly work well under all circumstances? It is improbable that the fact will be the same as my friend’s opinion. As a designer, almost all of my designer friends are big Apple fans. The complaint about Apple’s hardware and software are not rare to every Apple user. Apple’s post-purchase service is not fully up to expectations either. There comes something interesting that we may look deeper in another paper: people complain about a product but keep using it and love it. In my opinion, put asides the comparison between Android’s patch management system and iOS’s vertical management system, a portion of Apple’s big success came from their exact user experience research. Apple first proposed the concept of simplifying
users’ operation and they actually implement the concept in their design. Android system does have more compatibility than iOS, but domestic consumers can benefit few from this advantage. People use Apple product not only because their products are better than their competitor’s, but also because they are used to the convenient way to operate a mobile system that Apple has created. Once the users get used to a certain kind of system, they are hardly willing to accept a replacement with little improvement but more complexity. Therefore, doing user experience research is a practical issue, but not just whittled away to nothing. Those who can grasp the opportunities and set the priority from user experience test will gain the loyalty of users. I believe this is what Apple failed to do for the Macintosh Portable but did successfully for the iOS products: design from user experience.

2.2 Methods for user testing

Back in undergraduate years, I was always wondering if there could be a systematical knowledge database of general design methods, which can be used to guide young designers for their professional developing. Hence I intentionally focused myself on the research of design methods. However, when I started researching various design methods, I was confused. Although different methods seemed to be reasonable and they were proved to be working during design process, I still was not sure how to adopt them into my own design process. As a result, most of my user experience researches were vacuous and poor. And the professors would seem to be hard to accept the results. As mentioned in Chapter 1, many small design firms in China, even some professional
designers would care more on the appearance and fancy layouts of products. **Confused by my own experience and faced with the practical truth, I decided to go further at graduate school to seek what I can do in my career life, other than sketching and rendering to satisfy clients’ “bias” requirements.**

There was no a specific curriculum called “design methods learning” at graduate school. I learned and concluded the methods from projects and researches I have been involved in. Different graduate schools will probably use different methods. But the general user-centered design research methods I have learned from graduate school can be concluded as three.

The first one is Questionnaire. “In market research the term ‘questionnaire’ is used to refer both to questionnaires intended for self-completion by survey participants and to survey instruments intended to be administered by an interviewer, either in a face-to-face interview or by telephone. In other disciplines, this is often referred to as an interview schedule, with the term questionnaire reserved for the self-completion survey instrument.”[4] In a class, we were assigned to conduct an experiment to test the subjects’ reactions toward patterns. Designing the questionnaire for subjects is a very interesting process. The process often includes 1) proposing a hypothesis; 2) designing the patterns related to the hypothesis; 3) properly writing the instruction for subjects; 4) searching and finding subjects who are willing to attend (all the subjects I found were willing to help because the survey did not come down to privacy and it only included single choice questions); 5) administer the Questionnaire; and 6) finally analyzing and visualizing the
results. Some students would get the opposite results against their hypothesis. Some others, however, would get the supporting ones. It is important that whatever the results were, we learned the method and went through the procedure of this method. Sometimes it is a hundred times better to actually do than to hear and observe from other’s experience.

A popular way to do Questionnaire nowadays is online surveys. There are some web-based software that would provide free access to some services of their online survey system. Designers are more familiar with SurveyMonkey while business people would use Qualtrics more. Software like SurveyMonkey and Qualtrics is an extended form of questionnaire that is based on the Internet and can be easily spread to target users. I will discuss the detail of them later in the websites researches in Chapter 3.

The second design method would be Focus Group. “A focus group isn’t just getting a bunch of people together to talk. A focus group is a special type of group in terms of purpose, size, composition and procedures. The purpose of conducting a focus group is to listen and gather information. It is a way to better understand how people feel or think about an issue, product or service. Focus groups are used to gather opinions.”[5] In a studio I have attended, the target user was set as North America’s baby boomers. Then there would be a group of baby boomers coming to the studio to join as a part of the project. This group of people would run through the whole design process. They were invited to the studio at the beginning to get familiar with students. Then students could visit and interview them (the target consumers) at home and go shopping with them to
observe consumer behavior. Finally the focus group would attend the concept evaluation round and give their insights.

Usability testing is the third one. When I refer to usability testing here, I mean it is “the activity that focuses on observing users working with a product, performing tasks that are real and meaningful to them.”[6] I have conducted a usability testing for the young generations. The process before the testing included: 1) brainstorm the topic and forms of testing; 2) make plans for the process of testing; 3) prepare for the testing (including invite people to the test, prepare for the devices and products, reserve locations and etc.). Luckily I can find a lot of students and young professionals willing to attend near the university. During the test, I firstly gave subjects some instructions. Then I would let them test use the products and observe their behaviors, take photos of them interacting with products, and talk with them in case that fresh ideas would go away. The main purpose for me to do usability testing is to eliminate the gap between me as a designer and the users. From usability testing, the ideas from users prospective could be collected. It is important to do usability testing because sometimes only designers would understand the “design codes”. And if this “design codes” appear in a product, users would find it difficult to use. For example, my boyfriend cannot understand the interface of a self-service ticket machine at one of Vancouver Skytrain station while I think the design language of it is clear. We have the same education level and I’m not smarter than him. The problem is that designers are often more familiar with the “design codes” than normal users are. Usability testing can help designers to clearly observe the reaction of users and “decode” the design for majority users.
2.3 User testing methods are out of reach of small design firms

Like discussed in the previous section, there are many good design methods out there. And more and more designers are aware of the importance of user experience research. Many companies have been benefited a lot from their user experience research. Then why those small design firms are still unable to take advantage of the benefits of user experience research? In Chapter 1, I have pointed out that the reasons are quite complicated yet can be categorized into three factors – ignoring the importance of user experience research, small budget, and limited time. These three factors are the main cause of the isolation, and thus make the user testing methods out of reach of small design firms.

While it is relatively hard to convince them (many small design firms) about the importance of user experience research, it is not too difficult to find a convenient and less expensive way to do user experience research. If every design firm could do the research fast and efficiently, they would surely realize the importance of this research after tasting the “candy in the box”. That is the new access to getting a taste of good consumer research data.

However, there is one crucial problem I found during my research. Although the design methods do have a lot of successful applications in real commercial cases, there is one interesting phenomenon. When doing researches on these methods, I found that almost all the descriptions or introductions of user experience methods had ignored the topics on how to access to target users. The methods are useful, but designers and small design
firms encounter a barrier when they try to find someone to proceed with the advance process of those design methods. Surely they can invite people by paying them a certain amount of cash, but most small design firms do not have a large social network of people. They do not have much time to spend on searching for target users.

There is also another problem that came from what I have experienced in focus group study. The problem is that designers must keep in mind that a designer does not serve one single consumer. To please the majority of users is our goal. Sometimes when a designer who is not familiar with user testing does the user study, he/she usually would invite the convenience sample group to attend (convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher [7]). The results from a convenience sampling group would easily mislead beginners to put a lot of emphasis on partial user’s insight and to make decisions arbitrarily. I have one example from a previous studio. We were designing the package for toothpaste for a client. After one of our guest consumers said that she wanted one she can use in one hand, we had a class discussion about one-hand designs. Then I started to sketch toothpaste-packaging design similar to Figure 4 (a new package design from SENSODYNE). Users can easily press the top of the bottle to squeeze out the toothpaste. After the usability test, they said it was OK to use. Six months later, I happened to buy the toothpaste in Figure 4 from a supermarket. The experience of using it can be described as terrible. Some toothpaste would slowly come out of the top opening every time after using it. Thus there is always a layer of slime covering the bottle and the bottle becomes not clean at all as we think it would be.
Thus we can see a truly good user-centered design is more than simply arranging surveys, conducting conversations and interviews with users, and making users’ behavior observations. Sometimes we may need to stand at a user’s point of view to discover the problem. But again the key is to reach out to users. And it would be better to keep in touch with users for a certain length of time. Right user sample groups would be in need at this point as well. If small design firms or individual designers have the access to normal users, then they would be able to measure a product and research on the main purchasing group after it has been released.

Figure 4, SENSODYNE toothpaste package
2.4 Small design firms cannot compete without user research

Some small design firms may have a question that why they should test user experience if they can earn money faster by following their own efficient process of design. Charles L. Mauro, CHFP, president of MauroNewMedia has presented recently on New York Technology Council’s series about user experience design and given his answers [8].

Why should we test user experience?

- Reduce risk
- Identify opportunities
- Set priorities
- Improve probabilities of success

In short, small design firms would not be able to compete against those companies putting more emphasis on user experience researches for three reasons. First, without studying user experience, small design firms would concentrate more on fancy looking and ignore the product’s function and usability. As those examples in the prior section of this chapter showed, normal users would not pay for a good-looking product that is uncomfortable to use. Ignoring the user experience testing would increase the risk of investing more and benefiting far less. Sometimes this would be a crushing blow to a small firm. Second, small design firms cannot compete if they do not have a reasonable portfolio of their products. Clients would compare several firms about their capabilities through their design products and related researches. Small design firms’ proposal without user experience researches sounds pale when they try to attract new clients. There was once I attended an introduction presentation to a client by a small design firm in China. When they tried to describe a kitchen device using the form of the traditional
four Chinese spiritual creatures (Dragon, Red Bird, White Tiger, and Tortoise [9]), an audience asked that how they thought the design would benefit users. No one from the company could answer the question. The result was apparently that the firm lost the opportunity. Third, small design firms that do not spend time and money on user related researches would limit the intelligence of designers. Designers in small design firms who want to do user experience testing would have to find convenience sampling as their subjects. These would lead to a misunderstanding and affect the results of design concepts. It would also affect their final proposals and decrease the competitiveness of the design firm.

Key sentences of each section in chapter 2

- Usability testing is essential to good product design;
- An innovative concept together with a joint connection with actual product will be closer to success;
- There are plenty of existing systems of design methods that we can utilize;
- But the methods are out of reach of the design firms that are lack of access to a large pool of subjects.
Chapter 3. The media of user-designer collaboration

3.1 Collect consumer profiles

3.1.1 Introduction of PCUI

Good user experiences build loyalty among users. Since the majority of designers and researchers have reached the agreement on the importance of user experience, the study of users should be discussed further. Normally, the methods used by design firms or individual designers to collect users’ information are no more than kindly asking for, which I call it Passive Collected User Information (PCUI, figure 5). The definition for Passive Collected User Information is such that, from the perspective of a user, his/her insight is passively collected by a designer (by being asked some questions). The means to collect PCUI that designers usually use now vary from leaflets surveys, online surveys, email invitations, and friends’ and relatives’ point of views. The survey initiator arranges and raises several questions related to the product they are developing. The subjects react to the surveys. The survey initiator receives the reaction and analyzes them. From PCUI, the users’ insights and reaction to some certain products will be extracted. There is a truth that usually designers and design firms can only find a small sample group in their design process. And sometimes users from these small sample groups do not actively help with the research.
3.1.2 Introduction of APUI

Design firms do not have too much time or money to spend on inviting users for surveys. Therefore a low cost way to encourage users to actively provide insights is desired. Active Provided User Information (APUI: figure 6) would help small design firms with their limitations. By definition, Active Provided User Information is the information that users initiatively provide to designers, without being asked any question. From this definition, we can see that almost everything that naturally comes out from a user can be APUI. For instance, a conversation between two friends regarding iPhone, or an online post of a person about his opinion on a new released Nokia cell phone. With the access to APUI, Small design firms would not need to spend much time and money on searching for the right users for their user experience research. All they need to do is to “grab” all the information that is already out there.
For a detailed example of APUI, let’s take a look at the social network website Facebook. Active Facebook users would often upload daily life pictures, comment on friends’ latest status and news, and share their fresh thoughts on their personal homepage. With all these online activities, many companies including Facebook itself have discovered the benefits of a new marketing methods created by social network – an evolved precise marketing in information age. I will discuss the detailed marketing advantage of Facebook later in Chapter 4. The same good examples are Twitter and Weibo (a Twitter-like website based in China). From what people have posted in their tweets, we can sometimes have quite a comprehensive idea of their attitudes towards value and life.

3.1.3 Benefits of APUI to user researches

Specific to the APUI for design process, what if we can find a way to collect all the relative opinions that people have made on a product or a service that they are familiar with on their personal profile page? If people would share their insights not because they are asked to do so (PCUI), but because they would like to (APUI), it would be easier for designers to catch the most natural response. Before further discussion I would like to
clarify that, in this thesis, there is no specific statement saying that APUI is better than PCUI in user researches. PCUI is one of the kinds of information we would know about the right users in depth. APUI in this thesis is mainly used for targeting the right users.

Sharon L. Lohr wrote in her book “Sampling: Design and Analysis” [10] that a good sample will be as free from selection bias as possible. “Selection bias occurs when some part of the target population is not in the sampled population, or, more generally, when some population units are sampled at a different rate than intended by the investigator.” And he point out several ways in which selection bias may occur such as a sample of convenience [7] and a judgment sample [11]. Sample selection is important to user experience testing because the samples would have great effort on the result of a user research and finally would affect the design concepts. Design firms need a fast way to find the right users and hear the real insights. PCUI comes from the sample groups that were selected by human, but APUI is collected and classified by computer programs and thus eliminates the selection bias of sample groups. A certain place that designers can receive APUI from the right sample group may help them quickly and accurately collect the information they need.
3.2 Main concept of this thesis

3.2.1 Introduction of Persona Circles

“A persona (plural personae or personas), in the word's everyday usage, is a social role or a character played by an actor. The word is derived from Latin, where it originally referred to a theatrical mask.

In the study of communication, persona is a term given to describe the versions of self that all individuals possess. Behaviors are selected according to the desired impression an individual wishes to create when interacting with other people. A person may inhabit various social roles through intentional or unintentional expression of behaviors and appearances that convey meanings maintaining these roles during social interactions. Therefore, the persona one presents to other people varies according to the social environment the person is engaged with. In particular, the persona presented before others will differ from the persona an individual will present when he/she happens to be alone.” [12]

Most designers are familiar with setting a persona at the beginning of a design process. Personas are one or several characters that designers create when user research is needed. Each persona has a name, information of sex, age, job title, hometown, education, and etc. The background information helps designers to easily analyze their target user. Borrowing the idea from persona, I would like to introduce a new form of group of personas, which I named it Persona Circles.
Personas in former design process are usually the combination of a real model and an image designer set. Persona Circles is a concept that has real users being classified by their profile information. A basic data mining method would be used to search for users and categorize them into different Persona Circles (groups) predefined by designers (such as based on interests, age, or education level).

Assuming that I successfully encourage a large group of people to actively provide their information, and then I would have a large pool of user profiles, or personas. All the information users have provided will be automatically sorted into different circles. Different users can be put in the same circle if they have one or more similar profiles. These persona circles are dynamic groups of users in the database that will be changed as needed by designers. For example, if a design firm has a new project of designing a coffee maker for the young generation, they can search the keywords such as “young generation” and “coffee lover” for targeted personas. Then the system will scan through the information pool and find users with corresponding backgrounds. By analyzing users’ daily activities in the system using data mining techniques, the system would help designers discover additional stories of these young people. Designers can go further after they have found out the right users they are looking for. They can contact those people and invite them to surveys, interviews or usability tests.

3.2.2 Technique supports for Persona Circles

Due to the “grouping” nature of Persona Circles, in data mining, I can use the method of cluster analysis. Cluster analysis aims to partition samples into several clusters, where
each cluster has its mean $\mu$, with several samples associated with it. Taking the
following demonstration as examples, I would like to introduce the basic idea. Suppose I
have five users listed in the table:

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Age</th>
<th>Hometown</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>User 1</td>
<td>Female</td>
<td>23</td>
<td>Japan</td>
<td>Bachelor</td>
</tr>
<tr>
<td>User 2</td>
<td>Male</td>
<td>25</td>
<td>China</td>
<td>Master</td>
</tr>
<tr>
<td>User 3</td>
<td>Male</td>
<td>36</td>
<td>USA</td>
<td>Bachelor</td>
</tr>
<tr>
<td>User 4</td>
<td>Male</td>
<td>76</td>
<td>Germany</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>User 5</td>
<td>Female</td>
<td>43</td>
<td>China</td>
<td>Ph.D.</td>
</tr>
</tbody>
</table>

If I am interested in the sex and age of users, using cluster analysis, I may have a plot as
follows. In this figure, two Persona Circles, green and purple, are created which
illustrates that young ages are the majority of my users.
Following the above example, besides sex and age, I am now interested in education as well. Similar to the previous analyze, I can have another figure with two new Persona Circles. The green Persona Circle represents young people with lower degrees while the red one represents older with higher education.
Therefore, inspired by the k-means clustering method in data mining, I define the following method to create Persona Circles:

Given a group of users $x_1, x_2, \ldots, x_n$, where each user $x_i$ is actually a d-dimensional feature collection like age, sex, and education background etc. We can use the k-means clustering method to partition the n users into k Persona Circles $(k \leq n)$ $C = C_1, C_2, \ldots, C_k$ so as to minimize the within-cluster sum of squares (WCSS):

$$\arg\min_C \sum_{i=1}^{k} \sum_{x_j \in C_i} \|x_j - \mu_i\|^2$$
Where $\mu_i$ is the center of each Persona Circle. By doing cluster analysis, we are able to create a series of pre-computed Persona Circles so that each new user can be quickly classified into a Persona Circle by using the distance to each center $\mu_i$. The major issue in creating the Persona Circles is the features, which should be collected from different users. Nowadays, one of the popular methods is the use of social networks and content management.

3.3 “e-sight”- the main application of Persona Circles

After the introduction of Persona Circles, I would like to introduce the main application of the concept proposed by this thesis – e-sight. “e-sight” possesses two major features:

1. It is a Web-based Content Management System (WCMS), which allows design firms to focus more on users during the whole design process within a fast-paced environment.
2. It is more than just a WCMS – it builds its own colony, analyzes it, and takes advantage of dynamically circling into proper groups. It is a large information pool for both designers and users.

In the Computer Science literature [13], a CMS is a system that provides a collection of procedures to manage workflow in a collaborative environment. Multiple users of the system can interact with and control access to data through a predefined and/or programmed common interface. Serving as a central repository, a CMS is used for storing, controlling, revising, and publishing contents. As Johnston mentioned in his article [14], a Web-based CMS, or WCMS, is designed to provide each organization with a means of putting contents online. A WCMS is a software system that provides web
authoring, collaboration, and administration. Users with little or even no knowledge of web programming languages or markup languages should be able to create and/or manage contents with relative ease.

A WCMS typically has, but not limited to, the following features:

- **Access control.** User groups control how registered users interact with the system. Pages or functions can be restricted to one or more groups on the website.
- **Expansion and extension.** Modern WCMS has the ability to expand a single implementation or adds extension to the current system, depending on the server settings.
- **Easy access.** Once the content is separated from the visual presentation of the site, it can be easily and quickly edited.
- **Work-flow management.** Work-flow is the process of creating sequential and parallel tasks in a WCMS.
- **Collaboration.** Contents in a WCMS can be retrieved, reviewed, and worked on by one or many authorized users.

A minimum WCMS should contain a storage layer, an execution layer, and a presentation layer. The storage layer is usually referred to a Database Management System (DBMS). A DBMS is an organized collection of data, which are typically modeled to reflect relevant aspects of reality. For example, in “e-sight”, we may have lists of design firms, designers, and users. For each firm, we may have its products and for each user, we may have his/her preferences. The execution layer is a set of instructions or programs that
actually do the tasks. Simple tasks could be fetching user information from the DBMS or listing the products of a design firm while more difficult tasks might be analyzing historical behaviors of users to match the requirements of designers. Finally, the presentation layer involves displaying the content to modern web technologies.

“e-sight”, designed as a WCMS in mind, benefits the management, collaboration, and easy access properties. Like in Facebook, design firms, designers, and users are able to publish, edit, and modify content in a centralized system. Moreover, “e-sight” focuses more on analyzing the contents and organizing users into dynamic circles with respect to requirements such as young generation and coffee lover.

3.4 Websites research

This section will explain the reason why e-sight is different from those rating and reviewing websites and web-based software that are used to help conducting online surveys.

3.4.1 Ratings and Reviews on relevant website

During my thesis research process, the most asked question was what the differences are between my framework and those rating and reviewing websites, which were already professional and well designed. There are quite a lot existing websites that provide the functionalities of rating and reviewing. Most large online shopping systems would also
have a specific section for their customers to review and rate the products. I would analyze three parallel examples and thus we can see the differences clearly.

The first one is ConsumerReports.org. ConsumerReports.org website origins from the magazine format, which is popular among the elder American generations.

*Consumer Reports is an American magazine published monthly by Consumers Union since 1936. It publishes reviews and comparisons of consumer products and services based on reporting and results from its in-house testing laboratory and survey research center. It also publishes cleaning and general buying guides.* (Wikipedia).

A good point that can be learned from Consumer Reports is that they do not accept any form of outside advertisements as they want to keep the results as accurate and objective as possible, but problems were still exposed. Consumer Reports started from the magazine version. It provided subscribers guides and tips before they purchasing any goods. The main form of Consumer Reports is still magazine. This may lead to a loss of the majority of younger generation who do not have the habit of purchasing magazines. Although Consumer Reports has an online version now, the first impression was disappointed to some degrees. They always try to sell their magazines. Website visitors would be led to a subscribing page (Figure 9) all the time when they try to view the ratings and reviews. Visitors have to subscribe the Consumer Reports magazine before rating and reading ratings. Though visitors can read reviews for free, most products
reviews were left blank. Besides, the web design is quite complicated. There are too many information at the home page. The classification of products is clear, but to some extend too detailed. Users may feel it hard to start.

The second one is WEDDINGWISE.co.nz (Figure 10). As it was named, the purpose of this website is to help new couples to find, rate and review wedding vendors. WEDDINGWISE.co.nz has the information of vendors with ratings and reviews. Compare to other general rating websites, its objective is stronger. The searching engine in the most highlight part of front page will help visitors quickly reach the service they are interested in. As the main purpose of this website is to search for wedding service vendors, advertisements and competitions are inescapable. Based on the reality in those countries with bad network environment, there would be a large possibility that the
website would be filled by blind competition. The web developer would have to control the content strictly to avoid fake information.

![Find a vendor](image)

*New Zealand's most comprehensive directory of wedding vendors, user reviews, advice, and resources*

*Figure 10, Screen shot of WEDDINGWISE.co.nz website*

The third example I would like to show includes some general rating and review websites such as Review Center and Epinions.com (Figure 11). These general websites are well organized, clear, multi-functional and easy to understand. They also have an easy access to the online stores of the exact product in their rating and review pages.
I have registered a free account in both of these websites and checked the reviews they have gotten from users. The reviews such as “It is a piece of art” or a complicated personal story on a baby seat were quite different from what I have expected (Figure 12). For example, I have seen a user on Epinions.com telling a long story about her husband buying a Kindle Fire for her. Perhaps most viewers would not have the patience to finish reading the story of an unknown person from the Internet.

As a lot of our researches show that products people choose to use were mostly recommended by their family members and friends. My expectation is to move this traditional mouth-to-mouth communication forward to the use of Internet based technology. Users of e-sight can connect to their friends and family members and create
circles to share their experience of using various products. People who know each other well would have more sympathetic response to their emotions on something.

As Figure 13 shows, there are several differences between designers’ and users’ needs. Therefore, e-sight and those websites mentioned above have an essential difference: the target user. As a whole, the main goal of the above websites is to help consumers find better products through ratings and reviews, while e-sight is to enable designers to have a close contact with users and users can benefit from this web-based framework as well. It is not just about ratings and writing reviews, but a mutually beneficial framework based on consumers’ insights.

Figure 12, Screen shot of reviewcentre.com and Epinions.com, rating and review page
3.4.2 Research on online survey websites

There is also some other web-based software that helps professionals to do their research work. Business people use Qualtrics a lot while designers are more familiar with SurveyMonkey. This kind of software helps its users to create surveys, analyze the answers and generate results charts. It is a good way to get users’ insights from Internet because of the fast spreading speed and high efficiency. I benefited a lot from using SurveyMonkey when I was doing researches on this thesis. The process of creating a general survey on SurveyMonkey would have five steps: creating and naming the survey, writing instructions, typing in all the questions, saving and getting the link to the online survey. There are instructions from the website throughout the process. Users can update their accounts to enable more useful functions with a monthly or yearly payment.
I did one of my online surveys by using SurveyMonkey, which I would discuss about at the beginning of Chapter 4. From the experience of using these online survey systems, I found out we can collect people’s insights and attitudes more quickly. But it is a one-way communication. For example, I asked “If a designer finds you through the information you provided online, would you like to attend their user test and online surveys?” Most subjects would click yes while the second most would choose “only attend online surveys”. Based on the answers to the survey, I would like to go further and ask them what kind of in return they preferred. Then I would have to start a new survey again. The problem is that I can never make sure that those who said to be willing to attend the second survey do attend. If focus group changes from the first survey to the second one, the results of these two surveys would have a very weak connection. Therefore, the problem I found when using SurveyMonkey was that though one can get feedback quickly he cannot go back and forth with a group of same subjects. Of course, setting questions to ask for subjects’ contact information is a way to contact further. But the situation I encountered often was that seldom of them would like to be contacted personally. The second problem is that the designers who use these online tools would have to send their survey’s link to people by themselves. These subjects they have chosen would easily to be convenience sample group or judgment sample group. Persona Circles on the other hand would eliminate the sample bias. Moreover, even though designers can get the subject’s email address or telephone number, it would be easily considered annoying to contact them directly.
e-sight can provide a platform to contact the subjects further after online surveys by adding an online chatting system to the framework. People can choose to provide whether their personal outside contact information or register for an e-sight account. After having an account with e-sight, users can chat with others through the online chatting room (private or public). The detail of the functions of e-sight would be introduced later in Chapter 4.

Key sentences/words of each section in Chapter 3

• Active Provided User Information is the information that we encourage the users to provide actively compare to we ask them to give their insights, this way would be more efficient.
• Introduce the concept of Persona Circles and e-sight.
• e-sight is different from those rating and reviewing websites and web-based software such as SurveyMonkey as well.
Chapter 4. The new collaborative model

4.1 Market research

4.1.1 A survey on consumers’ web browsing preferences

I have conducted a survey on users’ web browsing preferences (Figure 14). The total 17 attended subjects came from China, USA and Canada and included students, IT workers, mechanical engineers, sales people, drivers, accountants and one retired person. I benefited a lot from the results of this survey and would use the analysis to help designing my website. As the results show, to the question of “What kinds of websites do you usually browse?” the top four chosen answers are: “Searching engine”, “Chatting
tools”, “Emails” and “Social websites”. It can be seen that over 60% of people use the Internet to keep in touch with others. Searching engine is certainly the first because of its joint function. From the second to the forth are tools to help stay connecting with family and friends. Just as the purpose of Internet is to connect the world together, people take the best advantage of it to stay connected.

The most popular topics people are interested in when they surf online are: News, Communicating with friends, Gossip, and Trends. Newly released products ranked the fifth right after Trends. Besides providing circles function to let people communicate, e-sight would also have the news on newly products and design trends, which offered by designers and web-developers. Half in half of my subjects considered the Internet a safe place for storing their information. I have discussed about the social networks previously in Chapter 2. Some people believe that their online information is not safe. Therefore, they are not willing to provide their personal contact information. That is why e-sight was designed to have an in-site chatting tool so that people do not need to give their contact information. Normal users would only be contacted through this in-site chatting tool when they accept the request. Moreover, designers would have an authentication (with a special logo shown beside their user name) after they have registered for e-sight and before they can reach the normal users.

For the question “How did you usually know that there’re newly released products?”, TV is the mostly chosen one. The second is from family members and friends. It is obvious that people would consider the person who they know well more reliable.
The results of this survey would be permeated in my website design and the full version of visualized result of this survey would be attached in the Appendix A.

4.1.2 Give users and designers access to e-sight

The second most asked question during my thesis research process was “how can you attract people to register and use your framework?” It is a very hard task because I am only a usual graduate student now, I do not have money to hire talented workers and I do not have the experience on marketing or communication. Learning from some good examples of marketing and communication might be necessary for e-sight.

I have once read an article on newspaper talking about Twitter:

Twitter introduced a program of “promoted tweets” in 2010 that will display ads in some search results, although this program remains limited to a select group of Twitter partners, including Best Buy, Bravo, Red Bull and Sony Pictures. Eventually, Twitter plans to offer advertising more broadly, but until then small businesses can continue to make productive use of the service. [15]

Twitter and Facebook are two good examples to study because they not only have taken a big advantage of the Internet but also have changed the way people live. A lot of people will share their personal experience and post interesting stuffs via these two network.
There are also a plenty of public pages on both Twitter and Facebook for organizations, campaigns and companies. It is a good way to marketing because nowadays, whoever catches the loyalty of users would earn a big return from users. Twitter and Facebook have gained large amount of users during the past 5 years. And their services have broadened from the basic use (posts) to activity invitation, public page, voting and the recent story telling timeline in Facebook. Most people using these social networks would love to keep in touch with people they know in real life. They are interested in stories and experience of those people even if they might not know quite well. Some people share to receive the jealousy from friends. Some people use for business reason. For whatever reason, users will keep using a network, inside of which most of their friends are using. This network would keep providing surprise when they are boring. It is interesting that I found a survey on people’s “moment of loneliness”. Normally it is after 11pm before bed. And during that period of time, the mostly used are chatting tools and social networks. Also the survey on “the Twitter Book” [16] showed that the time from 1pm to 6pm is the best time for re-tweeting. Therefore, to catch a right time is also very crucial.

The story of Pink Cake Box, a small specialty baker in New Jersey has been cited as a good example of small business using social media. The bakery store leverages nearly every type of social media that exists to build a substantial brand. Employees write a blog that features images and videos of their unique cakes. They post photos to Flicker and videos to the company’s YouTube channel. Pink Cake Box had more than 1,300 followers on Twitter, and more than 1,400 fans on Facebook according to The Twitter Book which was published in 2009. Currently the number has increase to over 9,000 on
Twitter and nearly 38,000 on Facebook. Within three years, its advertising on social network has earned it more than twenty times. It is clearly shown that social media is an effective way to broadcast one’s products.

After doing researches and the discussion with professors, I had a brainstorming work and had found several ways to assign access of different groups of people to e-sight.

**Ideas**

**For normal user side:**

- Earn cash (for example $10 or $20) if they can attend the surveys or usability tests
- Check newly released designs
- Get free small samples
- Get rewards (such as cash back, chances to attend design process or free new products) by inviting friends, attending surveys and usability test, and post their experience with products they are using
- Link e-sight with their accounts on other social network websites
- Get notice if the products they have helped to develop have been in production

**For designer side:**

- Invite friends and get free basic account
- Quickly find target user (Persona Circle)
- Create online surveys (back and forth)
- Real time chatting with users
Invite target user to Demo and test

Link to other useful design websites or resources

Visit material suppliers’ or companies’ page on e-sight

Have a verification system parallel to patent to prevent designers from potential plagiarizing

For developer side:

Set up Facebook and Twitter public page

Email users latest updates (based on the survey in 4.1.1, the majority of users would like to receive invitations via email) by their recorded searching preference

Post recently released products

Post useful information users are interested in

Following the above ideas, I have some initial sketches about the user-designer framework. As shown, Figure 15, Figure 16 and Figure 17 are three samples of my drawings.
Figure 15, Homepage of normal users

Figure 16, Surveys page for normal users who can select to attend
4.2 A web-based user-designer collaboration platform

In this section, I will give detailed introduction of e-sight [17] and its available functionalities. E-sight is the main application of the concept Persona Circles. Since the whole site is built upon the designer and user collaboration model, in the introduction page, Figure 18, e-sight shows two entries for users with different roles, one for designers and the other one for normal users. The intro page gives users the idea that e-sight is designed to serve designers and users. The link to e-sight is: http://www.sichundesign.com/e-sight/. After clicking either icon, a main page for that
group is shown, in Figure 18. The main design of each page for designer and human is the same but contents are different.

4.2.1 The process/website map for designer

As the primary purpose of Persona Circles and e-sight is to benefit designers, I would like to introduce the pages and functions I have worked on so far for designers first.

In the front page for designers, from top to bottom and left to right, there are e-sight logo/banner, menu bar with different operations, a slider for e-sight system updates and news, the e-sight welcome message, and the login panel. Specifically, the menu bar shows most of the operations related to the designer community, i.e., Persona Circles, Surveys and tests, friends, public pages, and useful links. These operations should be very handy in the design process (Figure 19).
“Create a Circle” is one of the advanced tools for designers to conduct their researches or demonstrations. Some of the extended profile fields, e.g., sex, age range, interests, are used in the search. These extended profile fields are provided by the user during their registration step. In addition, e-sight would analyze users’ posts, surveys and events attended and form some predefined features for designers. Before creating a circle, designers can specify a particular user pool. After filtering the master pool, designers would get the most matched users in the searching results. This can help designers
quickly find their target user groups. At the same time, Persona Circles would help to avoid the selection bias discussed in Chapter 3.

By clicking Persona Circles, the key words searching page would appear (as Figure 20 shows). Designers can drag recommended features from other designers’ searching history or type in their own desired key words. After having all the featuring key words in the list, they then click the create circles button. With the assistance of some software tools and the APUI (active provided user information) which is introduced in Chapter 3, E-sight would provide designers a pool of target users by mining users’ profile information. Even with limited time, small design firms could still benefits from e-sight by using the Persona Circles. Designers can name the circle, set the number of subjects in the circle and modify the keywords to recreate the circle (as Figure 21 shows). Checking details of the circle, status and contact information of subjects in the circle is also available after creating Persona Circles (as Figure 22 shows).
Figure 20, Create Circles page for designers’ access

Figure 21, Modify Circles page for designers’ access
The second function of designers’ access is to create online surveys and usability tests. By clicking Survey and Test, designers are able to choose whether to create a survey or post a usability test (Figure 23).
Create a survey would enable designers write introductions and questions and set the types how subjects would answer. After finish writing, designers could preview their surveys and submit the survey to e-sight system. Survey/polling tools is specially designed for designers. Survey tool, similar to SurveyMonkey, is under development currently, which will be incorporated into e-sight shortly if time permits. Before publishing the survey, designers should remember to select proper Persona Circles for the survey (Figure 24). Results would start appearing when there is one subject who has responded the survey. Designers would be able to chat with subjects in the circle by an in-site chatting system (Figure 28) if they would like to know more or go back and forth with subjects. Designers could invite subjects in the circle to attend their usability testing as well. As figure 25 shows, by providing the name of the activity, location, time and rewards, designers could post an invitation and send it to subjects in a certain circle.

Figure 24, Select Persona Circles page for designers’ access
Public pages would be a good way to showcase if small design firms or an individual designer would like more people know of them. Public pages would have a basic function of introduction of the companies and brands. And people would be able to follow the companies and brands they are interested in, contact them and comments on their recent posts (Figure 26). Designers can use this feature to create event posts with detailed description, location, and registration instructions to share with the public. This is also an add-on feature for designers to announce their latest events. They can share with the public about their survey or testing results if they would like to.
Web links, as yet another tool for fast information delivery, are incorporated into the e-sight system. All useful links are put at the bottom-left corner of the webpage, figure 27, for quick references. These links are managed and updated by administrators periodically. Useful linked pages would contain useful information for designers during design process such as links to design organizations, design tools, list of suppliers and vendors.

Figure 26, Public Pages for designers’ access
Finally, at the bottom-right corner of the page, there is a live chat window, which can be popped out (Figure 28). The live chat tool serves as a fast and convenient method for user communication. Moreover, personal messages, email, and group notifications are also available in the e-sight communication module.

Figure 27, Web links for quick references

Figure 28, An in-site live chat tool
4.2.2 The process/website map for normal users

The main area of the normal users’ pages contains the following features:

- Firstly, home page for normal users has recent posts of their friends and activities posted by public pages they are following. They could write their own post from the home page as well.

- Activities. Activities include all the public surveys or test invitations, and recent activities such as semi-year sales and product release conference from designers and design firms (Figure 29).

Figure 29, Activities page for normal users’ access

- Friends. Users of e-sight can make friends with other users and sharing updates.
They could learn other’s activities such as who has attended a survey and earned rewards (users can select to post information like this), who will attend a sale happens sometime somewhere in a near future, etc. From the user web browse habit survey (appendix.1), most users would contact their friends and family members when they are online. And from my previous research on baby boomers and the young generation, the majority of both generations would try products that are recommended by people they know well. E-sight would provide those people an open and convenient environment to connect and share their experience. On the other hand, e-sight can mine the data they provide so as to benefit designers. Besides making friends with normal users, this making friends feature can also be served as a list of public page for companies. The book “Facebook Marketing for Dummies” [18] points out that the benefits brought by public page is huge and it guides readers how to set up a public page for their own company. Users of e-sight can set up their own public page or become a follower of other public pages. This would attract businesses to join e-sight.

• Invitations. With invitation settings, each user can choose to receive invitations of surveys and tests, group messages, email and newsletters from designers (Figure 30). As the results of the web browsing habits survey shows, many people are willing to attend the online surveys and usability tests with little rewards. And there is a long history of paying people small amount of money and invite them to attend the tests. Therefore, this feature could also be used by designers to post their invitations on user surveys and usability tests, along with some general reward information.
For each action performed by the user, with certain level of privacy controls, it will be shared and reflected in the activity list of the whole community.

4.3 How e-sight can benefit the design process

As the main purpose of this thesis is to find a way to assist designers and small design firms within fast pace environment doing user-experience test, this section would have a systematically introduction of how e-sight can benefit the whole process of design.
For those who use e-sight as a tool to do their user research, the biggest advantage they would get is the resource of users. At the beginning of a design process, most designers will do benchmarking and find target users for the objective of project. And then follows the study of users’ backgrounds, which include: age, life style, job, education, social networks, habits, and etc. Normally designers will search online or through projects they have attended for some existing surveys and studies. Actually when designers logged in to those social websites, users are just one step far from them. E-sight helps to push each side one step forward and it is also the intersection of the user-designer network.

Here comes the first advantage that e-sight brings to designers. With an e-sight account, designers can 1) type in the key words of their target users, drag the features of users provided by e-sight to filter Persona Circles, 2) fetch basic information and have a brief idea of users’ life style (e-sight would provide a backstage data mining of users’ activities). The second advantage of e-sight is that if a designer would like to go forward to learn more about certain users’ insights about a product or service, he/she can send a request and a draft of the survey to e-sight’s manage center. If the request is approved, then the survey can be sent to target users through two ways: Email or e-sight Persona Circles. The Persona Circles are different sample groups based on designer’s searching key words. Users who have the similar profiles are randomly chosen to attend the group. This group of target users can attend the entire design process if they would like to. For example, designers can conduct several rounds of surveys and invite users to attend their usability test either in-person or online. Designers can also use the suppliers’ public pages to find vendors that they need for prototyping or manufacturing real products.
Thirdly, after the products have been released, most companies still need to track the voice from marketplace for their reference. E-sight’s Persona Circles can be also used to discuss about the insights after users have tried a product for a certain time. These three benefits e-sight can provide have run through the three period of design process: pre-design, designing and post-design.

E-sight not only helps designers to proceed with the researches on users and public trends, but also helps to save their time and money to reach out to users. If a design firm chooses a company to help them to find users, the cost would take away a large part of their budgets. E-sight can provide users free basic accounts if they invite their friends to join. After e-sight has gained a certain size of users, new design registers would have the option to pay a little to enjoy more functions of e-sight. But this amount would be far less than one would pay for those companies that only provide the specific functions.

Key sentences/words of each section in chapter 4

• The survey on users web browsing habit gives a guideline on web design;
• Social networks can bring large benefits;
• E-sight is an entertaining and professional networking system for designers and users;
• The whole website map of e-sight;
• The benefits design firms can obtain from e-sight:

1. Find target user by searching Persona Circles; 2. reach users conveniently; 3. conduct surveys & tests and go back and forth with users; 4. useful resources; 5. listen to the insights after product is launched in the market
Chapter 5. Conclusion and future works

5.1 Conclusion

Firstly I would like to redefine one concept. In the field of design, the definition of user-experience test nowadays is emphasizing the test on user-interface. This thesis would like to broaden the concept to everyday designs, which include interface, 3D products, services, and etc.

In summary, this thesis has two main contributions:

- One of the contributions is that this thesis has worked out a new method to assist small firms and individual designers within fast-pace environment to do their user-experience research. In Chapter 1&2, my prior experience and recent researches on user-centered design research have showed the importance of users in design and the desires for users of small design firms. By introducing different design methods, a problem occurred that although there are a lot of researching methods out there, these methods are closely depended on the cooperation of users. Many small design firms and individual designers are not able to spend much of their time and money on searching for users. There comes the proposal of the concept of this thesis. Based on the amount of Internet users, the Internet was chosen as a best media. Chapter 3 introduced two innovative concepts, which were proposed in this thesis: Persona Circles and e-sight, the designer and user collaborative framework. Then I showed the researches that I had done on different websites based on the questioning I received from class discussion. My
method is different from those rating and reviewing websites and online survey websites in three points: the main goal, target users and the way to reach users.

- The other main contribution of thesis is that it established a website which was named e-sight. “E” comes from electronic and “sight” comes from the words insight and site. After setting up the main constrictions of my website, I conducted a survey on users’ web browse habits. The detailed results were being used in the design of e-sight. I have also done some marketing researches to learn about in which way e-sight can attract both normal users and designers to join.

5.2 Feedback and future work

The work presented in this thesis would practically help small design firms and individual designers in their design process. I have finished establishing the main construction and some highlighted functions of the website e-sight.

As a whole, further work will include completing of the website, discovering ways to attract more users and gain users’ loyalty to e-sight.

Some non-designers who have visited the website pointed out problems such as there were too much registration questions and there was no notification showing that users can get rewards after they help with a design process. Designers pointed out that the collaborative element was poor on e-sight and that made it just like a normal social
Detailed problems related to website designing would be the main target to be worked on in the future. Some designers have also mentioned that e-sight excludes those people who prefer traditional ways of communication. A solution for this may be that they would receive paper invitations instead of electronic ones and they could also attend surveys through postal mail. More ideas to solve this problem would be a crucial work in the future.
Bibliography


APPENDIX A

Visualized survey results

your annual salary?

0-2000 RMB
2000-5000 RMB
5000-8000 RMB
8000-10000 RMB
Over 10000 RMB

What kinds of websites do you usually browse?

Social websites
Portals like Sina, Yahoo
Video sharing websites
Searching engine
Shopping websites
Music websites
Fashion websites
Emails
Chatting tools
Do you usually use social websites?
- Often use it
- Seldom use it
- Never use it

What kind of topics will attract you?
- News
- Gossip
- New products
- Pictures
- Stories, novels
- Popular stuffs
- Music
- Communicate with friends
- Sharing pictures and experience

How did you usually know that there're newly released products?
- TV
- Newspapers and magazines
- Ads along the road
- Website
- Friends and family members
- Free samples
- Emails
Are you willing to share your experience with others?

Yes, I'm willing to share with others
Yes, but I don't know how to share
Yes, but I only want to share with my friends
No, I think it's not safe
No, I think there's no meaning to share

If it's safe, do you want to share your information online?

Yes
No

If a designer find you through the information you provided online, would you like to attend their UX test and online surveys?

Yes
Only web surveys
Only user tests
No

In what way would you like to receive the survey/UX test invitations?

Telephone
Emails
Log in the website and check
Friends
Would you like to attend online surveys?

- Yes
- Based on rewards
- Based on content of the survey
- No