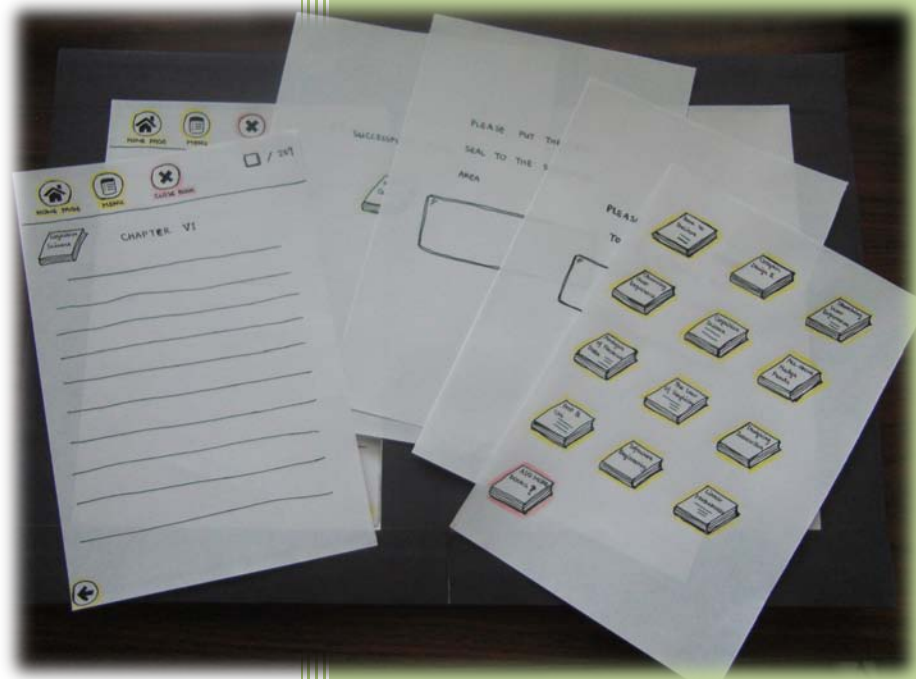


2009

Usability Report on Hand-easy



Group 5

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1. EXECUTIVE SUMMARY

In this documentation, we group 5 will provide the whole process and detailed report of usability test, including the usability preparation and the usability analysis.

From late November, we started to prepare our usability test, including the preparation of questionnaires, the test scripts, the test scenarios as well as tasks, the test schedule and our roles of the test. Although we didn't follow our test schedule strictly, we still did the usability test and analyzed it ahead of time.



In December 6th, we conducted a formal usability study on our design Hand-easy. Hand-easy is an event mapping and electronic book device used for social interaction and electronic book respectively. The test was conducted in-situ i.e. in an environment and time meant for the device usage. The test was conducted on 3 participants. Video was used for recording. We had a pre-test questionnaire, followed by set of tasks and eventually post-test questionnaire as a part of our usability study materials along with the data collection sheets.

From the usability test, we did find some successes and problems which will be analyzed in the following sessions. What we succeeded to convey is the affordance of our design but we failed to deliver some of the details of certain functions.

1.1 TOP 3-5 SUCCESSES

- The interface gives an impression of being tactile, especially the design of the icons.
- All the participants have no difficult to understand most of the functions as these they are commonly used in peoples' lives.
- The design can enhance people's social life to some extent.
- The design can bring good user experience in the e-book function and social network functions.

1.2 TOP 3-5 PROBLEMS

- In the map session, the dragging function lacks affordance and confuses users.
- There's some confusion about scanning function.
- Some functions may constrain the users as they think such functions only open to their membership.

1.3 CONCLUSIONS AND RECOMMENDATIONS

Based on what we found in the usability test, we manage to make our users understand most of the interfaces and

succeed in improving their social interaction through the design. However, we discover some problems related to the usage of the device in the test, especially the usage of the map. The reasons why the problems appear may belong to the following two aspects: the design of the usability test and the design itself. Considering both of those two aspects, we will focus on improving the usability test and our design. As for the usability test design issue, we will concentrate on developing more understandable questions and descriptions of the tasks, as well as pay attention to the way we ask questions. As for the design issue, we will provide possible new directions of the map and navigation function. Also, we consider to change the position of the scanning area and to narrow down the social network functions we provide.

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3. INTRODUCTION

3.1 DESCRIPTION OF THE TEST

The usability test was divided into the following parts: orientation, pre-test questionnaire, main body, post-test questionnaire and wrap-up. In the orientation, we first welcomed the participants then introduced the whole test to the user including the purpose, goal, tasks, duration and user's rights. Then, we would give the participant a pre-test questionnaire in order to understand more about his/her demographics. The main body was the central focus of our test – we had the participants testing the actual device and asked them to go through the tasks based on the scenario in order to test the performance and the experience. The fourth part occurred shortly after the participants were done with the usability test, where the participants took a post-test questionnaire answering questions geared towards receiving feedback about the test, how they felt about their experience, and the device's ease of use. At last, we would thank the participants and the test ended.

The following is the roles of each of us.

FACILITATOR: ROBERT BEGLEY

Responsibility: First, welcoming the testers to the usability test. Second, explaining the whole test to the testers, including the purpose of the usability test, the procedure of the test, the time it takes and the responsibility of the testers. Third, giving pre-test questionnaire to participant and find out whether he/she is suitable. If the participant is suitable for the test, then conducting the usability test, asking the testers to finish the tasks in sequence and also taking some notes about the testers' saying, words, feeling, emotion and gestures. At last, asking the post-test questions and thanking the participant.

OBSERVERS: MATT EDWARDS, XIYING WANG

Responsibility: Observing the whole progress of the usability test, especially paying attention to the testers' gestures, word, emotion, feeling and confusions about the applications. While observing, taking notes as detailed as possible.

TIME RECORDER: VARUN KHANDUJA

Responsibility: Recording the completion time of the scenarios and tasks of each participant, also managing the camera recording.

3.2 TEST OBJECTIVES

The first test goal we had was to understand the usefulness of the device for the user. We wanted to know if the user found the device useful. Would they use it if there were an actual device with the capabilities we designed for? We also wanted to test the understanding that the user had in regards to navigating the device. Did they understand that it was designed to be like a book? A third test objective we had was the functionality of the device. We wanted to know if the participants understood what happened when they initiated an individual action on the device. Finally, the fourth goal we had was to measure performance by observing verbal and non-verbal

expressions and also quantitatively by task completion.

3.3 SUMMARY OF USER PROFILE

“International students aged 18 or above of IUB”

The users are all international students of Indiana University Bloomington, which belong to our target group. The following diagram is the summary of their demographics:

Title	Gender	Age group	Home country	Living on-campus / off-campus	Transportation
Participant 1	Female	18-24	South Korea	On-campus	Bus, walk
Participant 2	Male	18-24	South Korea	On-campus	Bus, walk
Participant 3	Female	25-31	India	Off-campus	Bus

Table 3.1: User profile

Besides the demographics data, we also asked one specific question about the social aspect in our pre-test questionnaire in order to know more about the desire of social interaction among international students. And the summarized data is provided as follows:

Title	How many evening s in a week do you participant in social events?
Participant 1	6 or above
Participant 2	0-2
Participant 3	0-2

Table 3.2: Social events calculation

4. SUMMARY OF TEST PREPARATION

4.1 TEST SCHEDULE

Date	Content
12/02/2009	Adjust the usability preparation materials according to the feedback, in order to deliver a better usability testing.
12/03/2009	Go to the library in order to be familiar with the environment Practice the usability test
12/04/2009	Usability set-up Set up the usability equipment, including the forms for users to sign, the hardware and software environment, and the setting of the test. All the teammates should learn and remember their responsibilities.
	Testing the Follow the testing preparation process

	participants	
12/05/2009-12/06/2009	Analyze the data individually in Saturday and Sunday	
12/07/2009	Analyze the data, discuss the insights and re-design our concept as a group	
12/08/2009	Complete the final report	

Table 4.1: Test schedule

4.2 SESSION LENGTH

This usability testing is divided into five sessions, the first session is the orientation of the whole test, the second session is pre-test questionnaire, the third is the main body of the test and will be driven by scenarios and several tasks, the fourth session is post-test questionnaire, and the last one is the wrap-up part of the test. In general, the first two sessions will last 4-5 minutes, the third part will be 9-10 minutes and the last two will be 5 minutes long. Each of the session will be recorded as materials. The observers will use camera and computer recording to record the whole process of the testing, and they will also use computer, observation forms, notebook as well as pens to record each of the session, marking down the expression, emotions and words of the testers. Besides, the facilitator will mark down the notes while he guides the testers during the testing. The observers will also take photos during the testing when it's suitable.

4.3 NUMBER OF SUBJECTS

3 participants were involved in this usability study.

- Since the device was for international students, so all the participants were selected according to such criteria.
- 2 participants with the age group 18-24 and one participant in the age group 25-31.
- All genders were well represented (2 female and 1 male).
- 2 lived on campus and 1 lived off-campus.

4.4 TEST SET-UP

Location and Environment

Wells Library in Indiana University Bloomington

- Rationale:
 - We would have access to a large section of our target group, and also have access to areas where we could conduct the test privately.
 - It's appropriate for us to test in the library, since our design focuses both on the study aspect and social aspect. The students in the library can give us such experience. Also, it's easy for them to imagine the whole test and give us useful feedback.
 - We see benefit from pulling people directly from a natural environment, ensuring they belong to our target group and getting the data in-situ.
- Drawback:
 - Possible drawbacks to using this location may include people already being preoccupied with other

tasks. However, we will emphasize to the subjects that they are not required to complete the test and may stop at any time, to ensure that results are not rushed.

Equipment

- Hardware: 4 laptops including 2 Windows Vista and 2 Mac operating system, camera, prototype, cell-phone (for time recording)
- Software: Microsoft Office
- Other materials: pens, notebook, observation forms

4.5 DESCRIPTION AND RATIONALES FOR THE TESTING SCENARIOS

Based on data from our focus group, we wanted to create a scenario that our testing subjects may find themselves in. It was also important to create a scenario where it would feel natural to try both functionalities we were testing. As a result, we devised a scenario where the subject would be waiting for their friends, and decide to study. Afterwards, they decide to look up social events going on that night, and then look up the location. Also, using scenarios was easier for the participants to image.

Scenario 1: Imaging that you have finished the courses, and you plan to go to 'Taste of India' to have dinner with your friends. You go to the restaurant earlier than your friends, so you want to read some books to kill the time of waiting.

Rationales: The first scenario was created mainly for testing the reading and scanning functions of our design. We created such scenario according to our primary research – focus group, and we intended to create the situation real to the life of international students in Bloomington. So scenario 1 was established and it aimed to help the participants to understand our tasks easily. Moreover, it simulated real life in Bloomington, which could let the users easily experience the atmosphere so as to give us more valuable data.

Scenario 2: Imagine that you are studying in library during a Thursday evening, but you suddenly want to do something else except study. You wonder if there's any social activity you can join in this evening.

Rationales: This scenario was created mainly for testing the social functions of our design, including twitter, facebook and google map. Based on what we found in our ethnographic observation and contextual inquiry, library could be the place both for study and social communication. What's more, the international students studying in library might have the potential desire to socialize after a long-time study, or they might be distracted by some social incentives. As a result, we created such scenario related to the library to let our participants easily image the situation, even recall their similar experience of library. In such way, the data we got might be more valuable and useful for us to improve the design. Also, we could test whether our design was suitable under the purpose of 'interaction after dark' in-situ.

4.6 DESCRIPTION AND RATIONALES OF THE TASKS

During the first scenario, we created two tasks for the participants to complete. Below is the description of those two tasks.

Task 1: Select the book cognitive science you would like to read while waiting for your friends.

Task 2: You're interested in the magazine in the restaurant. What would you do if you want to add it into the device?

Rationales: Task 1 of scenario 1 was created to test the reading function of our design. We aimed to see whether our interfaces were clear enough for the participant to understand, as well as whether the functionality of selecting a book, opening a book and reading a book was easy to use. Task 2 of scenario 1 was established to test the scanning function of the design. Participants were asked to scan the barcode to the device, and we wanted to see whether the participants did this task with difficulty or not. For these two tasks, we wanted to test the transparency, performance and usefulness of our design. So we created these two tasks, each represented one major function of the design, to find out the potential problems with intention to improve them in the future design.

During the second scenario, we created three tasks to test the social function of our design. Below is the description of these three tasks.

Task 1: If you want to find the activities happen today in twitter, what would you do?

Task 2: Please use the Facebook function if you want to know what's happening now.

Task 3: If you are not familiar with the location, what would you do?

Rationales: Task 1 and 2 of scenario were created to test the search function of twitter and facebook. Task 3 was aimed at testing the google map function as well as the navigation of it. All these three tasks were related to the social aspect of our design, and we wanted to see whether the social aspect of our design was clear or not. Also, we wanted to learn about the experience when participants were interacting with our design. Most importantly, we wanted to know whether our design improve international students' social life after dark. As a result, three tasks were created, and each represented one major function of the social aspect, to learn more about the user experience and the effect on the international students.

5. EVALUATION METHODS AND RESULTS

5.1 USABILITY GOALS

Scope

The scope of this usability test is to test our design of Hand-easy and find out the potential problems of our design. This usability test is not intended for testing the whole implementations of our design. Rather, we want to learn whether our design is meaningful to the users and easy to use, both the performance of our design and the experience. Also, it's intended to find out the improvement of our design. At the same time, this test is also for figuring out whether our design tackles the core problem defined in the problem space – interaction after dark.

Purpose

The purpose of this usability test is to find out whether our design can enhance social interaction in the evening among international students in mundane society, as well as the interfaces and functionality of our design. The find out of users' emotion, reflections, values and preference of the design is crucial for our re-design. We try to learn the potential problems of our design, rather than just observing and collecting the feedback of the testers. Also, we seek for insights by conducting this usability test, and try to make a better re-design which fits the needs of users.

5.2 SUMMARY OF EVALUATION STRATEGIES

We use usability test as our evaluation strategy. Video recording, note taking and self-report metrics are used in the usability test. One of the teammates is responsible for the video recording, and the videos are used for review and data analysis. Two team members are observers, who take notes in a pre-made data collection sheet. The notes focus on the users' languages, expression, emotions, body language, gestures and mistakes. And we will evaluate all these data of the usability test. Finally, we also have the participant to fill out a post-test questionnaire which acts as a self-report metrics where the participant could answer questions based on their own experience.

5.3 TASKS ANALYSIS METHODS AND SELECTION RATIONALES

In the tasks analysis, we use the following methods in order get insights from the usability test:

- Summarizing the quantitative data
- Statistics analysis
- Comparing the data with our goal
- Looking for trends of the data
- Comparing the sequences of users' actions with the desire sequences
- Identifying reasons

By doing the quantitative data analysis, we choose to first summarize the data, then calculate the average mean of the numbers and compare the numbers with our goal. In such way, we can see clearly about the performance of our design. By calculating the data, we know about how the interfaces affect the usage of the design in order to find problems of our interfaces. Also, we look for trends and use comparisons in order to find out the users' preference and usage patterns. How these patterns differ from our perception is important to our design, and we want to come up a better design for the users to use. We hope to use such task analysis methods to better understand our usability test data.

5.4 SUMMARY OF DATA ANALYSIS

The usability test focuses on testing two aspects of our design, one is related to the performance, and the other is about subjective experience of the users. By performance, we focus on the usability and functionality of the interfaces. And for subjective experience, we aim to see whether our design can improve the interaction among international students in the evening and arouse their sense of social life.

In the following paragraphs, we will analysis the data in five ways: the average time spent on each task, whether each task was completed or not, whether the flow of sequence was the same as we had expected, error analysis and the user subjective experience towards our design.



Time spent on each task

In our expectation, we assume that each of the tasks will not be spent over 2 minutes. Otherwise, our design may either too difficult to understand or too confusing for people to use. There are five tasks in our usability test, the first two are the tasks following of scenario 1, and the rest are the tasks of scenario 2. The five tasks are as follows:

- **Task 1:** Select the book cognitive science you would like to read while waiting for your friends.
- **Task 2:** You're interested in the magazine in the restaurant. What would you do if you want to add it into the device?
- **Task 3:** If you want to find the activities happen today in twitter, what would you do?
- **Task 4:** Please use the Facebook function if you want to know what's happening now.
- **Task 5:** If you are not familiar with the location, what would you do?

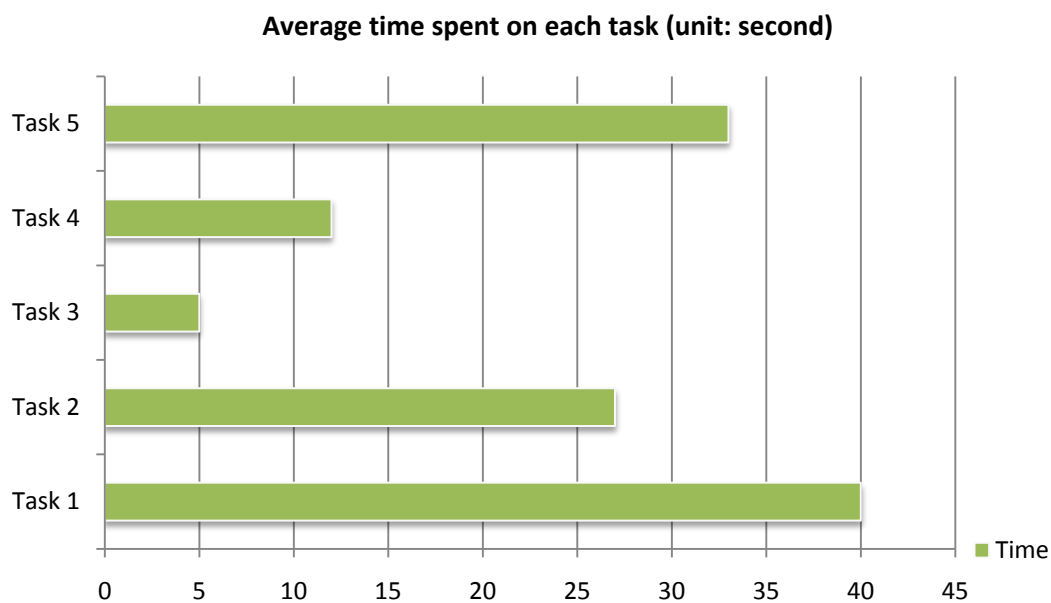


Chart 5.1: Average time spent on each task

From the above diagram, we can conclude that the duration of each task is no more than 1 minute, which agrees with our expectation. Task 1 has the longest time duration than any other tasks, and this is because the participants took time to think and understand in the test their first task. Task 3 has the short spent time, which indicates that the twitter function is much easier for the participant to understand. Also, task 5 has the second longest average time and we find out that this task is the most confusing part of the usability test and has some problems related to the navigation of the map. Considering that there's no need for the participants to warm up before the task, task 5 may be most demanding for the participants that we need to think of alternative re-design.

Task completion analysis

Two out of three participants completed all the tasks, except one participant didn't complete the last task about map navigation. During the usability test, the participants all had some questions about the last task, but two of them succeeded in doing that and one failed. Besides, all three participants questioned about task 2, especially the scanning function. However, three of them managed to complete the task after explanation.

	Task 1	Task 2	Task 3	Task 4	Task 5
Participant 1	√	√	√	√	√
Participant 2	√	√	√	√	√
Participant 3	√	√	√	√	×

Table 5.2: Tasks completion

Sequences analysis

In the sequences analysis, we compare the sequences we expect and the real sequences of participants in order to find potential problems or design indication.

• Task 1: Select the book cognitive science you would like to read while waiting for your friends.			
Sequences we expect	Participant 1	Participant 2	Participant 3
1) Open the device	Same with our expectation	Same with our expectation	Same with our expectation
2) Move finger to the book 'cognitive science'			
3) Click it			

Table 5.3: Task 1 sequences analysis

• Task 2: You're interested in the magazine in the restaurant. What would you do if you want to add it into the device?			
Sequences we expect	Participant 1	Participant 2	Participant 3
1) Click 'Add more book'	Same with our expectation	Same with our expectation	Enter the barcode number into the scanning area
2) Put the barcode in the scanning area			

Table 5.4: Task 2 sequences analysis

• Task 3: If you want to find the activities happen today in twitter, what would you do?			
Sequences we expect	Participant 1	Participant 2	Participant 3
1) Enter keywords in the search bar	Same with our expectation	Same with our expectation	Same with our expectation
2) Press the button named 'twitter'			

Table 5.5: Task 3 sequences analysis

• Task 4: Please use the Facebook function if you want to know what's happening now.			
Sequences we expect	Participant 1	Participant 2	Participant 3
1) Enter keywords in the search bar	Same with our expectation	Same with our expectation	Same with our expectation
2) Press the button named			

'facebook'			
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Table 5.6: Task 4 sequences analysis

• Task 5: If you are not familiar with the location, what would you do?			
Sequences we expect	Participant 1	Participant 2	Participant 3
1) Enter keywords in the search bar	Slightly different from what we expect, the participant used arrow to navigate the map.	Instead of doing the navigation, the participant asked us whether he could zoom in and zoom out to control the map. Then he said he would use zoom functions to navigate the map.	She said she needed to select the hyper link in order to navigate the map, as she didn't know to do with the current map so she believed that link would lead her to navigation.
2) Press the button named 'Google map'			
3) Use finger to drag the map from one place to another			

Table 5.7: Task 5 sequences analysis



From the above analysis and comparison, we find out that task 5 has confused most of the participants due to part of the design problem and part of designing the test. Task 2 has slightly problem compared to the remaining tasks. And three fifth of the tasks are successfully in making participants understand the content. In sum, our design does show its advantages in some forms of functions such as social network and e-book reading, but on the other hand, it has some defects in scanning and map function.

Overall, there's no great error happened in the usability test, and all the participants seemed understand most of the tasks as well as completed them with little effort. However, there's one particular phenomena of participant 3 in the second task. Task 2 is about scanning the barcode to the right scanning area in order to add the book content into our device. Instead of putting the barcode over the scanning area, participant 3 intended to enter the barcode number into that area while the other two participants didn't think of entering the numbers.

Subjective experience analysis

In order to collecting the subjective data, we use self-report metrics. Our post-test questionnaire is created according to the SUS (System Usability Scale) method in order to obtain the subjective opinions about our design. There is the summary of the data we collected in the test.

There are four scale questions (scale from 1 to 5, and 1 represents strongly disagree, 5 means strongly agree) in the questionnaire, and they are:

- I think that I would like to use this system frequently.
- I thought the system was easy to use.
- I found that various functions in this system were well integrated.

- I would need technical help while using this system.

“I think that I would like to use this system frequently.”

Two of three participants showed their interests in using our design, and one even strongly agreed with the statement above. The rest one ranked the scale of 3. In general, our design succeeds in achieve people’s satisfactory in using it as well as arouses their interests of it. Also, there’s potential indication that our design can improve international students’ social life and help them to interact more in the evening.



“I thought the system was easy to use.”

Two thirds of the participants strongly agreed that our design was easy to use, while the remaining one thought it was neither difficult nor easy. Two of them gave 5 in the scale and the other one ranked 3 in the scale. In general, we can conclude that our system is easy to use in most of the functions but still has some confusing points.

“I found that various functions in this system were well integrated.”

Two participants ranked 4 in the scale, which means they agreed the above statement but in a strong way. One participant gave 3. Obviously, we need to improve the functions in the design, especially the scanning function and navigating function.

“I would need technical help while using this system.”

Two out of three strongly disagreed that they would need technique help, while the rest one did agree the notion. What indicates in this situation is that, our design may be suitable for part of the international student but not so much for the other students. Some confused parts appear in the design. We can both improve the design and develop a help system in the device.

Only one participant finished the open question, and the participant mentioned that the navigation of the map was the least favorite part of the experience. Also, this participant commended the map function: “I didn’t understand how to navigate the map, and it would be helpful to have a zooming button.”

5.5 CLASSIFICATION OF THE SEVERITY OF THE PROBLEMS

Since we focus this test primarily on navigating and using specific features, navigation and use receive more attention than problems of aesthetics or usefulness.

As such, the navigation of the map feature is our largest concern. It is brought up with each subject in similar ways. Its centrality and frequency makes it our highest priority. Secondly, barcode scanning would be considered. While it is also central to our functionality testing, we consider this slightly less of an issue because we suspect problems performing this task were more related to the fidelity of the prototype than the functionality. People were able to navigate to this feature each time, but often did not understand our prototype to have an infrared scanner. Finally, the issue of feeling included in a social network in order to search it is our least important concern. It is not central

to navigating the functions, and people generally understood how to use it, they simply didn't think they could if they were not a member.

6. USABILITY PROBLEMS AND RECOMMENDATIONS

In the map session, the dragging function lacks affordance and confuses users.

In regards to the mapping system, users did not entirely understand navigation. Two of our subjects believed pressing the onscreen arrows that appear were the only way of navigating the map. The third thought the onscreen map could not be navigated at all. We believe this could be amended with either some sort of navigation buttons, or a type of affordance that would imply to the user that they can swipe the screen for navigation. We also consider that we may not have made this task clear to our users. In this case, a rewrite of the script may remove the issue.

There's some confusion about scanning function.

Although two thirds of the participants could manage to complete the scanning tasks and one failed, we realize that there's some confusion about the scanning function. Basically, we design to let the user to put in the barcode in the scanning area in order to add more content into the device. However, participants might be confused at the first stage. We change to put the scanning area at the bottom of the device instead of central so as to arouse people's attention and make people connect to the bottom barcode of common piece of goods. Also, we decide to have more instructions on the interface to tell the users what to do. Moreover, we intend to change the appearance of our prototype to make the scanning area similar to real barcode shape.

Some functions may constrain the users as they think such functions only open to their membership.

We plan to narrow down the choices of functions in our design. In the future, we might only implement facebook or google map in the device. Or we might merge the functions into integrity so as to eliminate the choices and make the users more focus.

7. REFERENCES

[1] <http://www.useit.com/papers/heuristic/>

[2] Kuniavsky, Mike. Observation the user experience, Morgan Kaufmann Publishers

[3] Nielsen, Jakob, Loranger, Hoa. Prioritizing Web Usability, New Riders Press, Berkeley CA.

8. APPENDIX

8.1 USABILITY PREPARATION PACKAGE

USABILITY PREPARATION FOR INTERACTION AFTER DARK

Testing on the device HAND-EASY

1. USABILITY SET-UP

TEST LOCATION

Wells Library in Indiana University Bloomington

- Rationale:
 - We would have access to a large section of our target group, and also have access to areas where we could conduct the test privately.
 - It's appropriate for us to test in the library, since our design focuses both on the study aspect and social aspect. The students in the library can give us such experience. Also, it's easy for them to imagine the whole test and give us useful feedback.
 - We see benefit from pulling people directly from a natural environment, ensuring they belong to our target group and getting the data in-situ.
- Drawback:
 - Possible drawbacks to using this location may include people already being preoccupied with other tasks. However, we will emphasize to the subjects that they are not required to complete the test and may stop at any time, to ensure that results are not rushed.

MATERIALS

- Hardware: 4 laptops including 2 Windows Vista and 2 Mac operating system, camera, prototype, cell-phone (for time recording)
- Software: Microsoft Office
- Other materials: pens, notebook, observation forms

SESSION RECORD PLAN

This usability testing is divided into five sessions, the first session is the orientation of the whole test, the second session is pre-test questionnaire, the third is the main body of the test and will be driven by scenarios and several tasks, the fourth session is post-test questionnaire, and the last one is the wrap-up part of the test. In general, the first two sessions will last 4-5 minutes, the third part will be 9-10 minutes and the last two will be 5 minutes long. Each of the session will be recorded as materials. The observers will use camera and computer recording to record the whole process of the testing, and they will also use computer, observation forms, notebook as well as pens to record each of the session, marking down the expression, emotions and words of the testers. Besides, the facilitator will mark down the notes while he guides the testers during the testing. The observers will also take photos during the testing when it's suitable.

2. TARGET PARTICIPANT

International students aged 18 or above of IUB

The target participants we want to test are the international students aging 18 and above who are studying in IUB, as our design is intended to encourage the international students to be more engaged in the interaction at night. Specifically, the international students mean the students whose nationalities are not American, including those from other countries such as China, India, Korea, and so on. We also hope to look for the international students who desire to take part in social activities but value study.

3. CONSENT FORM (SEPARATE FILE)

Please see the file [02 Group 5 Consent form](#)

4. PRE-TEST QUESTIONNAIRE (SEPARATE FILE)

Please see the file [03 Group 5 Pre-test questionnaire](#)

5. TEST SCHEDULE

Date	Content	
12/2/2009	Adjust the usability preparation materials according to the feedback, in order to deliver a better usability testing.	
12/3/2009	Go to the library to be familiar with the actual environment; Practice the usability testing.	
12/4/2009	Usability set-up	Set up the usability equipment, including the forms for users to sign, the hardware and software environment, and the setting of the test. All the teammates should learn and remember their responsibilities.
	Testing on 1 st participant	Steps for testing each of the participant <ul style="list-style-type: none">• Orientation session• Pre-test questionnaire (if the participant doesn't suit for our target group, we will find another one)• Scenarios and tasks• Post-test questionnaire• Wrap-up session
	Testing on 2 nd participant	
	Testing on 3 rd participant	

12/5/2009-12/6/2009	Analyze the data individually in Saturday and Sunday
12/7/2009	Analyze the data, discuss the insights and re-design our concept as a group
12/8/2009-12/9/2009	Complete the final report

6. ROLES

FACILITATOR: ROBERT BEGLEY

Responsibility: First, welcoming the testers to the usability test. Second, explaining the whole test to the testers, including the purpose of the usability test, the procedure of the test, the time it takes and the responsibility of the testers. Third, giving pre-test questionnaire to participant and find out whether he/she is suitable. If the participant is suitable for the test, then conducting the usability test, asking the testers to finish the tasks in sequence and also taking some notes about the testers' saying, words, feeling, emotion and gestures. At last, asking the post-test questions and thanking the participant.

OBSERVERS: MATT EDWARDS, XIYING WANG

Responsibility: Observing the whole progress of the usability test, especially paying attention to the testers' gestures, word, emotion, feeling and confusions about the applications. While observing, taking notes as detailed as possible.

TIME RECORDER: VARUN KHANDUJA

Responsibility: Recording the completion time of the scenarios and tasks of each participant, also managing the camera recording.

7. TEST SCRIPT (SEPARATE FILE)

Please see the file [04 Group 5 Test script](#)

8. SCENARIOS AND TASKS

During the main body of usability testing, we use scenarios guide the participants through the tasks, and also ask them questions. There are two main aspects we want to test in this usability testing, one is the self-study aspect of our design, and the other one is the social aspect of our design.

SCENARIO 1

Imaging that you have finished the courses, and you plan to go to 'Taste of India' to have dinner with your friends.

You go to the restaurant earlier than your friends, so you want to read some books to kill the time of waiting.

Task 1: Select a book you would like to read while waiting for your friends.

Task 2: You see a word you don't quite understand. What would you do?

Task 3: You're interested in the magazine in the restaurant. What would you do if you want to add it into the device?

SCENARIO 2

Imagine that you are study in library during a Thursday evening, but you suddenly want to do something else expect study. You wonder if there's any social activity you can join in this evening.

Task 1: If you want to know the activities happen today, what would you do?

Task 2: Please use the Facebook function if you want to know what's happening now.

Task 3: If you are not familiar with the location, what would you do?

9. DATA COLLECT SHEET (SEPARATE FILE)

Please see the file [05 Group 5 Data collect sheet](#)

10. POST-TEST QUESTIONNAIRE (SEPARATE FILE)

Please see the file [06 Group 5 Post-test questionnaire](#)

8.2 PRE-TEST QUESTIONNAIRE

The following link is the pre-test questionnaires that completed by the participants.

Please see the file [07 Group 5 Completed Pre-test](#)

8.3 POST-TEST QUESTIONNAIRE

The following link is the post-test questionnaires that completed by the participants.

Please see the file [08 Group 5 Completed Post-test](#)

8.4 SIGNED CONSENT FORMS

The following link is the signed consent forms of the participants.

Please see the file [09 Group 5 Signed Consent forms](#)