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Low Fidelity Prototype

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ROLES

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PROBLEM AND SOLUTION OVERVIEW

Talking to someone for the first time in a public setting can be very intimidating. There is often no indication of common ground or shared interests with which to break the ice. Because of this, many social opportunities are missed. What if the man sitting across from you on the bus shared your love of motorcycle maintenance? What if the girl at the next table in the coffee shop had just finished refinancing her home mortgage and could tell you the pitfalls to avoid? Sociall is a mobile app that solves this problem by allowing people to share information such as interests with other people in their vicinity. Privacy settings along with the option to chat before meeting generate the security and trust needed to make Sociall comfortable for its users.

PAPER PROTOTYPE

Our low fidelity prototype featured multiple screens of an Android like design. Though the physical buttons on a real phone would provide functionality such as menu, back, etc. we opted to include all buttons in the actual screen of our design. This way we wouldn't be locked into using a certain type of phone (or any type of phone at all), and a user's experience with our design wouldn't depend on how well they could comprehend this particular phone.

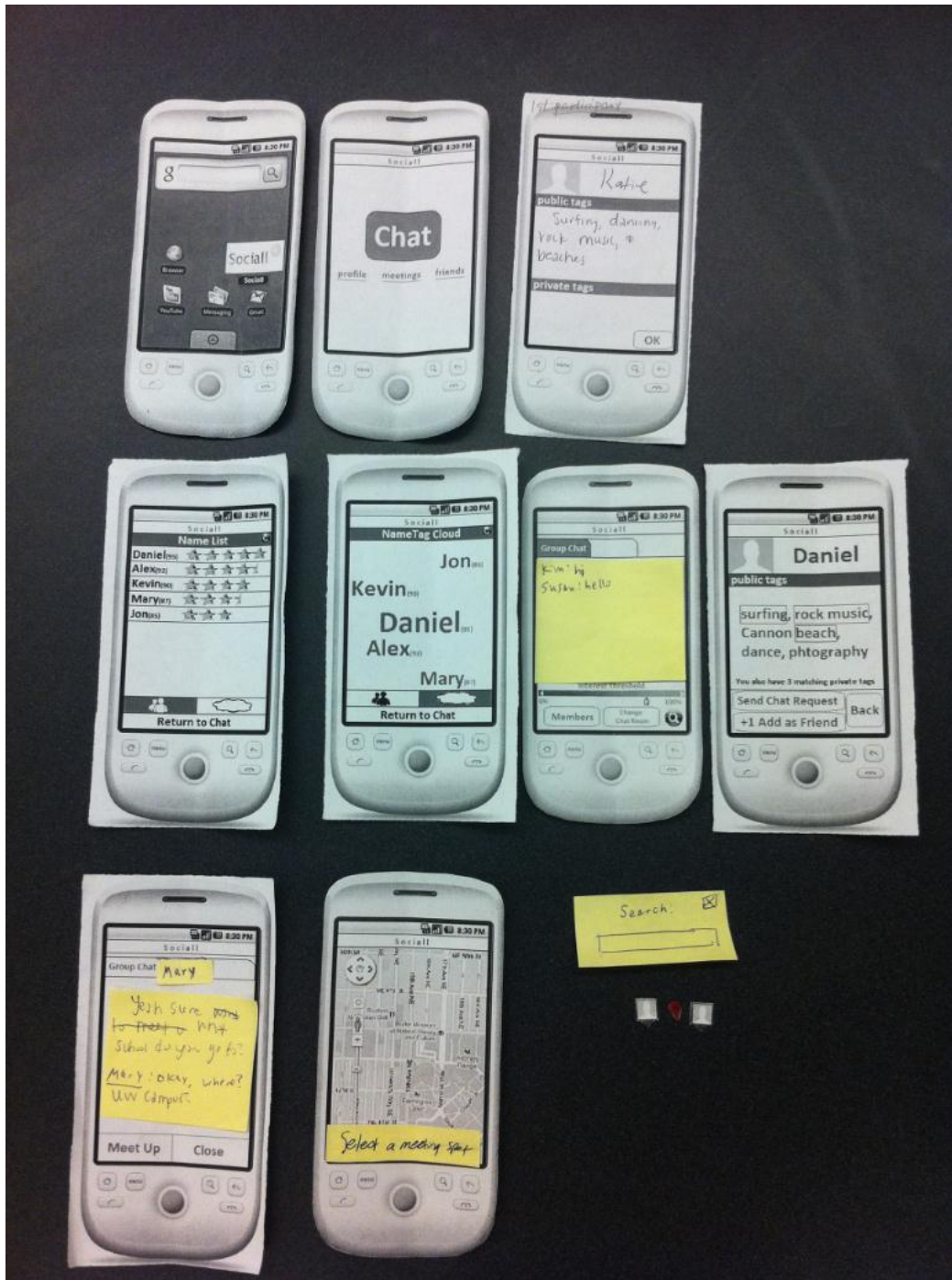


Figure 1: Entire prototype



Figure 3: Group chat

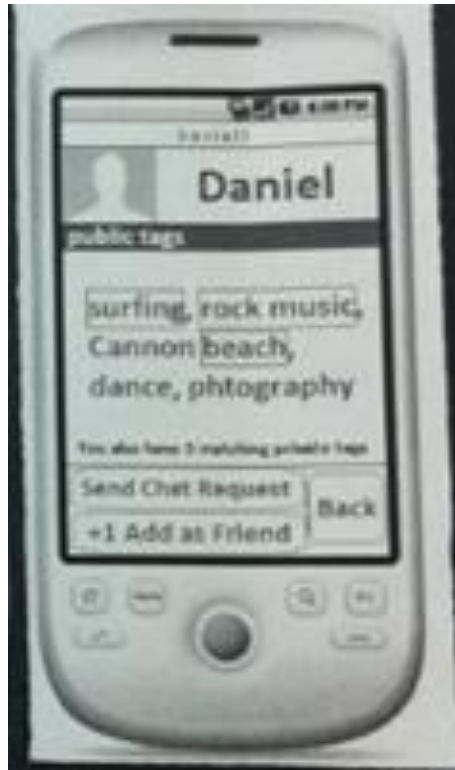


Figure 4: Other member's profile

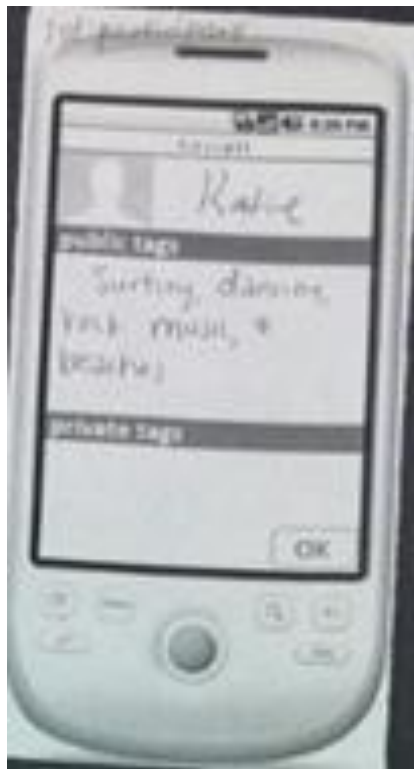


Figure 4: Your profile screen



Figure 5: Members screen



Figure 7: Private chat

Figure 8: Meet up screen

Figure 9: Search box

As our design is fairly open ended, a lot of user interaction was carried out by the user physically writing on copies of our design (figures 3 and 7). In a few cases we had to make screens of alternative options (such as multiple user profiles, figure 4) that a user would only end up seeing one of to emulate things like the search functionality.

Our prototype featured all of the core functionality of our application including the following:

- Creating a profile (figure 4)
- Participating in / refining (by search or interest level) a group chat (figure 3)
- Viewing members in a chat room / view profiles (figure 5)
- Starting / accepting a private chat (figure 7)
- Initiating / accepting a meet up and selecting a location (figure 8)

We did not include the ability to view friends or meetings in our paper prototype. This was partly due to the fact that we weren't exactly sure how users would interact with these features or even what we wanted to use them for. By presenting users with a notification that this screen was still in development, but asking them what they thought it should do, we gained valuable insight into how we should implement these work in progress features.

TESTING METHOD

PARTICIPANTS

Since our main target users are college students, we selected three volunteers from this group to test our prototype. In order to find the volunteers, we had looked around the UW campus.

Participant 1 is a sophomore female who majors in English. She is an active user of Facebook and wants to extend her social network to meet people who share some common interests with her.

Participant 2 is a junior female who majors in Social Science. She is a person who is willing to meet people who share some common interests with her to have a conversation at her free time. Also, she wants to look for some classmates to study together for her class.

Participant 3 is a senior male who majors in Bio Chemistry. He is a person who wants to meet new people who have the common interests with him to do activities together such as soccer.

ENVIRONMENT

For testing the usability of our prototype we performed the tests in a casual environment where our target group, college students, preferred to use our product. Two tests were performed in the dining hall of the McMahon which is one of the dorms on UW campus where students eat, chat, or study with friends. The other was performed in the Odegaard library where students are studying, discussing, and doing assignments with others.

We set up a table for testing. We introduced and explained our project to our participants to provide the basic information as well as to make more comfortable environment for the participants to perform the test. The prototype materials were only shown when each participant started the test.

TASKS

Script: You are a college student who has just transferred from Hawaii. Some of your interests are surfing, dancing, rock music, and beaches. Upon entering the University of Washington, you are overwhelmed by the number of students on campus. A friend has suggested you use the networking application, Sociall, to try to find other nearby people with similar interests to you.

Task 1: First, you want to see who's out there. Update your profile on Sociall (adding several interests besides those listed above) and then find the person who the program says is your closest match.

Task 2: Having seen who's out there, now arrange a time and place at which to meet someone who you think you might get along with (this doesn't need to be your closest match).

Task 3: During your first quarter at college, you attend the class Meteorology 101. You soon find yourself confused with the concepts and, as the midterm nears, you decide you need to find someone to study with. Use Sociall to find someone else in your class and arrange a study time with them. Today is Friday, and the test is exactly one week away.

PROCEDURE

Three members of our group worked together during the interviewing phase of the prototype. To conduct our interviews, one person took the role of facilitator while two others were note-takers.

We did not create a consent form, but started by explaining the project to each of our interviewees and making sure that we had verbal consent before continuing with the interview process. We also made sure to inform them that we were testing the GUI and not the participant.

Once we had consent, we handed a task script to each participant and had him/her read it. The task script described what each task was along with starting and ending conditions. Before the participant started the tasks, we encouraged them to describe what they were doing during the tasks so that we could better understand their actions. We also told them that they could end each task whenever they felt they were done.

Each task began by showing the participant an initial Android app screen. As our participant clicked on buttons, the interviewer switched out the pages of the UI or introduced chat rooms or menus represented by Post-its. The note takers individually recorded what our participants clicked to finish a task as well as what they said while they were doing their tasks. If an interviewee was stumped, we asked them what they were looking for.

After the interview, we asked some questions about the UI to get feedback. We carefully listened to the participants' opinions about good and/or bad aspects of the UI. We also specifically asked questions about actions which we hadn't been expecting or things they had said during the interview, such as why they clicked particular buttons. Then, we finished our test interviews by thanking our participants for their time.

TEST MEASURES

The intention of performing the usability tests was to measure our prototype particularly to find out some problems to improve it. We encouraged our participants to speak out what they were thinking during testing. So, we could write down the reasons behind their actions and understand our user interface from user's perspective. After the test, we asked the participants about good and bad aspects of our user interface as well as their expectations. Particularly, we encouraged the participants to tell us any inconvenience or problems about our UI.

TESTING RESULTS

HOME SCREEN

Though users understood what the buttons on the home screen meant, they wasted a lot of time here going to options other than “chat” (which is the main functionality of our application).

PROFILE SCREEN

Every participant in our user test was confused by both the use of and difference between public and private tags. Two of our users thought that private tags were tags on your profile that only your friends could see (when the intent is that only the user himself can see them). We observed users using the tags in (valid) ways we hadn't anticipated, such as setting different public tags across chats to find different users.

MEETINGS / FRIENDS SCREEN

The idea behind the meetings and friends screens, linked off the main page, was to help users organize the information they have gathered during the chat process. However, *all* of our users initially tried to use these screens to initiate meetings with other users even though these buttons are small compared to the large and centered chat button.

MEMBERS SCREEN

The members screen was fairly easy for our users to understand at least conceptually. There was some confusion with the “tag cloud” view, including misunderstanding what the numbers next to names meant. Users seemed to generally like the list view better and made note that they liked the star rating system for users.

MEET UP SCREEN

Everyone who used the meet up screen found it easy to use and convenient. There was one user who didn't use the “meet up” option from a private chat but instead verbally arranged a meeting. When told about the meet up map screen though, he said he would have liked to use such a feature.

MEMBER SELECTORS (SEARCH AND INTEREST THRESHOLD)

Only one user used the interest threshold slider (however she did use it effectively). What proved to be the main impediment of our users was finding the search functionality. Multiple users voiced the desire for such a function, but they did not notice the small magnifying glass icon at the bottom of the chat dialogue.

CHAT FLOW

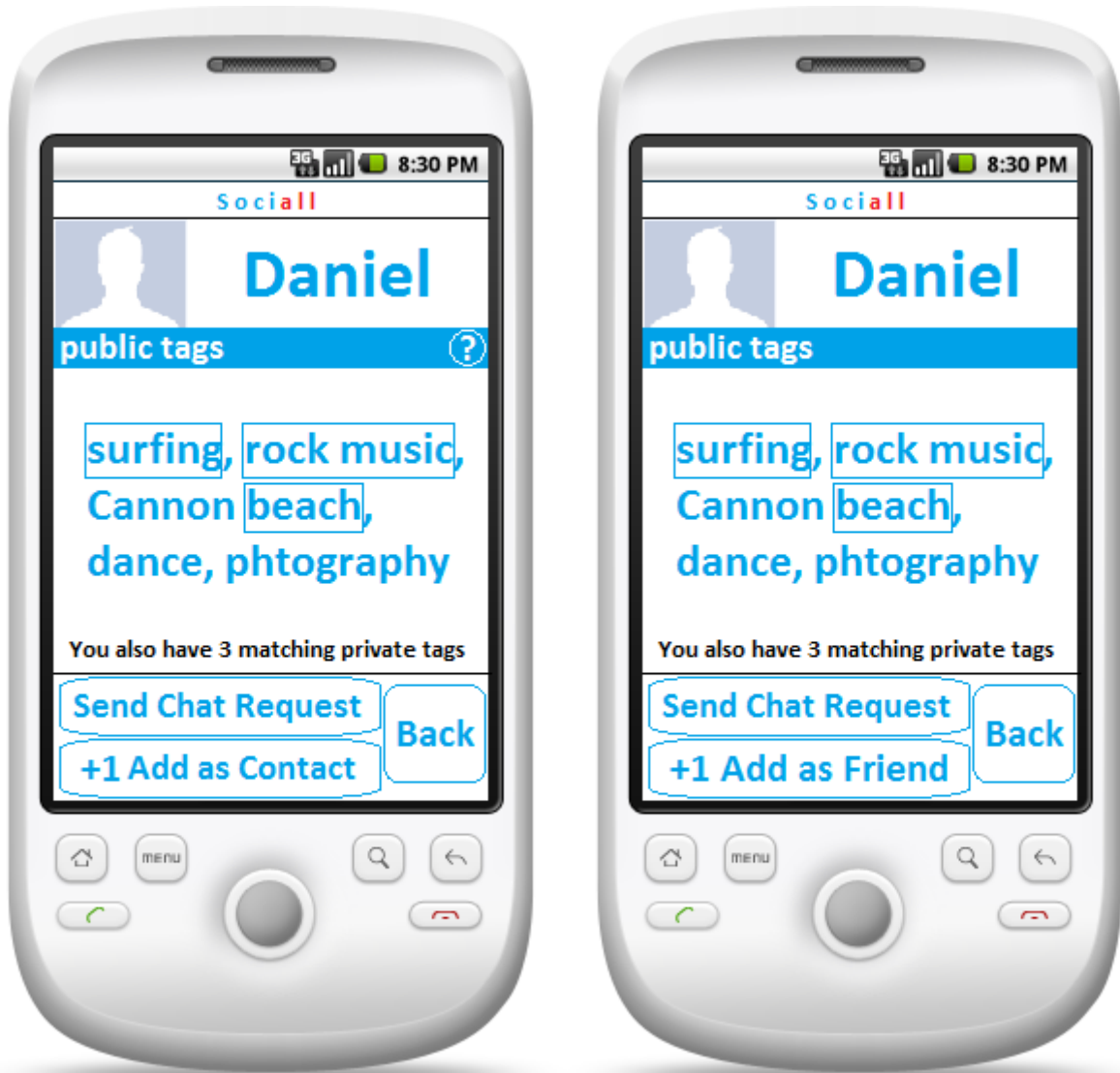
The idea of just jumping into a general chat to meet new people was foreign to our users at first. After the first task using the group chat though they seemed quite comfortable with the chat mechanism and the process of entering into a private chat to discuss an actual meet up.

INTERFACE REVISIONS

User testing uncovered a number of flaws in our design that we hadn't anticipated. Both user complaints and praise directly influenced a number of graphical revisions of our design as well as the flow of control throughout the program. Original designs are pictured on the right with revisions shown on the left.



Group chat / home screen: Our initial design had a home screen with options for chat, friends, meetings, and profiles. Unfortunately this initial screen proved to be confusing to the new user and an extra step for the experienced user to get the group chat (which is what the rest of the application revolves around). For our revised design we decided to eliminate the home screen entirely, instead dropping the user directly into the group chat pictured on the left and migrating the eliminated features to different screens. We also eliminated the interest slider and change room buttons as these were unclear to the user and not part of the common use case of the application.



Other member profile page: Our users didn't seem to have much problem navigating the profile page of other users. This is likely due to the experience our users have with other social networking services and the similarity our interface has. One change we did make across most pages (as reflected here) is adding a help button to explain the current screen.



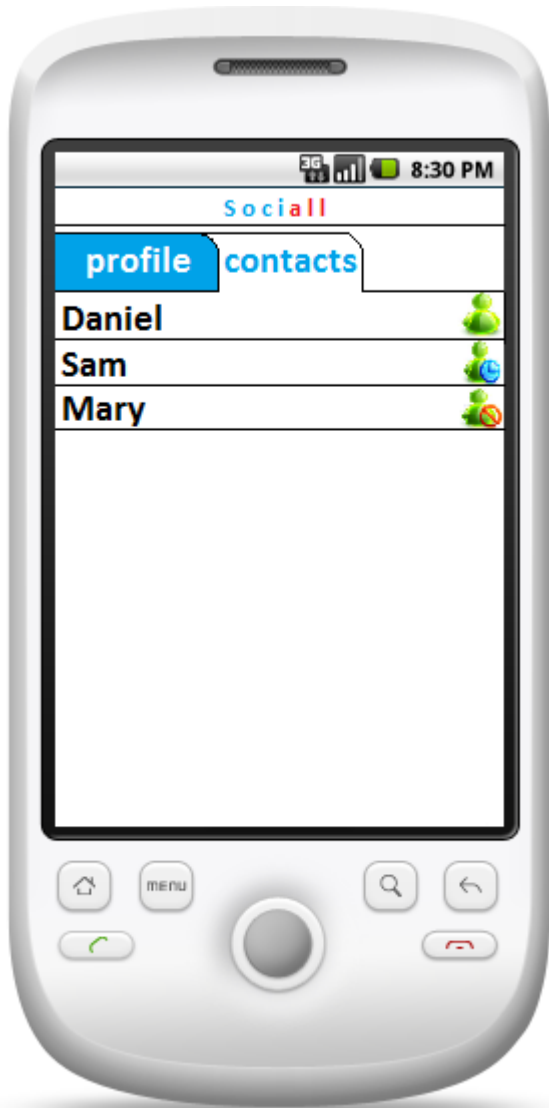
Member view: Our original design featured two ways to view users, both “tag cloud view” and list view (pictured above). This was a case where having two ways to accomplish the same task did not provide flexibility like we were hoping, but instead confused the user. The cloud view “looked cool”, said one user, but the rankings next to the names were confusing and member listing was already accomplished by the list view. Further, this led users to think that there were different features associated with each view-- also untrue. We also moved the search functionality to the member screen and made the search box bigger. As the search function searches users’ tags, it makes more sense contextually in the member screen; users didn’t know what exactly they were searching for when the search button lacked text and was on the group chat screen.



Search results: As discussed in the revision of the member screen, the search box makes more sense in the member screen. This way it more clearly acts as a filter for the displayed users.



Profile page: Though our users understood the concept of the profile page, they in general had misconceptions about how private tags worked. They had questions about what the point of these was and who could see private tags but we had no way of telling them. To help alleviate this problem we added help icons to the public and private tag texts. We also moved the contact screen (previously part of the now eliminated home screen) to a tab in the profile screen in a general effort to group like pieces of information together: your profile and your shortcuts to other's profiles are similar things that should be in the same place.



Contact page: This page was not developed in our initial design. We developed how this screen would look based on the feedback we received of how our users thought this page would function (they thought it would look much like an instant messaging client).

SUMMARY

Our application has the advantage of being within a grouping of products our target demographic is familiar with: social networking. Our user testing reflected our initial assumption that our users would have no trouble understanding concepts like profiles, friends, and the basic structure of meeting new people as Sociall is essentially trying to apply the concept of a social network to in person interactions. What we found though is that in many cases the expectation of how a social network functions is so strongly ingrained that our users become quickly confused when our app departs from something like Facebook (such as the secondary importance we place on “friends”). These small differences combined with the open-ended nature of our application led to our users often falling back on past social networking knowledge and either hitting a dead end or worse, finding a possible but highly inefficient and circuitous way to accomplish a task. These observations have led us to validate a number of assumptions as well as group our revisions listed above into a few broad focuses for our design:

ELIMINATE REDUNDANT / UNNECESSARY FEATURES

Some of our features were added because they were interesting or potentially helpful ideas. We didn’t know if users would use them, but they might. The features of this type just served to confuse the user. This was shown clearly during our first task where users got hung up on the “meetings” screen off the home page. The meetings page was just to be an area where users could write down future meetings. The design is better without it. The same goes for our dual cloud view / list view of members as listed in the discussion for “member view” above.

OPTIMIZE FOR THE COMMON CASE

Sociall is intended to facilitate in person meet ups. This process revolves entirely around the chat function. By the second task, when users were familiar with the chat function; they had no problem using Sociall for its intended purpose. However, when first using the Sociall the “chat” button was the last thing our users generally clicked. They instead ended up going down the dead ends of the “friends” and “meetings” links (despite these being much smaller in size). We decided it would be best to eliminate the home screen entirely and drop the user directly into chat as described in the “group chat / home screen” discussion above.

CLEARLY EXPLAIN / DIFFERENTIATE NON-STANDARD FEATURES

Our design lacks any help or explanation of our features. This became an issue during profile creation when users were unable to tell the difference between public and private profile tags. We decided this would be a good place to add a small textual clue about each option (“visible to everyone” on public tags and “only visible to you” on private tags). We will also be adding help icons to the various screens of our application to explain the purpose of each; this should be especially important for screens like the chat screen that have multiple functions.

We noted a deeper problem with the “friends” screen though. Our users seemed to attach more meaning to this than we intended though. Friends are the primary discovery mechanism in Facebook; you add friends to grow your network. In Sociall discovery is accomplished through the group chat. For this reason we’ll be changing “friends” to “favorites”; this terminology evokes thoughts of Internet bookmarks, a handle to reach a certain destination again. This concept is much closer to the intended use of friends.

Our application was generally well received by our users. They thought the design was fairly easy to use and they liked the idea of social, in person, exploration. We found that our users were able to find multiple ways to

accomplish the same task but that we should focus on making a small set of optimized paths instead of leaving the interaction completely open ended.

Even after user testing though it is difficult to know exactly how our users will want to use Sociall. We have our best guesses that we structured our tasks from, but Sociall is an open ended tool to accomplish the task of meeting people; it is not an end in itself. In a completely free setting our users might find uses and develop needs we hadn't anticipated. The only way to explore these questions are to find more users, ask more questions, and run more tests.

APPENDICES

APPENDIX A: USER INTERACTION NOTES

Participant #1: English major, female

Task 1:

Button sequence: Social app -> profile -> no input in name, inputted "surfing, dancing, rock music and beaches" to public tags -> ok (goes back to home screen) -> meetings (no page available) -> friends (no page available) -> profile -> tried to click public tags -> ok (back to home screen) -> chat -> members (after seeing chat log) -> Daniel (top person) -> add as friend.

Problems: confusion about profile page, specifically what public and private tags mean. Home page is not very informative (user doesn't know what to click).

Task 2:

Button sequence: Social -> wants to click meeting/friends again but still no pages available -> chat -> members (after seeing chat log) -> Mary -> chat request -> meet up -> click Burger Place.

Problems:

Task 3:

Button sequence: Social -> chat -> members -> Kim -> send chat request (conversation not useful) -> close -> members -> Susan -> send chat request (not useful) -> close -> members -> Quinn -> send chat request (conversation not useful) -> back (goes to members list) -> cloud button -> member list -> cloud button -> noticed magnifying glass search icon at top of namecloud page -> searches "metereology 101" -> finds Sam -> send chat request -> arranges meeting.

Problems: No idea what nametag page and numbers next to the names mean. When asked what she thought the numbers meant, she thought maybe distance.

Feedback: GUI is user-friendly, resembles Facebook. Main concern is about numbers next to names, nametag cloud and search button (not apparent).

Participant #2: Social science major, female

Task 1:

Button sequence: Social -> profile -> asked "what do the public and private tags mean?" Spent a long time considering what they mean -> when I ask what she thinks they mean, ultimately put the tags from the scenario into public tags -> ok -> meetings (doesn't work) -> friends (doesn't work) -> chat -> uses interest slider to increase threshold high enough so that only the highest match shows (Daniel) -> clicks Daniel -> add friend

Problems: no instructions for what public/private tags are. User trying hard to not make mistakes.

Task 2:

Button sequence: Sociall -> chat -> clicks Mary in chat log -> send chat request -> meetup -> "Burke cafe"

Task 3:

Button sequence: Sociall -> stays on home screen for a while, when asked says she wants some kind of search button but there's nothing on home screen -> decides that chat is where everything is -> chat -> finds search button at bottom of group chat page -> inputs "Meteorology 101" -> finds Sam -> send chat request -> arranges a meeting without going to map (purely through text dialogue)

Problem: Misunderstood private tags (thinks they are seen only by friends),

Feedback: Not very willing to use app in real life, would rather meet people physically. Is excited about meeting random people from classes, though. Excited about map and directly selecting meetup location. Asks us if there is any framework to make an arrangement (time, etc).

Participant #3: Bio Chemistry, male

Task 1:

Button sequence: Sociall -> profile -> adds public tags from task -> ok -> on home page, clicks meeting then friends then chat -> members -> Daniel -> sends chat request and we tell him he's done.

Task 2:

Sociall -> says "my profile is already set so I click on chat" -> chat -> members -> Daniel -> send chat request -> arranges meeting/time through dialogue

Problem: never uses map/meet up button.

Task 3:

Sociall -> profile -> adds "Meteorology" and "Meteorology 101" to public tags -> ok -> chat -> members -> Quinn (nothing useful) -> back to group chat -> back to home screen -> profile -> deletes all public tags besides "Meteorology" and "Meteorology 101" -> ok -> chat -> members -> Sam is at the top since he is the only one with matching tags -> clicks Sam -> sends chat request -> arranges meetup through dialogue (no map)

Problems: Thinks private tags are visible only by friends. Didn't notice the search bar. Said it would be more useful if he could search. Never uses the map to arrange meetings.

Feedback: Friend link on home page should give some recommended friends. Prefers name list to cloud page: "cloud is fun, but name list is more useful. The stars are useful." It's a cool idea to find people you don't know.

APPENDIX B: IMMEDIATE REVIEW NOTES

MAIN PROBLEMS

- Misunderstanding of private and public tags. People think they are seen by friends.
- Lack of instructions for user.
- Small search button.
- Home screen is confusing (chat is always the last button pressed when the user first encounters the screen).

BEST ASPECTS

- People like the idea of social exploration (meeting random people with similar interests).
- Mimics Facebook, is generally user-friendly.
- Real-life oriented. Can arrange a meeting offline.
- Map meeting arrangement is intuitive.
- People found multiple ways to solve the same problem.

THINGS WE SHOULD CHANGE:

- Interest threshold should gray out users beneath threshold, not remove them from the chat log.
- Add information icons to the public/private tags section and also on the home page (to let the user understand what the system's doing).
- Add (?) icon to the corner of every screen to explain what it does
- ~~-Make search button more visible.~~ Add "search tags" field to members list
- ~~-Change home screen so that user understands what the Chat button does.~~
- ~~-Perhaps add flexibility to which tags you can use for the search (for example the last participant searched using only the Meteorology tag to find Sam).~~
- Eliminate home screen completely, drop user directly into chat, prompt them to create an account when first signing up
- For group chat get rid of interest slider, only have two buttons "members" and "profile"
- Delete nametag cloud view and the numbers next to peoples' names. People only pick names based on their priority in the member's list (usually look at stars to pick people).
- ~~-Add the ability to manage meetings. Perhaps Google Calendar style. Eliminate contacts~~

APPENDIX C: USER TESTING SCRIPTS

Hi, we are testing the user interface of a social networking application for a computer science class. Would you be able to spare twenty minutes?

If they agree:

We are testing an application called Sociall which can be used to find people who share common interests with you. The application is in its early stages right now so we will be using a paper prototype to simulate it. This is the first screen which is the touch screen for an Android phone.

(hand them the first screen)

All of the buttons on the screen are supposed to be clickable. We'll replace the current screen as you move through the interface. If you ever need to type something in, we'll provide you with a pen with which to write it. We also have three tasks for you to perform using the interface.

(hand them the tasks)

It would be helpful if you could talk through your decisions as you go through the tasks. If you find yourself stuck, tell us what you're looking for, or what you would expect the application to provide. At any time that you think you're done with a task, tell us that you're done. If you decide that you're stuck and want to just finish, also tell us that you're done. There's no pressure on you to finish.

Also, remember we are testing our user interface not you. We want to make sure that it's user-friendly.