

Herd



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Introduction:

“Never miss out” is the value proposition we are looking to encapsulate with our application. Finding reliable information about events is incredibly difficult. By enabling people to make informed decisions about events through user-driven data, we can improve how people treat events before, experience them during, and remember them after. We are looking to achieve this by providing a platform in which people can create events, share information, and communicate with others. During this part of the design process, we refined our interface and created a prototype. We then tested this prototype with three potential users in order to find out what works and what doesn't.

Sketches:

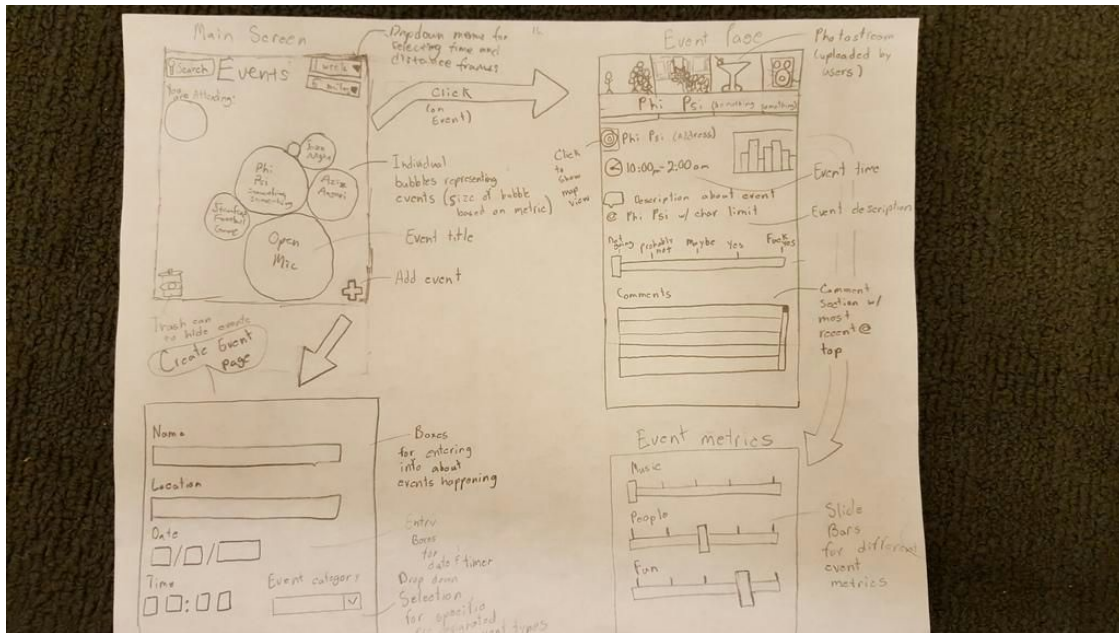
Sketches

We began this prototyping process by drawing out ideas that popped in our heads. We ran through many ideas for the UI, particularly how to display events. We went

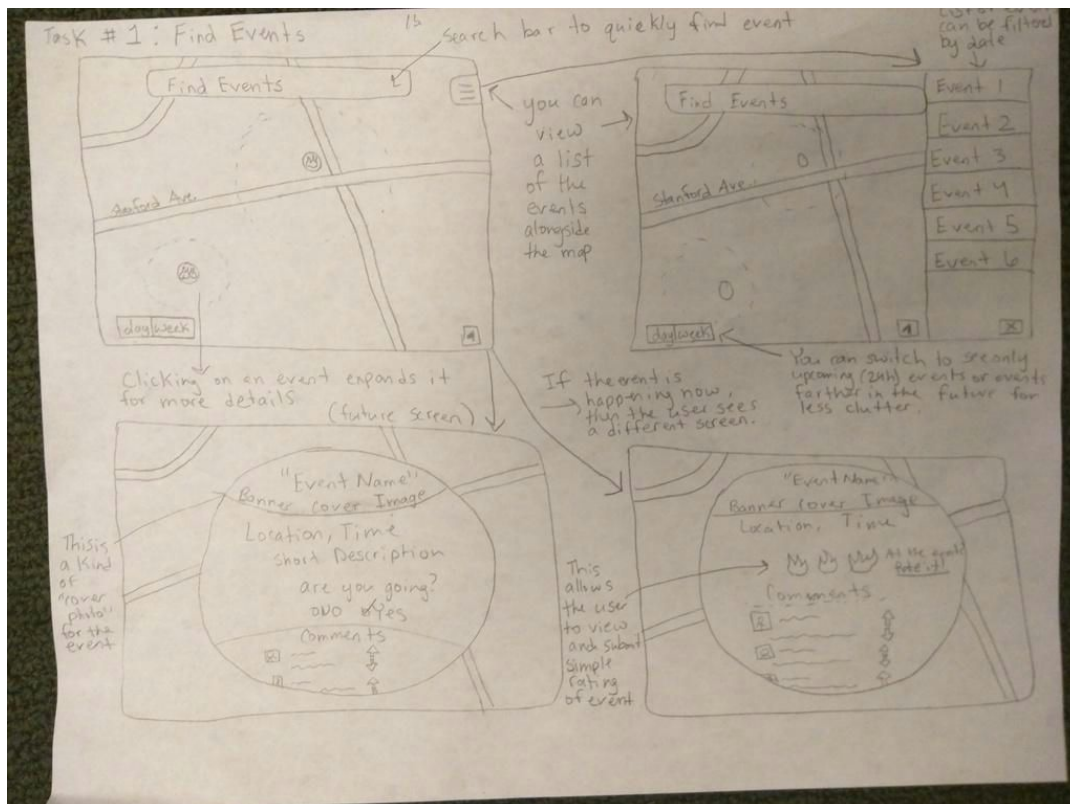
through ideas like a simple list, a sorted line, cascading pages, and a map overlay, to name a few.

After deliberating, we decided to draw storyboards for two ideas we particularly liked: a bubble visualization and a map overlay.

Bubble implementation storyboard



Map implementation storboard



The bubble implementation functions by representing the events as free-floating bubbles on a screen. The size and shading of the bubbles indicates their popularity (darker shades of a certain color that we haven't decided on yet indicates higher popularity). The map implementation functions by allowing the user to move through a map of their area. Events in a given time frame are displayed as bubbles laid over their location. By clicking on the bubbles in either of these implementation, users would open an event page where they can view various information about the event.



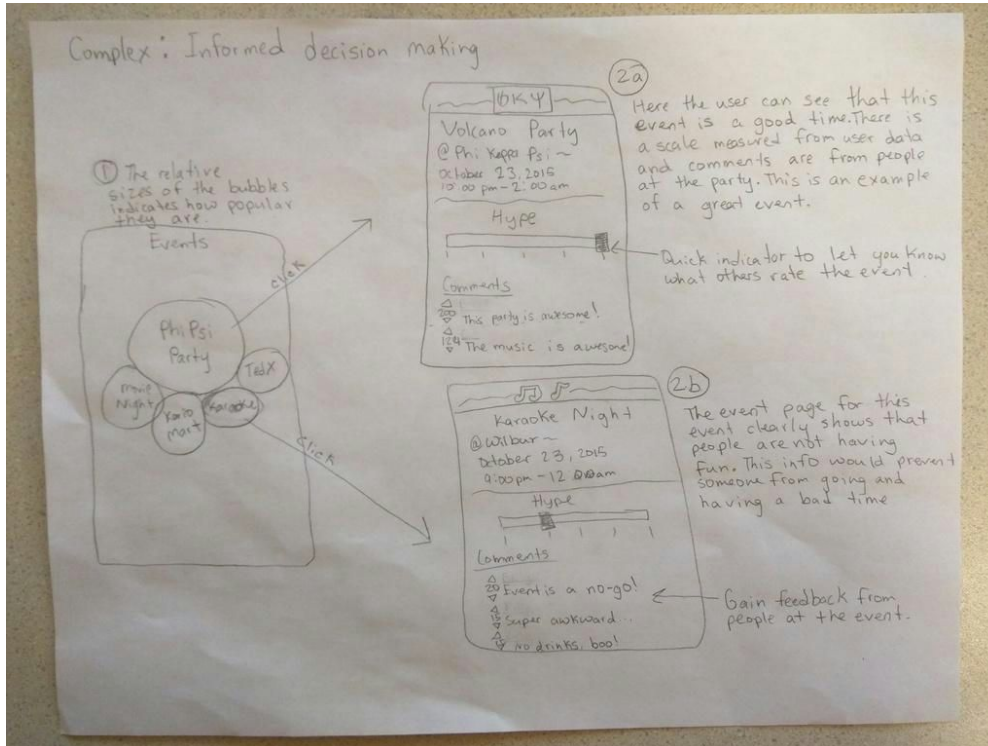
Bubbles-Apple Music

Including general info like date, location, to other info like hype rating. The details in how/what information is provided in these two storyboards is different, although the general idea behind the event pages is similar. This is because we felt like we defined a very strong baseline with the event page. Nevertheless, we wanted to test out different ways of implementing that baseline.

Selected Interface Design:

After a lot of thought, discussion, and friendly argument, we decided to select the bubble implementation to move on with. We decided on this because we felt it was far cleaner than the map overlay. There are simply too many details and nuances to deal with in the map implementation. So much so that we felt like it would be near impossible to create a useful map implementation that worked for all kinds of locations. This perceived inherent design flaw guided us towards the bubble implementation. Additionally, we felt that the bubbles provide more than enough information, and that having the map overlay would simply be feature

Complex Task: Informed Decision Making



Prototype:

Because our interface is intended to be on a mobile phone platform, we made a phone out of cardboard and made screens out of paper to illustrate each of the key screens our users would navigate between. These paper screens represent the main pieces of functionality. Users interact using touch input to move through the screens.

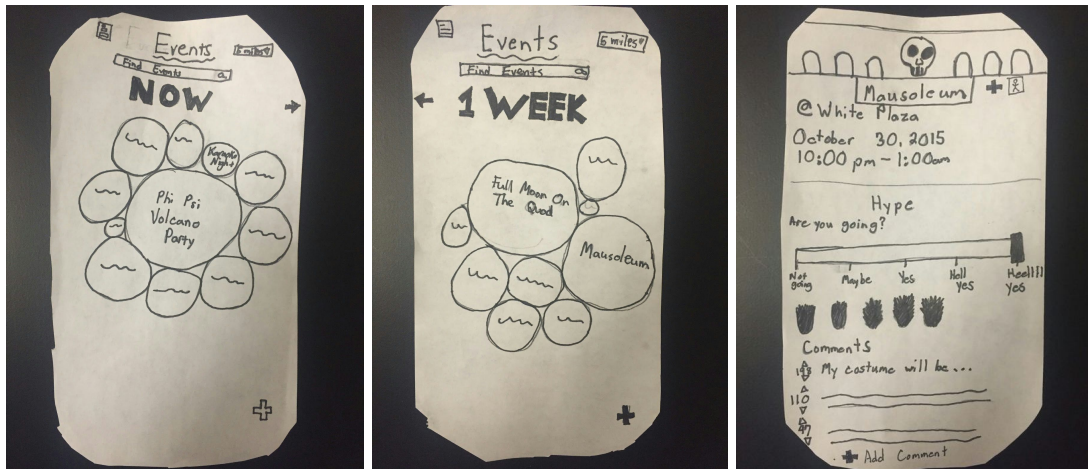
For testing, we decided to coalesce our simple and our complex task into a single task. We did this because we felt that the simple task (find events) functioned better as a subtask of our complex one (make informed decisions about events).

To represent the functions we had in mind, we made screens showing how our users would find events using our app. The first screen that we made was the *home view*. It shows all the events happening soon or now. It groups together events into “bubbles” which themselves relate information about events through size and color. To show future events we made a *future view* showing bubbles for future events that you can get to by either swiping or clicking on the arrow. Touching a bubble itself takes you to its own event page with more details.

home view (now)

future view

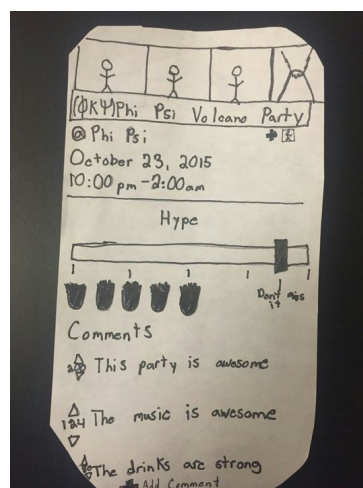
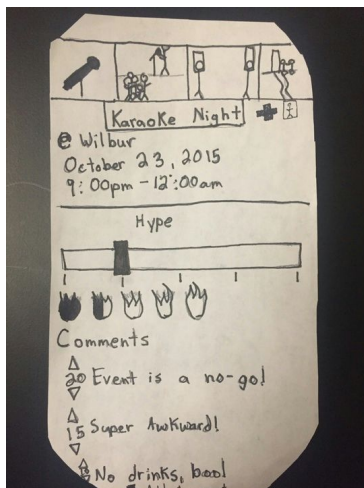
event view



In order to help our testers make informed decisions about the events, we filled some event pages with information that would be useful when deciding between different events to attend. To achieve this, our prototype screens displayed real-time photos of the event, user comments, and a “hype” meter displaying how exciting an event is. We made a “good event” and a “bad event” to test how users would react to the information we are providing.

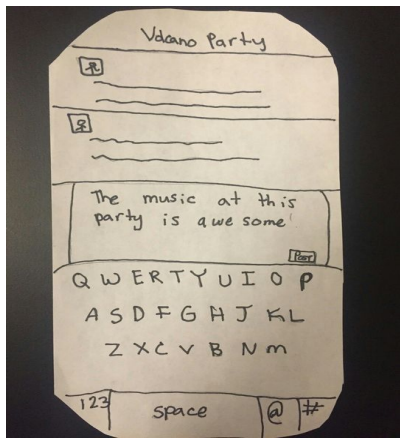
“bad event” example

“good event” example



For the second task, sharing info about events, we made sections in the event pages that allowed the user to input their own opinions on the events. This took the form of a comments section, and public event photo streams, as shown in the above event pages. In this task, we allowed users to add a comment and a photo to the event of their choosing by pressing the respective “plus” buttons on the screen. While add comment and add photo screens have become fairly standardized, we still wanted to test how our users felt about the way that we designed them.

Add comment

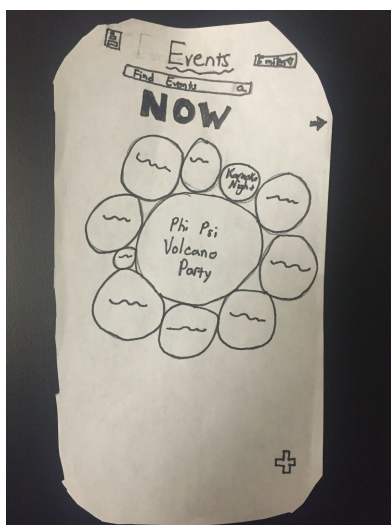


Add photo

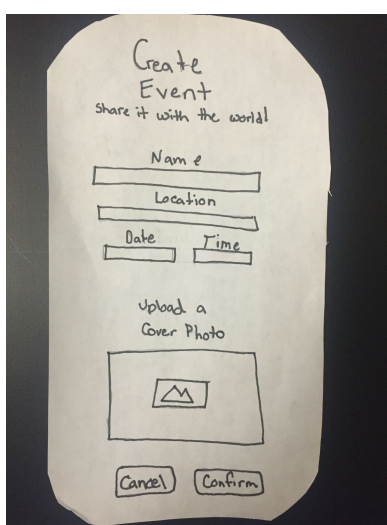


For our final task, we wanted to test how users felt about creating events. Again, screens for this sort of thing have been established for some time, but because our application is user-driven, it is incredibly important to us to test pieces that will be heavily used. For this we created a clearly labeled “plus” button on the events screens, which when pressed, sent the user to a create event form. This form allows the user to input a name, location, date, time, and a cover photo.

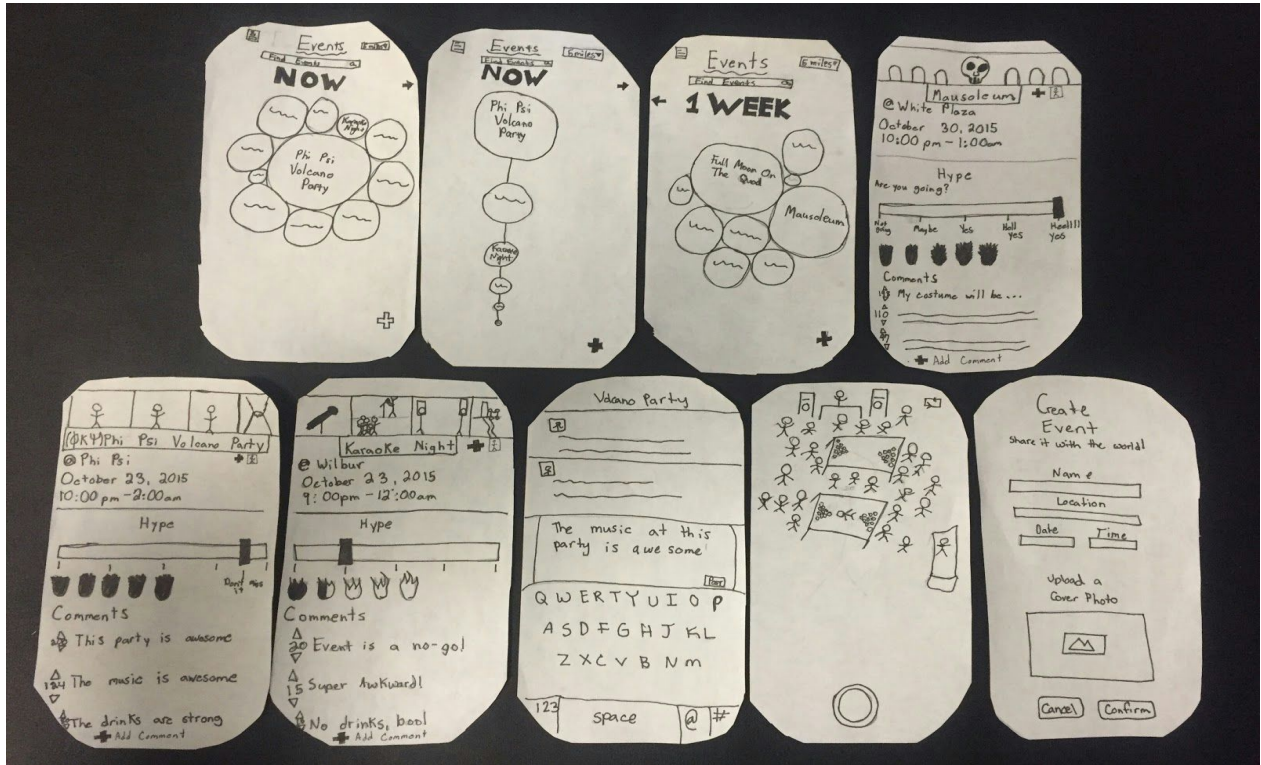
Home screen



Create event



All of our screens



Method:

We selected random people in our dorms who we did not know or speak to regularly. This way they wouldn't be biased while testing our prototype, but would be comfortable spending time with us testing. They were also a diverse demographic. We tested with both women and men, and they also had a range of experience with technology. One had very little experience navigating mobile apps, while another had extensive experience even creating his own apps.

Our testing was primarily done in our dorm's dining room. Our team sat across from the user and observed. Our facilitator introduced the test, while one team member served as the

“computer” switching the paper screens on the user’s cardboard phone, and another team member served as the note taker and wrote down anything of interest.

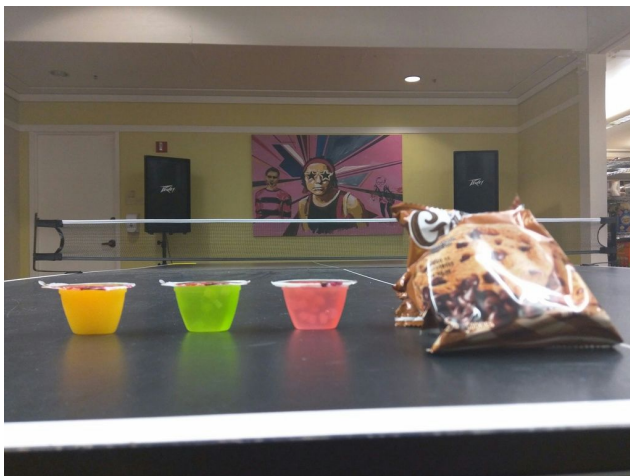
Our procedure consisted of our facilitator giving the user a task to accomplish using our app, and then the user going through our interface (with the aid of the computer). This was repeated three times (once for each main task) for each user while the note taker wrote down observations. These observations included anything that the user found intuitive or appealing about our interface, and also anything that the user had trouble with, or didn’t like while using our app.

At the end we asked our participants for final thoughts and comments about the interface, and compensated them with tasty snacks.

Our three testers!



Snacks!



Results:

We gained a lot of valuable information from our user tests. In general, our interface was intuitive and made sense, but there were definitely some problems.

Minor Usability Problems: Certain buttons were not clearly labeled. For example, our prototype for the main page had a button to adjust the distance radius for which to display events. It was simply a button that said “5 miles” and it wasn’t clear exactly what it was for. Only one of our testers actually understood what that was. When we explained what it was to one of our testers, he thought of it as an added complication. He felt that it was an added element that he didn’t want to think about. To fix this we could either label it better, or completely scrap it and have distance calculations be done automatically. Another problem was that there weren’t options to retake or edit a photo before posting it to the live event photo stream.

Major Usability Problems: We received feedback that our event pages were cluttered and had so much information that it was somewhat intimidating. This could be fixed by stripping down information and keeping our event pages minimal, while still being informative. This could also be fixed by better separating the various pieces of our event page.

Usability Catastrophe: Every single one of our users struggled to get back to the main page while in an event page. If all of our users struggled with this, we would have a major problem. We plan on fixing this by either making it obvious using animations, or by actually having a button to exit. Users also found that sliding a bar to indicate attending an event was completely unintuitive. This part of our interface has to come naturally to our users, since it is the way we intend to gather information about events.

In general though, people seemed to both understand and enjoy the core pieces of the application. We were pleased to see that the bubble implementation was natural for our testers.

Discussion:

Our results provide optimistic information, while still pointing towards some changes in design and strategy that we will have to address.

Information Overload: Our goal going into this project was to give people a lot of information about events. This led to us squeezing too much information into each event page. As it turns out, this overload of information is actually intimidating to users. We have to alter our strategy a little bit. Instead of providing a lot of information, we need to provide *meaningful* information. This means that we have to make sure our event pages are clean and not bloated to the point that finding information on them is difficult, but we still need to make sure we are providing valuable information.

Simplicity: On a related note, our app needs to remain simple. We came up with a lot of neat ideas that we thought would be cool and fun to implement, but now we see that if we implement too much, the application will feel complicated and lose focus. For example, some users found it confusing or unnecessary to have the ability to change the event radius. Having this just adds another layer of complexity that makes our interface less user friendly.

These results will definitely affect how our interface will ultimately look. It's also easier to change how we implement something the first time than it is to create an erroneous version and then have to fix it. Because of the feedback we received, we will focus on making our medium-fi prototype clearer and cleaner.

Appendices:

User Testing Heuristics

Problem	Location	Severity	Possible fix	Task
Difficult Navigation: It wasn't immediately obvious how to return to the home screen.	Event Page	4	Animation could hint at closing gesture.	1
Cluttered Information: The amount of information, and way that it was displayed was somewhat intimidating.	Event Page	3	Strip down information, keep it minimal and better organized.	3
Unclearly labeled buttons: The distance meter wasn't understood at first, and when explained, was an added complication.	Home Screen	2	We could label it better, or could scrap it completely and have that function done by the app.	1
Unavailable photo options: When taking a photo to share, it is automatically posted and there are no buttons to cancel/retake.	Event Page	2	An intermediary screen to review photo before posting.	2
Unintuitive Slide Bar: Sliding a bar over to indicate you're attending an event isn't intuitive.	Event Page	4	A RSVP button would be more intuitive.	2

Consent Forms

Appendix A: Consent Form	Appendix A: Consent Form	Appendix A: Consent Form
<p>Consent Form #100</p> <p>The [TEAM NAME HERE] application is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of [TEAM NAME HERE]. Data will be collected by interview, observation and questionnaire.</p> <p>Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers ([TEAM MEMBERS NAMES HERE]) or with Professor James Landay, the instructor of CS 147. <i>Abhinav Wang-Tanaka, Christian Lam, David J. Pei</i></p> <p>James A. Landay CS Department Stanford University 650-498-8215 landay@cs.stanford.edu</p> <p>Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student/researchers and their supervisors/teaching staff.</p> <p>I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the [TEAM NAME HERE] experiment. I also give permission for images/video of me using the application to be used in presentations or publications as long as I am not personally identifiable in the images/video. I understand I may withdraw my permission at any time.</p> <p>Name <u>Anika Nagpal</u></p> <p>Participant Number <u>1</u></p> <p>Date <u>10/21/15</u></p> <p>Signature <u>Anika</u></p> <p>Witness name <u>Abhinav Wang-Tanaka</u></p> <p>Witness signature <u>Abhinav Wang-Tanaka</u></p>	<p>Consent Form #101</p> <p>The [TEAM NAME HERE] application is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of [TEAM NAME HERE]. Data will be collected by interview, observation and questionnaire.</p> <p>Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers ([TEAM MEMBERS NAMES HERE]) or with Professor James Landay, the instructor of CS 147. <i>David J. 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I understand I may withdraw my permission at any time.</p> <p>Name <u>Amy Sridharthy</u></p> <p>Participant Number <u>#3</u></p> <p>Date <u>10-21-15</u></p> <p>Signature <u>Amy Sridharthy</u></p> <p>Witness name <u>Abhinav Wang-Tanaka</u></p> <p>Witness signature <u>Abhinav Wang-Tanaka</u></p>	<p>Consent Form #102</p> <p>The [TEAM NAME HERE] application is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of [TEAM NAME HERE]. Data will be collected by interview, observation and questionnaire.</p> <p>Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers ([TEAM MEMBERS NAMES HERE]) or with Professor James Landay, the instructor of CS 147. <i>David J. 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I understand I may withdraw my permission at any time.</p> <p>Name <u>Rebecca Brinkley-Delano</u></p> <p>Participant Number <u>2</u></p> <p>Date <u>10/21</u></p> <p>Signature <u>Rebecca Brinkley-Delano</u></p> <p>Witness name <u>Christian Lam</u></p> <p>Witness signature <u>Christian Lam</u></p>
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