

# Parcel

## Low-fi Prototyping & Pilot Usability Testing

### 1. Title & Team

Parcel: sending memories for your friends to find	
Jon Derman Harris	UX/Design
Da Eun Kim	User Testing
An Luong	Management & Documentation
Debnil Sur	Development & Digital Prototyping

### 2. Introduction and Mission Statement

#### Introduction

Transitions can be hard, and moving somewhere new can feel overwhelming for college students. Connecting and interacting with faraway loved ones comforts them. Care packages are especially emotional for both homesick college students and their families and friends. Parcel can be a way to digitally send memories or moments to a certain location, and when your loved ones journey there, they will have a surprise waiting for them.

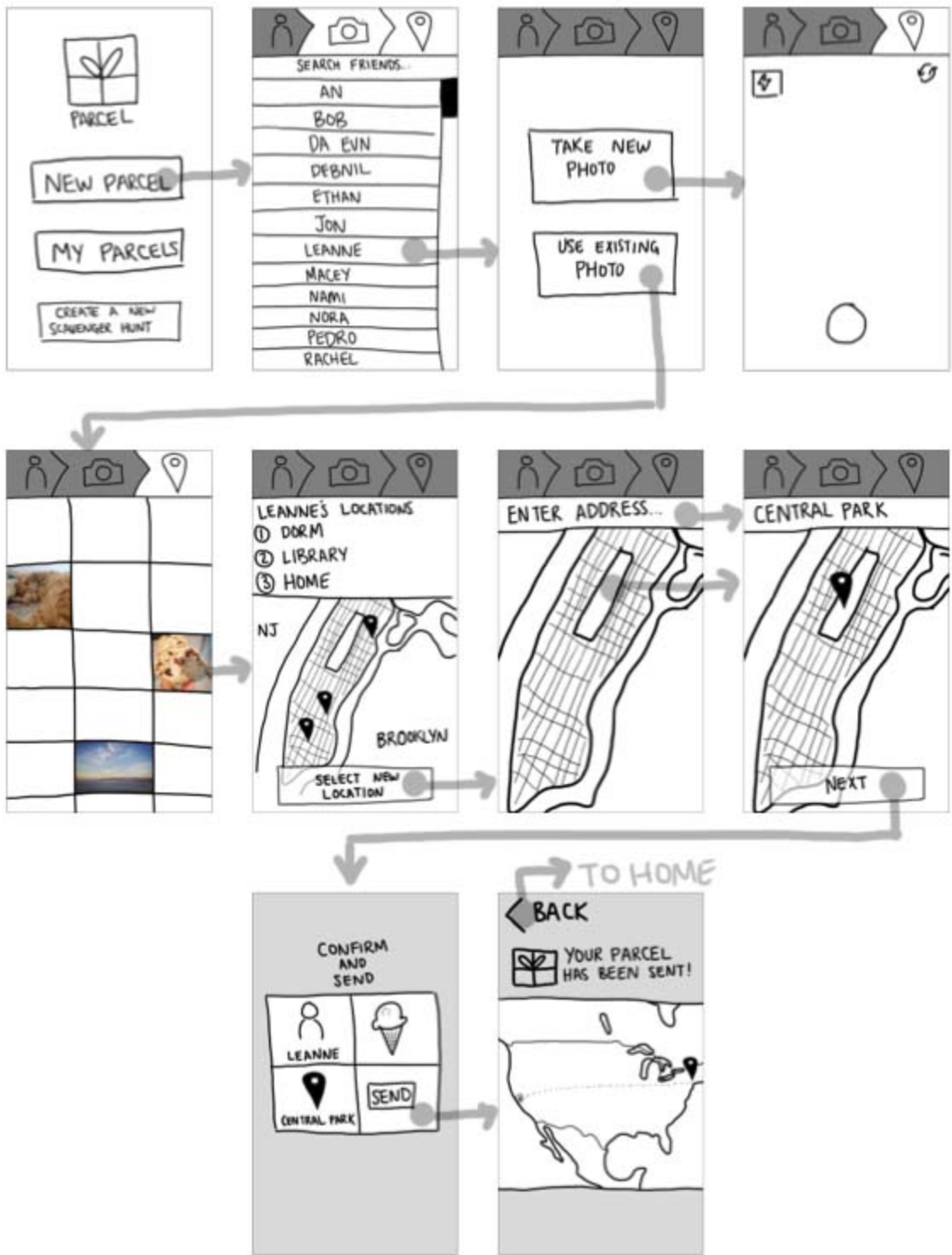
This report details the learnings we gained from user testing of our first design iteration. Our user tests were designed to elicit the most constructive feedback on our app's usability and validate our hypotheses about the value adds of each of our product's features.

#### Mission Statement

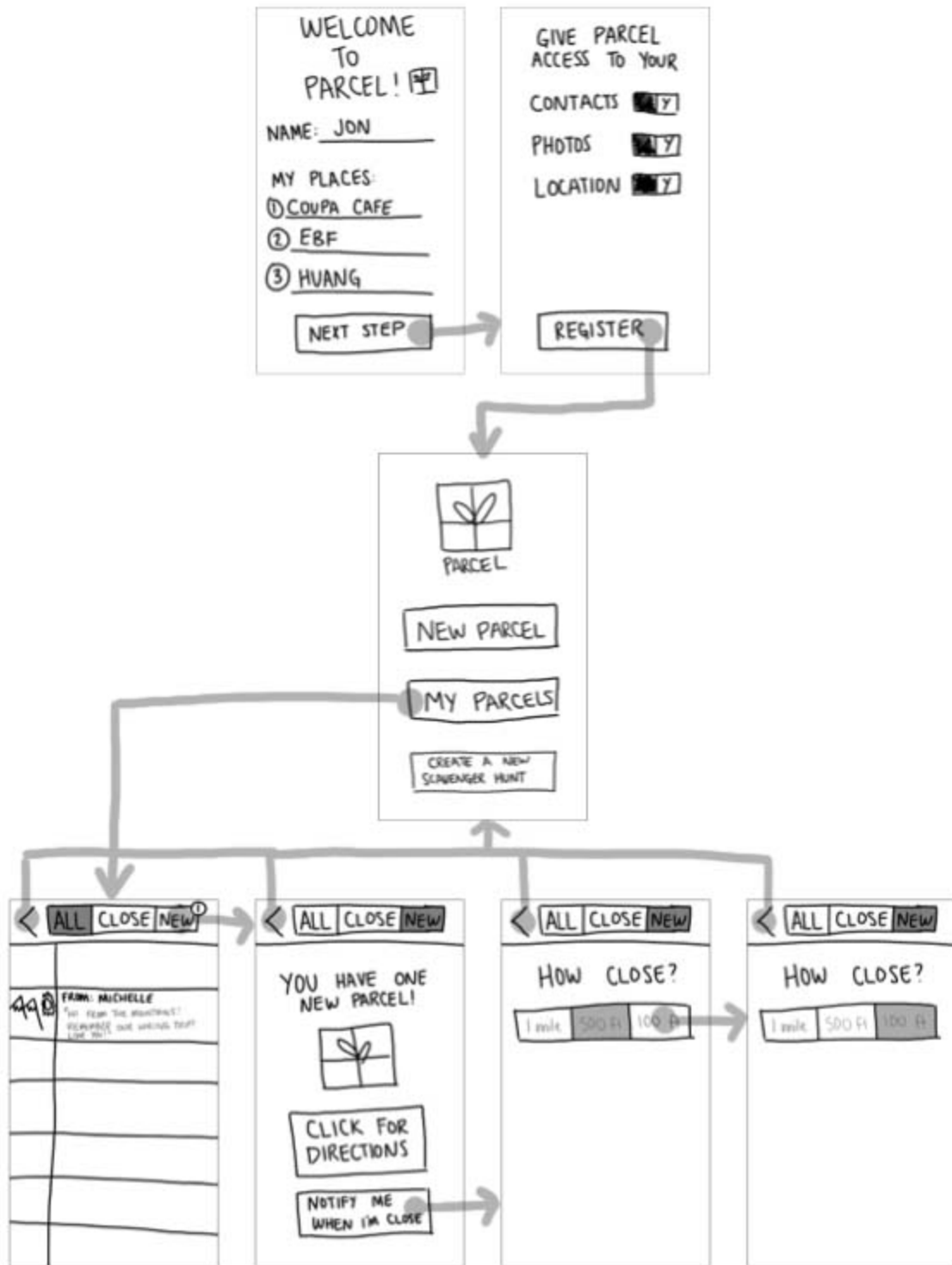
Our mission is to use location to add meanings to messages. People use Parcel to communicate with friends and family both near and far and connect memories to places that matter to them.

### 3. Prototype description

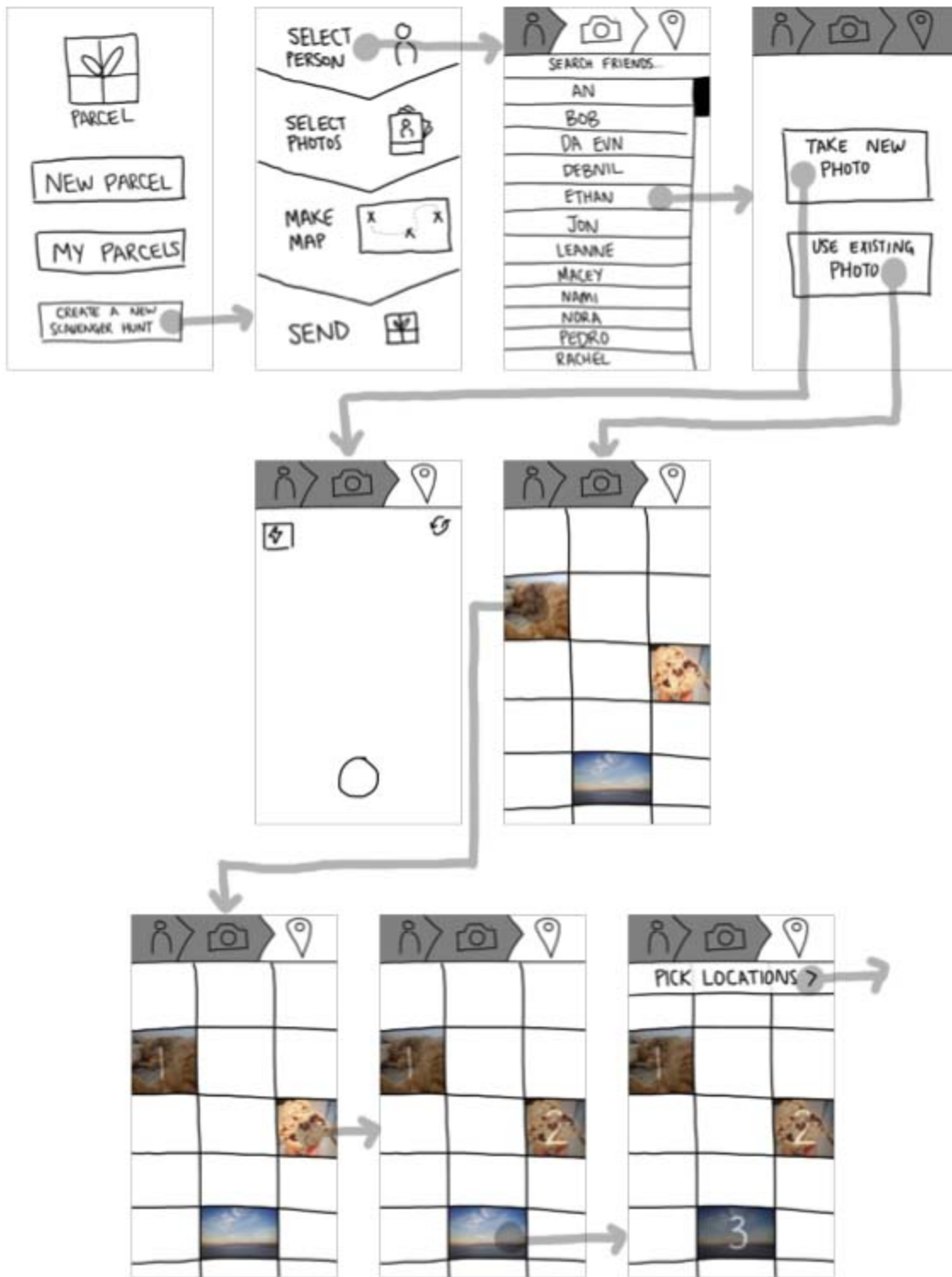
Our prototype was both vertical and horizontal. We used the POP app on one of our iPhones for the testing - users were able to perform their tasks because of the . Only the three functions that enabled the users to complete a simple, moderate, and complex task were implemented, but they were implemented completely. This prototype uses a hub-and-spoke model to arrange each main feature stemming from a home screen. Within each of the three features, there is a variety of flow structures. Tasks 1 and 3 follow a linear progress bar at the top of each screen, indicating the user's progress in completing the task. Task 2 uses a second hub-and-spoke design in which the user toggles between the three screens available at the top of the screen. All of the user's movements within the app required tapping the screen at those 'buttons' (movement indicated by gray arrows in the diagrams). No other gesture or hardware interfaces were used.



**Task 1 diagram:** Flow for selecting friend, photo, and location, with a final confirmation screen.

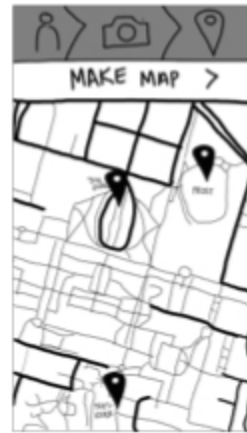


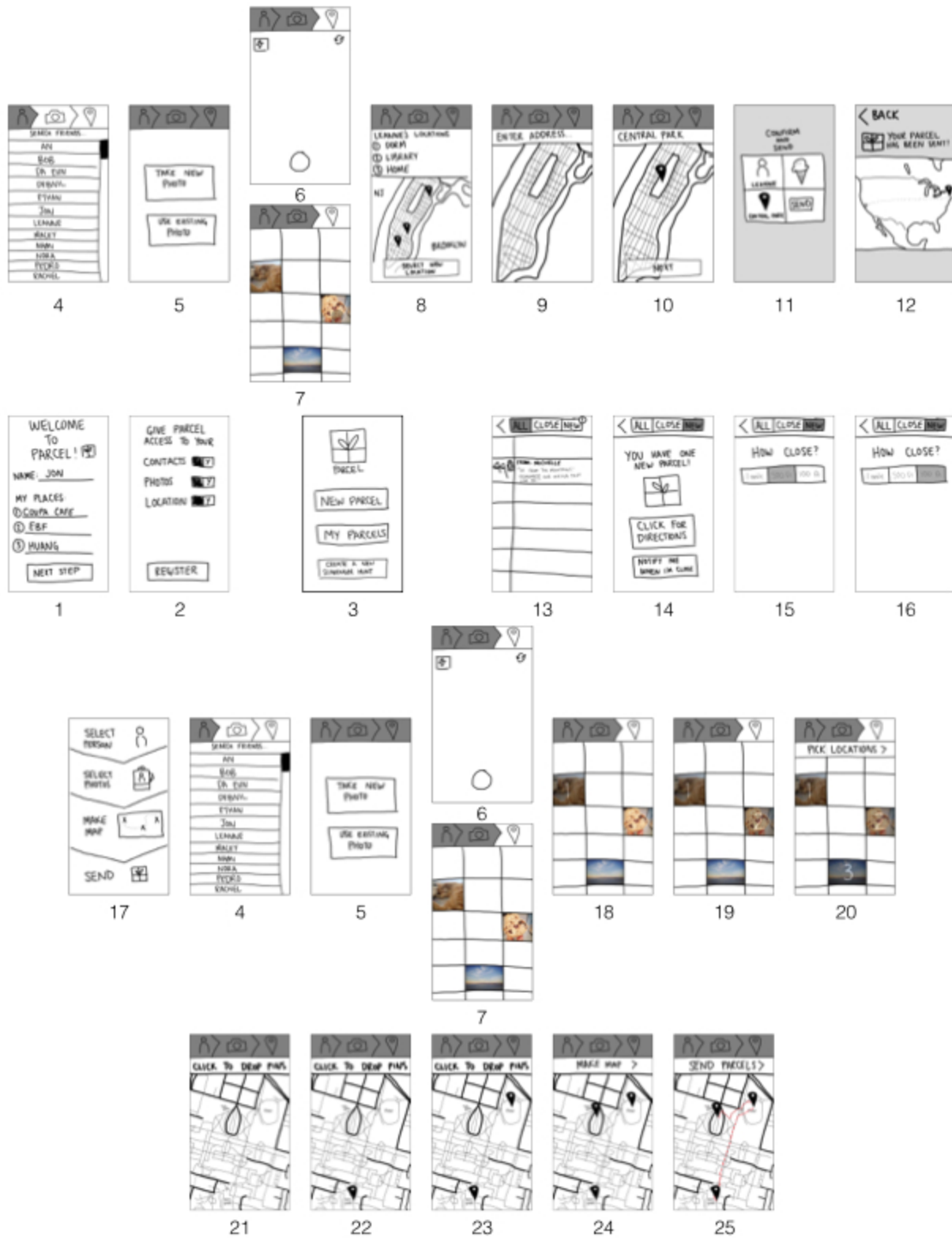
**Task 2 diagram:** Registration screens (shown for introduction to the app, not part of the user's task), home screen, then flow for observing received Parcels.



**Task 3 diagram 1:** Begin making scavenger hunt, select friends and photos.

**Task 3 Diagram 2:** Select locations for the three Parcels for the scavenger hunt.





Complete interface layout

#### **4. Method**

##### ***Participants***

Friends introduced us to other undergraduate and graduate students who they felt fit the model of the target user: a homesick college student. We interviewed younger students who may be having continuing difficulty fitting into a new college environment and students from farther places who could be missing their friends, family, and loved ones miles away. We did not offer them compensation. Because we used POP and did not need a computer, JDH and Debnil were facilitators, and Da Eun and An were recorders.

##### ***Environment***

We tested in three different locations: a dorm conference room, a dorm lounge, and in public, at Tresidder. We chose these locations to stay within spaces that our users are comfortable in. In each site, facilitators would sit next to the user and observe them using the app, and the recorder(s) would sit across the table.

##### ***Tasks***

After showing users what the sign-up process would be like, we used the following cards to articulate their tasks:



**Task #1:** Please send this photo of Ben & Jerry's to your friend Leanne in Central Park.

**Task #2:** Please look at the Parcels you have received and set the app to notify you when you are within 100 ft. of any new Parcels you may have.



**Task #3:** Please make a scavenger hunt for your friend Ethan at Stanford. Send him the three photos in your phone: 1) cat, 2) ice cream, and 3) landscape to: 1) Tresidder, 2) Frost, and 3) The Oval.

***Procedure***

We began each interview by getting to know each user. Through informal conversation, we learned about their academic and social experiences, relationships with friends and family, locations of their loved ones, and current methods of communication (whether digital or physical). Additionally, we understood their technical background, both from a technical perspective and one of daily utility (what technologies they use and with what frequency they message/share photos). Then, facilitators gave a high-level introduction



of the app, the feelings or situations motivating people to conduct each task, and a demonstration of a tangential but relevant task that users can perform with Parcel: input and save their preferred locations to receive parcels. Users were then given the three task cards above one by one. They then conducted the task, with the observer recording and watching for overall preferred workflow, screens that gave particular trouble, and other potential sources of delay or confusion (pain points). After one task was completed, the facilitator would explain the next task and answer any clarifying questions about the task that the user had. After all three tasks were completed, the facilitator asked general questions about each task -- the time it took for them, how natural it felt, and particular pain points they noticed that may have slipped past the observer. After receiving input regarding the particular tasks assigned, we then asked them about the usability of specific parts of the interface we were curious about -- the distinction between sending/receiving Parcels, the organization of the map, and others. Next, we asked more general usage questions about the app -- chiefly what kind of media they would use and who they would send Parcels to. Finally, we asked for their general opinions, their expected use cases, and any questions they had for us.

### ***Test Measures***

In the experiment, we looked for the workflows the users were intuitively choosing, screens that caused the most delay, and clicks/buttons that created the most confusion. In terms of process data, we wanted to figure out the order that users would pick a recipient, destination, and message content, and as such, though we detailed the task at the beginning, we observed how long each user spent on each page (we did this qualitatively: around or faster than one second per screen we labeled 'Fast', and anything longer than five seconds per screen was "slow". These labels were based on the speeds of the first several users. The bottom-line data helped determine that workflow and pointed out usability concerns for specific screens. That data included screens that took especially long and buttons that were ambiguous and processes that were unclear how to navigate.

## **5. Results**

From our experiments, we learned several subtle, but extremely important design preferences of our target audience. First, we learned that people did not immediately understand the order of our "My Parcels" page. We had different sections for "All," "Close," and "New" Parcels received for users to toggle through, but our users had significant difficulty understanding how to navigate that toggle at the top of the page. People also did not immediately recognize the notification for a new Parcel that was on the page. Second, we discovered that people were unexcited and slightly confused about our scavenger hunt feature. For the most part, they thought that not many people would enjoy 'having to' physically search for multiple photos. Third, we learned that the photo-selection process is currently not clear enough. Our users spent an average of ~6 seconds before understanding how to select a photo, whereas we were hoping that it would take ~2 seconds. They would have preferred to select locations immediately after selecting each photo, instead of all photos first, then all the locations. Fourth, we learned that people had a tendency to swipe left. For the screen in which our users would choose the recipient of a Parcel, all five of our

users would swipe at the name instead of push (perhaps a cue they've learned from Snapchat). Lastly, we learned a great deal about novel use cases that we had not before explored in-depth. For instance, two of our users suggested a situation where users could recommend restaurants and travel locations to their friends and family. To do this, users would send a Parcel of a food dish for a restaurant that they really liked or a Parcel of them doing something cool at a recommended travel location. Overall, we not only learned how to improve our design interface, but also how to expand the use cases for Parcel.

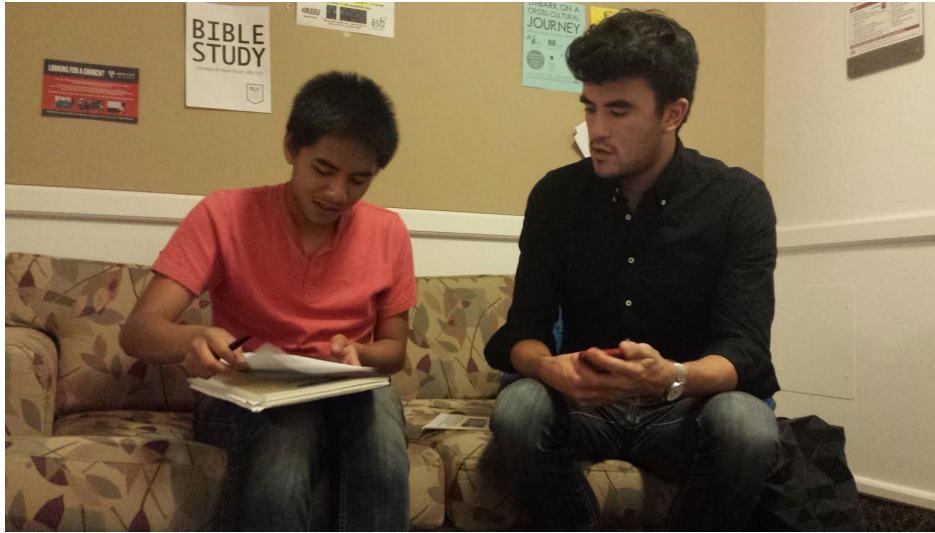
## **6. Discussion**

Our tests gave us excellent feedback and an unexpected number of suggestions for specialized features that could target new use cases. It was extremely satisfying to see users interact with our app and hear their suggestions for improvement. We learned that the overall flow of sending Parcels felt intuitive to users, which affirmed our hub-and-spoke model of the home screen (#3). There were several screens that users had particular difficulty navigating, and those learnings helped us evaluate the (in)efficacy of particular buttons and menu options, specifically #13-16 in which users can view their received Parcels. Redoing the UI for that screen is our first priority. We also witnessed users struggle with selecting multiple photos for their scavenger hunts and associating those photos with locations. Creating a more intuitive way to select photos and their Parcel locations is also a priority for our team. In discussion, users seemed to focus on the scavenger hunt as the main task performed with the app, and felt that that task created a huge time and energy investment for both the sender and receiver. Each of the five user testers were much more excited about sending individual parcels.

The main limit of our testing procedures was understanding the exact media users would send through Parcel. We certainly trust their predicted behaviors and creative hypothetical new use cases, but beta longitudinal studies will be more fitting for understanding user behavior. We also used these opportunities to better understand the user's photo-sharing and messaging behavior. They provided inspiration for several new product features that we will explore in following user tests: batch groups of friends to streamline sending to large groups of people, and using Parcels to recommend places (and even exact dishes) at restaurants or other sites of interest to friends visiting a place that the sender knows well.

## 7. Appendices

### User Photos



User 1: Amiel



User 2: Christine

**Consent forms**

Consent Form

The Parcel 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 Parcel. Data will be collected by interview, observation and questionnaire.

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 (Jon Derman Harris, Da Eun Kim, An Luong, and Debnil Sur) or with Professor James Landay, the instructor of CS 147:

James A. Landay  
CS Department  
Stanford University  
650-498-8215  
landay@cs.stanford.edu

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.

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 Parcel 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

Name Nick Trac

Participant Number (626) 347-5505

Date 10/21/2014

Signature 

Witness name \_\_\_\_\_

Witness signature \_\_\_\_\_

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Name Amiel Paz

Participant Number \_\_\_\_\_

Date Oct 21, 2014

Signature 

Witness name \_\_\_\_\_

Witness signature \_\_\_\_\_

## **Script (followed loosely after consent form is signed)**

Introduction - Hey thanks for helping us out with our user-testing! Parcel, our app, is a new way to send photos to a place for your friends to find. When they arrive where you sent it, they can see the photo you sent along with a short message if you like.

Story / context: A lot of my friends from high school are still back at home, and a few days ago I was eating a cookie dough ice cream and it reminded me of the time my friend spilled cookie dough ice cream all over herself. So I sent her a picture of me eating the ice cream to the shop where she spilled and told her I was carefully eating my ice cream and missed her. She could only open the Parcel when she went there.

*Give user task cards and answer any questions they may have about it. Ask them to say aloud what they're doing/thinking.*

### Things to discuss post-tasks:

Order of selection of person, media, location?

How to get directions to parcel?

What kind of media would they send - photos, music, video?

How should messages be displayed?

Will you be taking a new media or old media?

Should the app recommend places if you're unfamiliar with your friend's locations?

## **Interview Notes:**

### ***Nick Trac***

-Sophomore, ME Major, Arcadia, owns an iPhone, uses Snapchat (mainly selfies to friends in SoCal with messages)

-text is convenient, but it's funnier to send pictures

Task #1: View parcel, click on Leanne, pick photo, can't select place so enter address, go back. Fast.

Task #2: done really quickly Fast.

Task #3: Scavenger hunt, send to Ethan, wasn't clear on picking photos in order, small mix-up in locations. Fast.

*If he had this app... send to Stanford students (especially for scavenger hunts, familiar with the places here), suggestions to places that he's not familiar with would be helpful, would want parcels to be sent to gym, library, Tressider, dining halls, quad, engineering quad, (places that he bikes by), would probably wait until later to get parcel ("lazy biker")*

send to roommate: to soccer field, Arrillaga (eats late a lot), in their own room

Snapchat: just take a picture, write whatever he wants, then send to appropriate, doesn't think about who to send to first (unless it's a direct reply)

last picture sent: to his mom, picture of fraternity line jacket

usually send photos through Snapchat, but through text, there isn't much occasion (Problem #0)

*Would probably use Parcel for special events (especially when he's at the place), or if he has a friend who is vacationing to a place he's been to (a way to suggest places!)*

If a special event happened to him, he'll send to everyone on his list (relatively close, interact with on a daily basis), not too big/it'll be a casual

ex. if going to a concert, send a parcel to encourage people to come to the concert (more specifically, send to people who he knows likes that artist and his close friends)

hates Snapchat's My Story because it turns into spam and it's not personalized

*Workflow of Parcel: place from where he deems significant, person, then photo*

Pretty intuitive and simple to use (familiarity)

Reminded of Google Maps (drop a pin), Instagram/Snapchat (picture)

Usage was very different, but still easy to use

Confusing parts: scavenger hunt, no text messages, would like to leave text/clue to the next location (Problem #2)

Just send multiple parcels rather than scavenger hunt, don't want to force inconvenience/order

*Personal suggestions like Yelp but better ("When I look at Yelp and I see a lot of 4 stars for restaurants in the area, I have a hard time choosing. But it would be cool if friends could send a parcel as a personal suggestion")*

The toughest part about this app is having to go to a location (may become impractical)--right now all the parcels he would be willing to find are ones located on campus (Problem #3)

Sliding bar of proximity would be helpful

It's more important to be able to see the parcel rather than having to go to the specific place

Public parcels? Convenient but may lose its personal touch (it becomes spam)

upvote/downvote would help the spam but may limit the versatility of the app

(becomes touristy)

He tried to swipe the people

### ***Amiel Paz***

-Freshman, East Bay, CS (Biocomputation), owns Android

A little difficulty understanding firsthand how to use the app (Problem #1)

went to My Parcels first, both tried to click on the map rather than the button Select New Location

JDH had to explain much more than in the previous interview

Task #1: seems intuitive, asks a lot of questions (maybe need to give more background information like we did with Nick?). Slow

Task #2: much better at this task, asked if options are saved as progress is made (maybe not clear?) Medium

Task #3: workflow not easy to understand? Slow (Problem #2)

uses Instagram, not familiar with photo-sharing/private communication

texts with photos (sent a lot of photos of Stanford to friends and family back home)

friends send photos a lot (friends in general)

concept of Parcel not as familiar

dorm friends: send to dorm or familiar places around campus  
friends: send to local high school or home  
scavenger hunt: didn't know immediately how to use it, prompts would be good (Problem #1)  
Workflow: person first, picture, location (intuitive, select person you want to contact first)

### ***Stephanie***

-Freshman, Michigan, CS (general), iPhone  
Task #1: intuitive, Fast  
Task #2: intuitive, Medium  
Task #3: technical difficulty, but got through it really easily, selecting photos was not clear, Medium  
FB, text to communicate to a specific person  
immediately went to take new photo rather than use existing photo  
person first, media, then location  
Central Park was hard to understand  
if she had Parcel... she would use it for location-based purposes

### COMMENTS

generally we can select photos that we want, but we wouldn't know intuitively what order we want them in for the scavenger hunt

### ***Sadaf Sobhani***

-Coterm, Davis, ME, iPhone  
Task 1: Fast  
Task 2: Medium  
Task 3: Medium  
-had trouble with "My Parcels" screen (Problem #0)  
-selected "select address bar" instead of Central Park  
-found selecting the first three photos for the scavenger difficult to understand, wanted to select location for each photo immediately after each one

### ***Christine Tran***

-Sophomore, Texas, ChemE, iPhone  
Task 1: Fast  
Task 2: Fast  
Task 3: Medium  
  
-had trouble with "My Parcels" screen (Problem #0)  
-also found the scavenger hunt photo selection confusing,  
-all/new my parcels screen... stuck once you're in 'my parcels'. should go to new first?  
-scavenger hunt: photo to location? didn't realize could pick all photos at first then find all the locations. wanted to give each photo a location.



food is a big one, would love to send recommendations to places for her friends too. going to stores. (we should look at shopkick.)

scavenger hunt - "who would even want to do that?" (Problem #3)