

Parcel Hi-Fi Prototype Report

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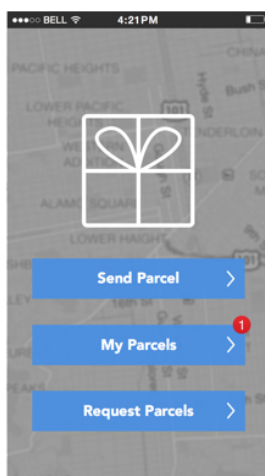
Value Proposition: Parcel: sending memories for your friends to find

2. Problem and Solution Overview

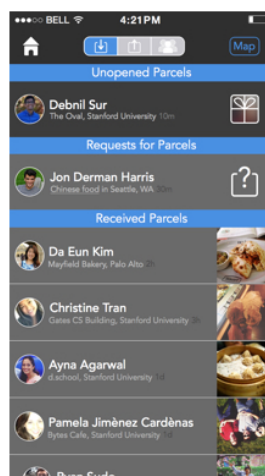
Transitions can be hard, and moving somewhere new can feel overwhelming for college students at first. Connecting and interacting with faraway loved ones comforts them. Care packages are especially emotional for both homesick college students and their families and friends because it allows them to reminisce about happy memories. 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.

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.

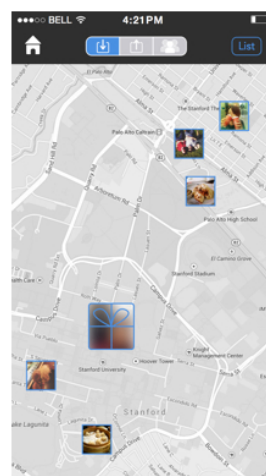
Below are screenshots of our main page, and views of received in list and map layout. Screen four is an example of a received Parcel:



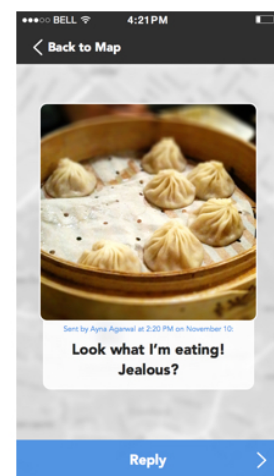
1



2



3

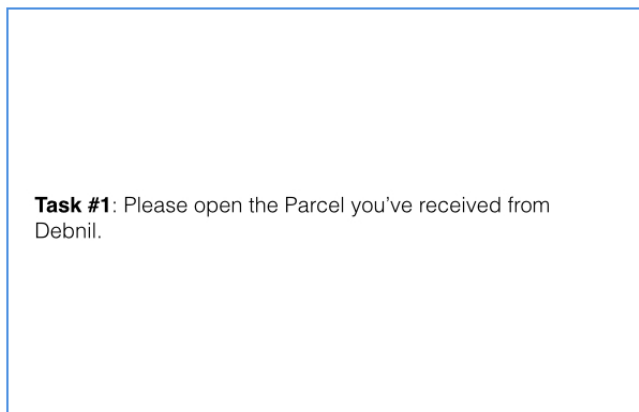


4

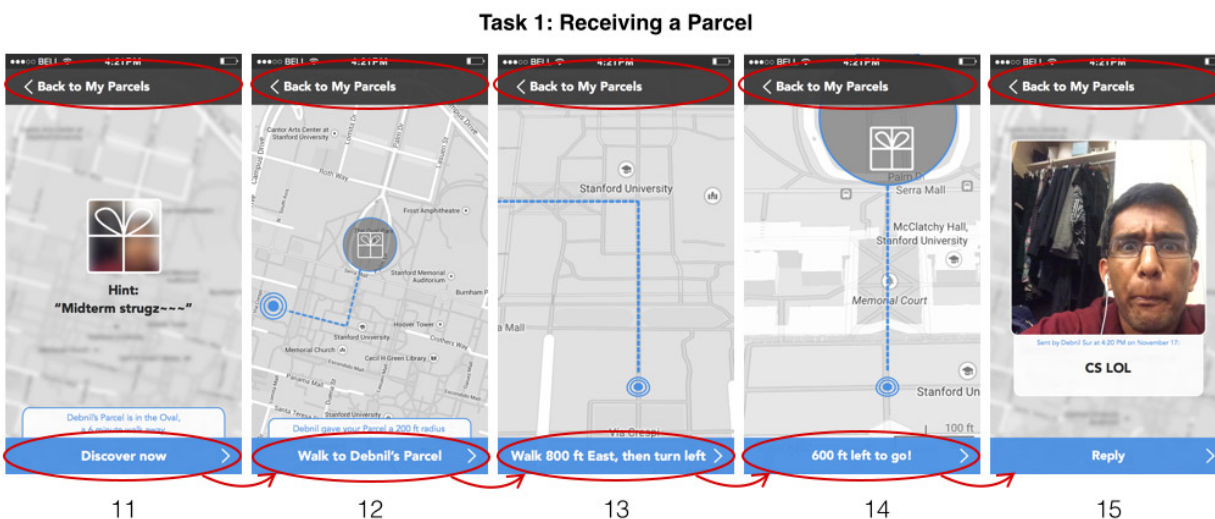
3. Tasks & Final Interface Scenarios

Task 1- Simple: *I want to check what media was sent to me from my friends and family.*

We chose this task because we believe that the process of receiving a Parcel will be the most used task for Parcel. It is interactive, easy to understand, and fun - in other words, this task would get people to understand the idea behind the app and encourage them to explore other features of the app. Below is the task instruction card with the specific representative task our hifi prototype performs we showed to user testers:



Below is a walkthrough of Task 1 with final interface images:




The “Back to My Parcels” buttons circled in red return to screen 2, the “My Parcels” screen.

Task 2 - Moderate: *I want to remind someone of a memory that we shared in a location by sending them a photo related to that place.*

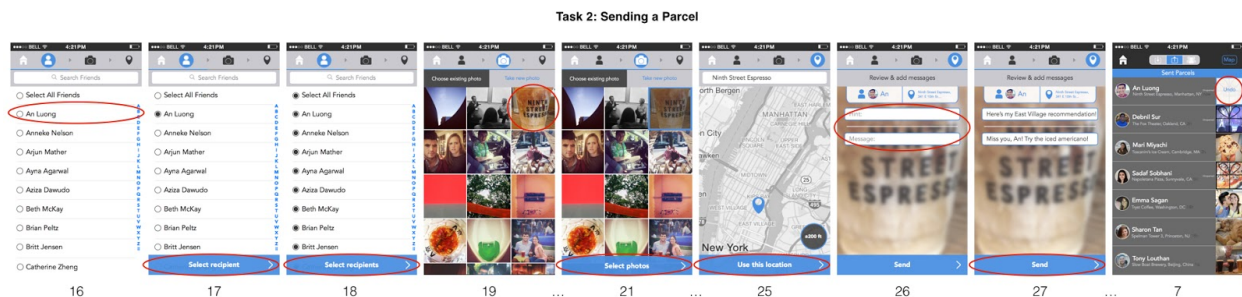
We chose this as our second task because we think that it is the most logical follow-up to Task 1. After receiving multiple Parcels, users would start wanting to send them as well. The process of creating and sending a Parcel requires more complex interactions. However,

sending a Parcel is a crucial part of our app that users would need to understand in order to use Parcel to its fullest capabilities. Below is the task instruction card with the specific representative task our hifi prototype performs we showed to user testers:

Task #2: Your friend An is in New York City for the weekend. Please send him this photo (already on your phone) to An at Ninth Street Espresso in Manhattan and add a hint and message.



Below is a walkthrough of Task 2 with final interface images:



The Red circles indicate which buttons take users to the next screen. This storyboard has been truncated by several screens that weren't directly a part of this interface, please note the ellipses.

Task 3 - Complex: *I want recommendations from my friends and family on things to do and places to see in a certain location.*

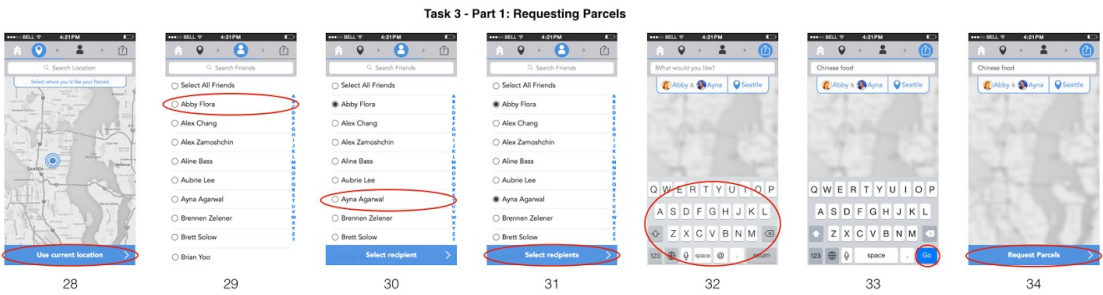
We chose this task because we thought that the idea of tying a photo to a location had more use-cases than just sending and receiving a Parcel. We thought that the idea of requesting recommendations was a great use-case that many people would enjoy. From our user testing, we discovered that people were more likely to use this app if they could somehow reach out and solicit Parcels from their friends. From a lot of similar feedback, we decided that requesting Parcels would be a great feature / task to include. Below are the task instruction cards with the two specific representative tasks our hifi prototype performs (broken into two parts) we showed to user testers:

Task #3: You're in Seattle and you'd like to know if your friends have any good Chinese restaurants to recommend. Please request Parcels from your friends Abby Flora and Ayna Agarwal.

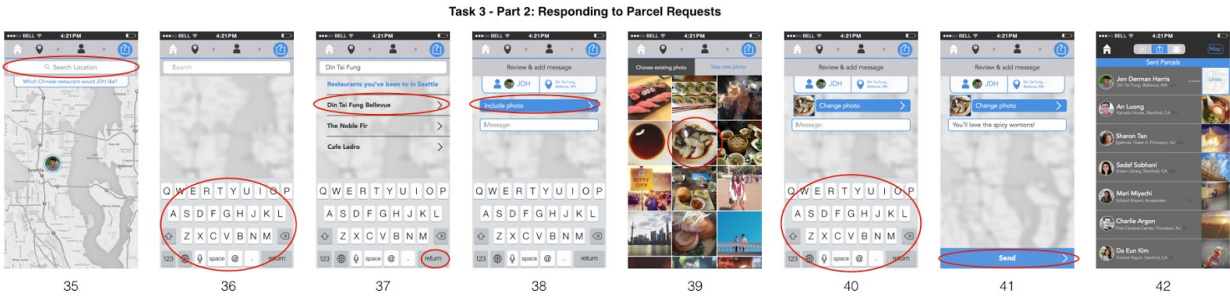
Task #4: Please respond to your request for Parcels from Jon Derman Harris. Recommend "Din Tai Fung" in Bellevue and send this photo (on your phone) to him.



Below is a walkthrough of Task 3, part 1, with final interface images:



Below is a walkthrough of Task 3, Part 2:



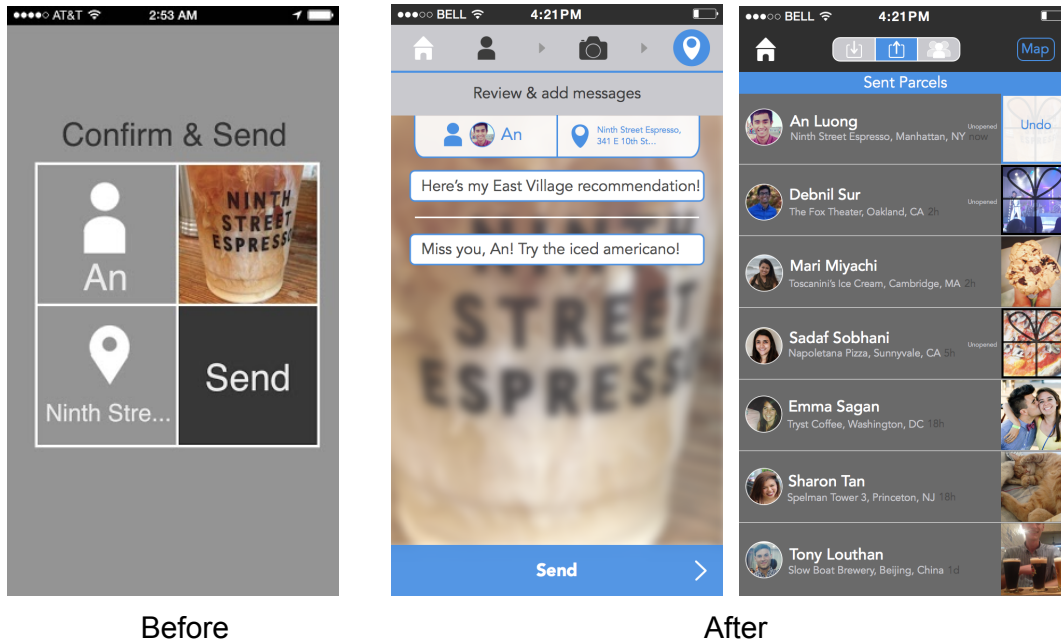
Again, red circles indicate which buttons next users to the following screen. The home icon on each screen takes users back to screen #1, the main page, and each of the gray icons at the top of the screen take users to their sections; for example, The location icon in screen 39 would take users back to screen 35. The "Din Tai Fung" icon in screens 40 and 41 takes users back to screen 37.

4. Major Usability Problems Addressed

1. [H2-1. Visibility of system status] [Severity = 3]

- After sending a Parcel, there is no feedback. This lack of communication
- Include a page that confirms the Parcel was sent. might allow the user to question whether or not his/her Parcel was successfully sent.

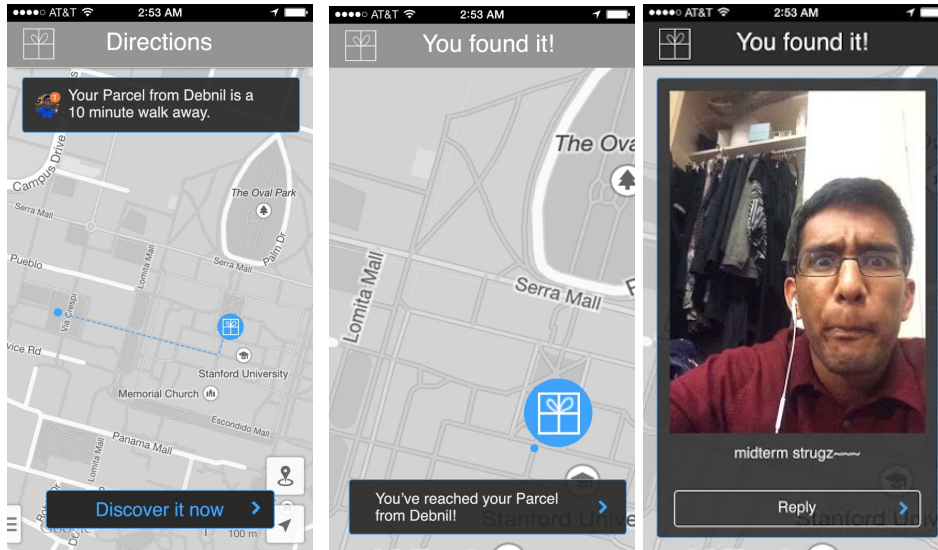
We fixed this problem by combining the confirmation screen with the “add message” screen, and then having users go to their outbox, with the option to undo their sent Parcel for the first 5 seconds. After 5 seconds, that “undo” button in white would disappear. In addition, you can check the status of the Parcel from this page (has it been received, opened, etc.). Unopened Parcels are shown with the Parcel logo overlaid. This change was made after we determined that a “Confirm & Send” page was not sufficient and having a central location to check previous Parcels would be useful.



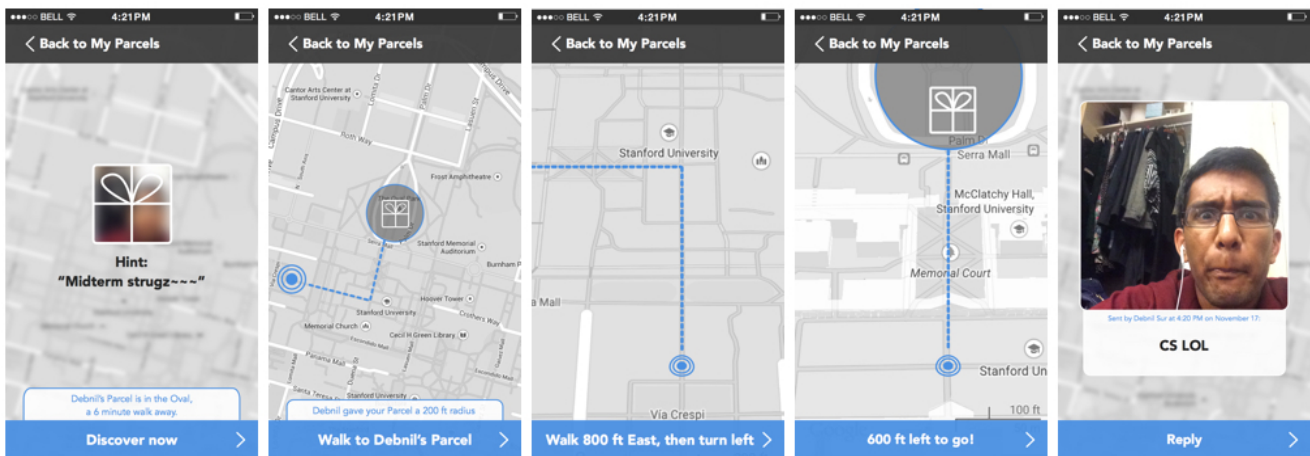
2. [H2-1. Visibility of system status] [Severity = 3]

- Feedback when reaching the parcel is not effective: text is too small, exact
- Make this feedback more intense and exciting. location of parcel (in the form of the dot) is too small.

We tried a variety of changes for this heuristic feedback. We definitely wanted to make the process of finding a Parcel exciting and more intense. First, we tried to blur the image and cause it to be more visible as the user gets closer to the actual Parcel. From our user testing though, we learned that this de-blurring did not really increase excitement, but actually decreased it. What we did learn was that people wanted step-by-step instructions so that it felt almost like a race. So, we implemented more immediate feedback and guidance to lead the user to his/her Parcel to increase the intensity of unlocking a Parcel!



Before

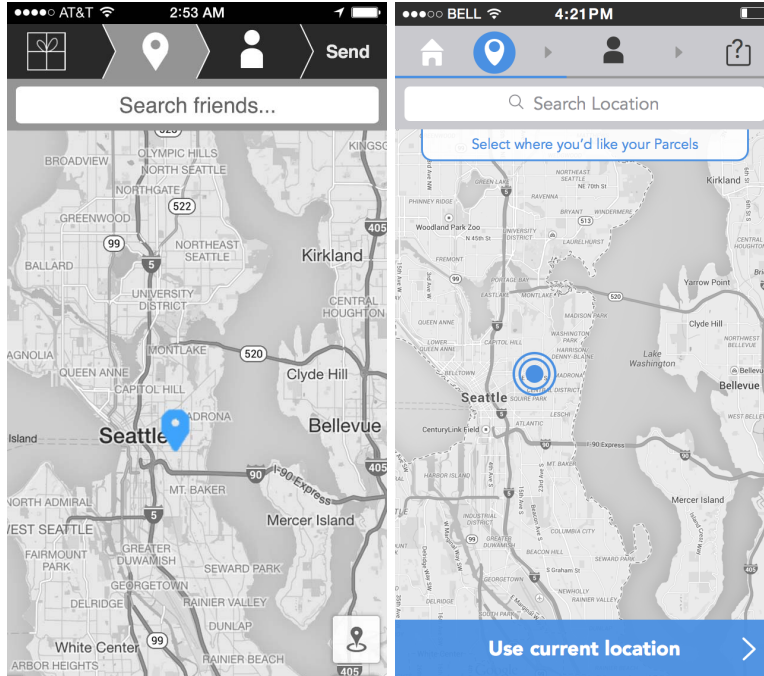


After

4. [H2-2 Match between system and the real world] [Severity = 4]

- After clicking “request parcels,” there is a map with a search bar; the
- This search bar label should be changed. search bar is labeled with “search friends,” although the map seems to be searchable for places.

The original problem was a simple mistake with the wrong text on that screen. It was an easy but important fix.



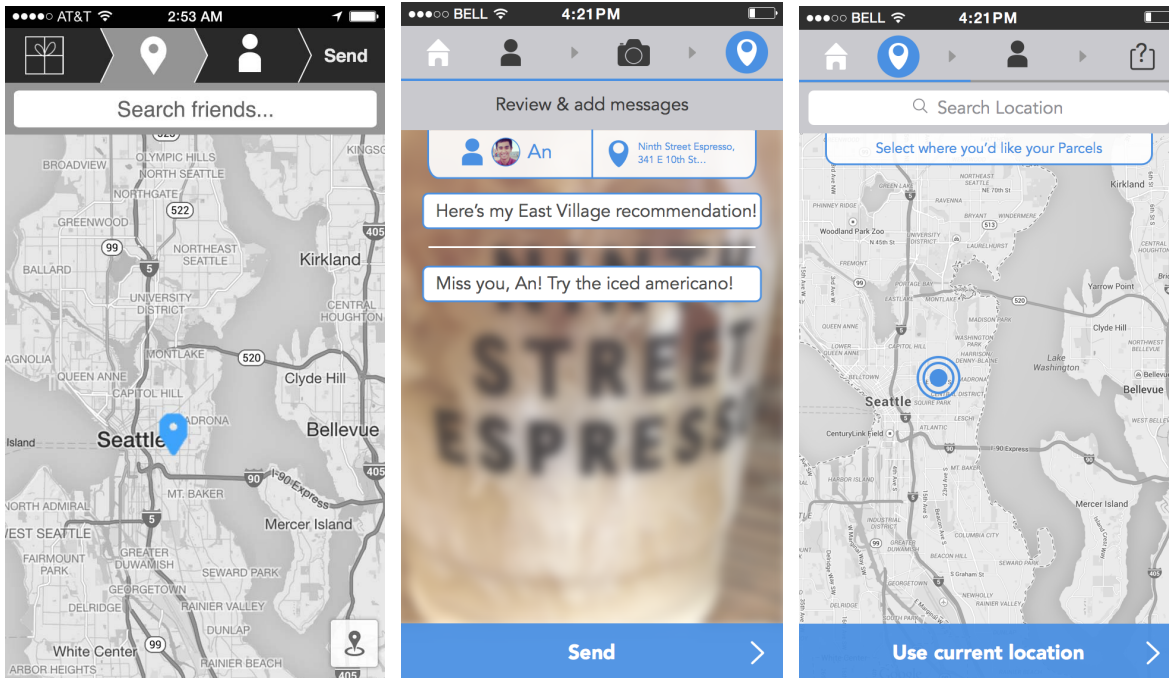
Before

After

5. [H2-4 Consistency and Standards] [Severity = 3]

- The send button in the top right corner does not actually send anything. While all the other buttons along the top have a function, this button seems to just alert the use of what step in the process they are. This is not consistent with other text labels in the upper right hand corner of the screen. Elsewhere, another dialog box that says “send” pops up in on a dark box in the bottom of the screen
- Make it to the only send button is the one in the top right corner.

We definitely agreed with this evaluation. So, we removed the “Send” option that is present in the Before photo. As you can see, there is no longer text in the flow, only icons. This improves the consistency of the overall app.



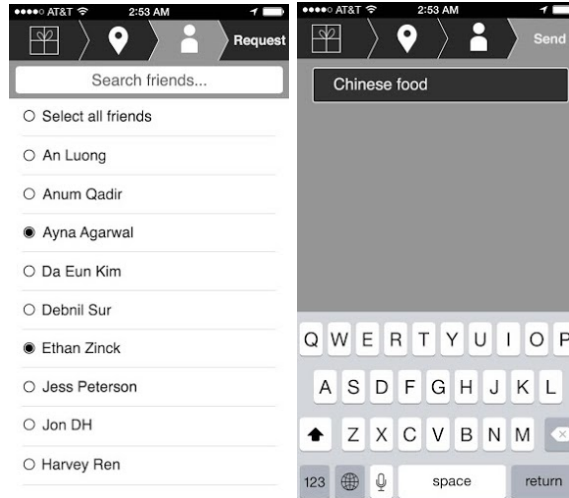
Before

After

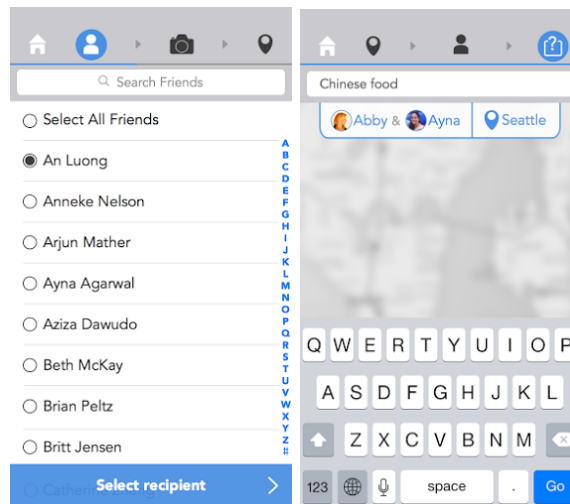
7. [H2-4 Consistency and Standards] [Severity = 3]

- In the menu of flow buttons across the top of the “Send Parcel” and “Request Parcel” feature changed depending on the task. It is confusing if they are supposed to show your current step or if you are supposed to click on them to move to the next step. They seem to operate in both ways depending on the task.
- Make the buttons across the top either just to show the current step or the way to move to the next step, not both.

We agree that having two different words “Send” and “Request” can be confusing. Therefore, we decided to change it so that the top flow bar is exclusively icons. However, we do believe that it should have different icons depending on the work flow. For instance, if I am in the process of sending a Parcel, my workflow should have certain icons. If I am in the process of requesting a Parcel, my workflow should have other icons. In addition, having a workflow as opposed to not having one makes more sense from our user testing - people want to see what their progress is in the larger scheme of their task. In other words, we decided to keep our work flow, but we decided to standardize icons depending on the task.



Before

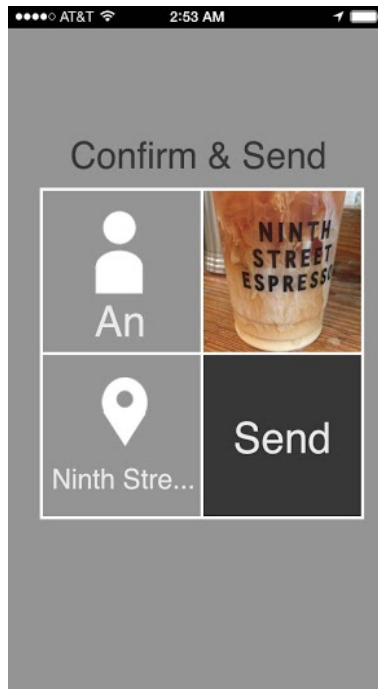


After

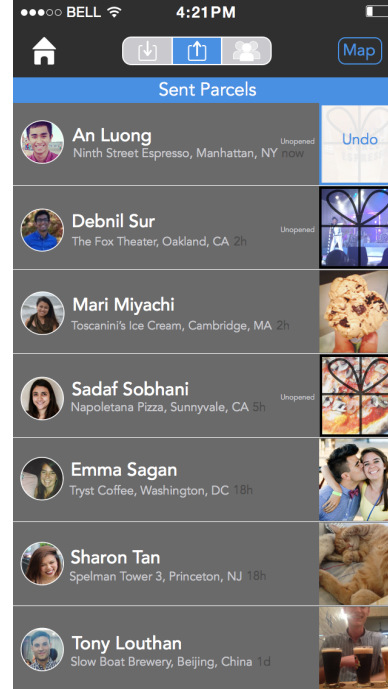
8. [H2-5 Error prevention] [Severity = 3]

- When sending a parcel, if you decide to change the photo, or the friend to whom you are sending the parcel, it is cumbersome to complete all the subsequent steps again. Information should be retained, and just the selected category should be shown for change.

We completely agree with this comment. For our final prototype, we had the capability to move back and forth between different steps. In addition, we had the option to undo sending a Parcel as well.



Before

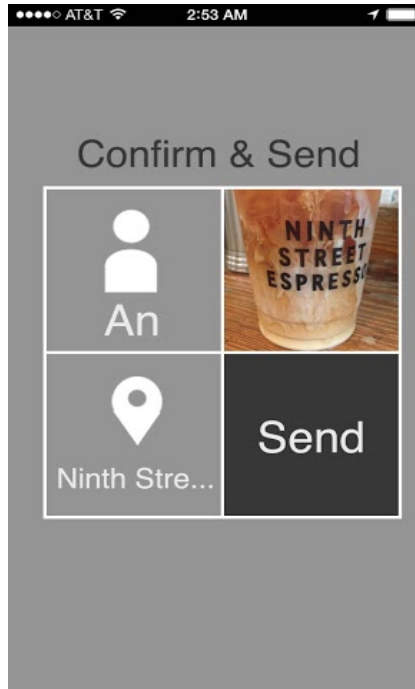


After

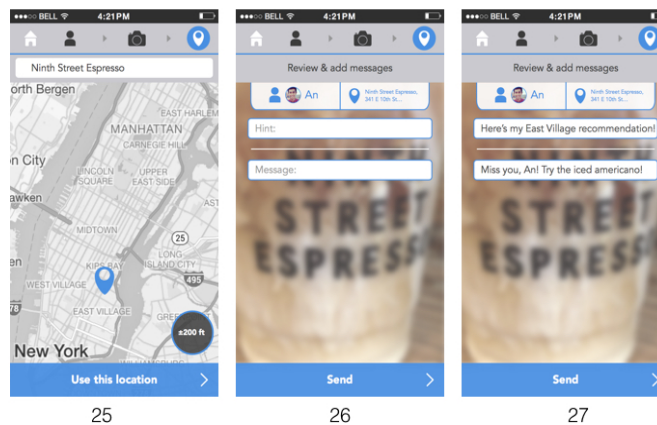
9.[H2-5. Error prevention] [Severity = 3]

- “Send” button in the 2x2 grid looks just like another feature of the Parcel. This could allow users to send the Parcel without knowing.
- Change this button to be “Message” and make an additional button at the bottom that is “Send.”

We decided to change the layout such that there was no longer a “Send” option on the overall flow. Once a user finished all steps required to send a Parcel, the option to “Send” appears. This change was due to usability testing when people would try to click on the “Send” button in the flow. With this change, we can funnel user behavior.



Before

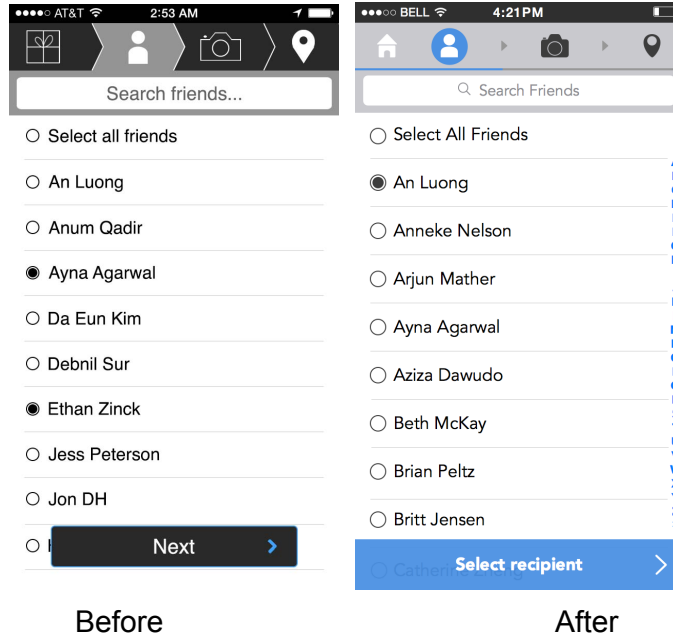


After

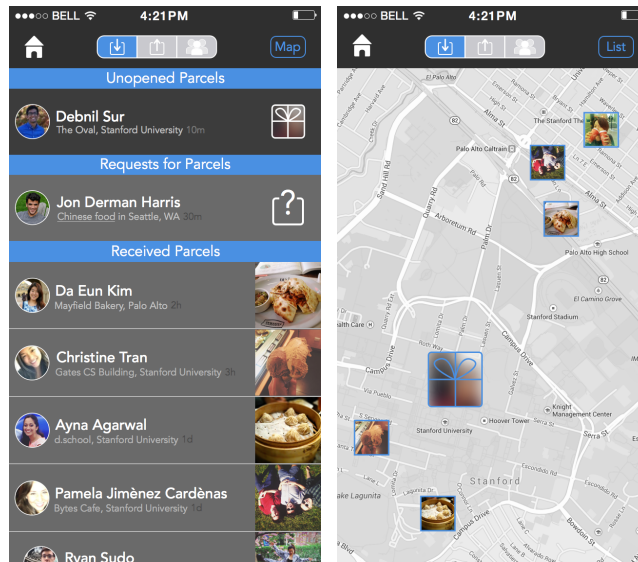
Miscellaneous Changes/additions to Hifi prototype

In addition to the heuristic evaluation results that we changed, we also decided to make some small changes to our prototype based off of collective consensus and conversation among our team. Those changes were the following:

- A. position the actionable buttons at the bottom of the screen and change those buttons to be the same blue color as other actionable buttons:

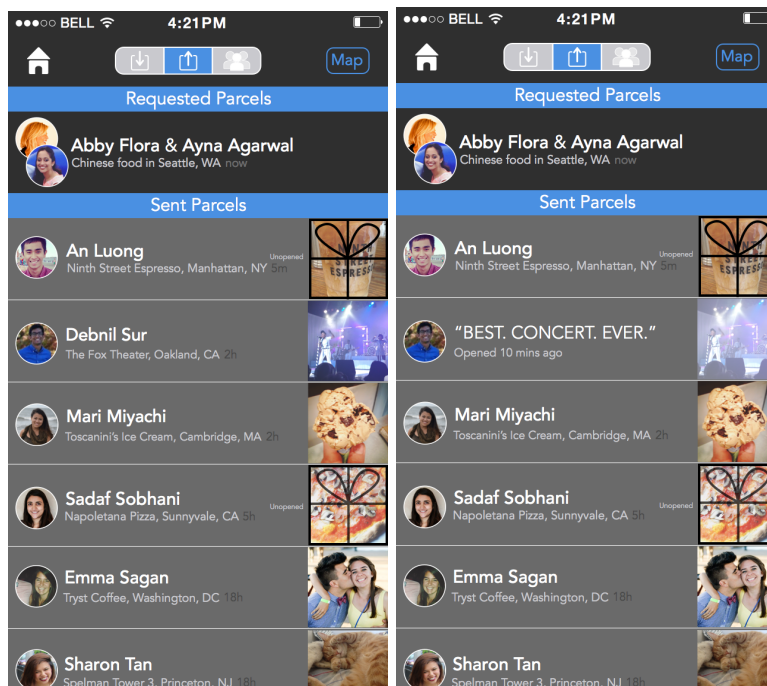


B. To visualize the received Parcels, we created a map version of the inbox:

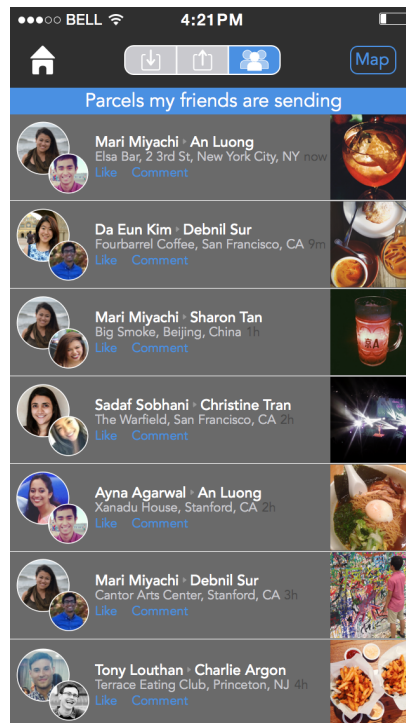


List and map views of inbox can be toggled by the buttons in the top right corner.

- C. By clicking a Parcel that you've sent or received, you can view the message you sent with it. In this example, clicking on "Debnil" or the associated photo would reveal the message you sent.

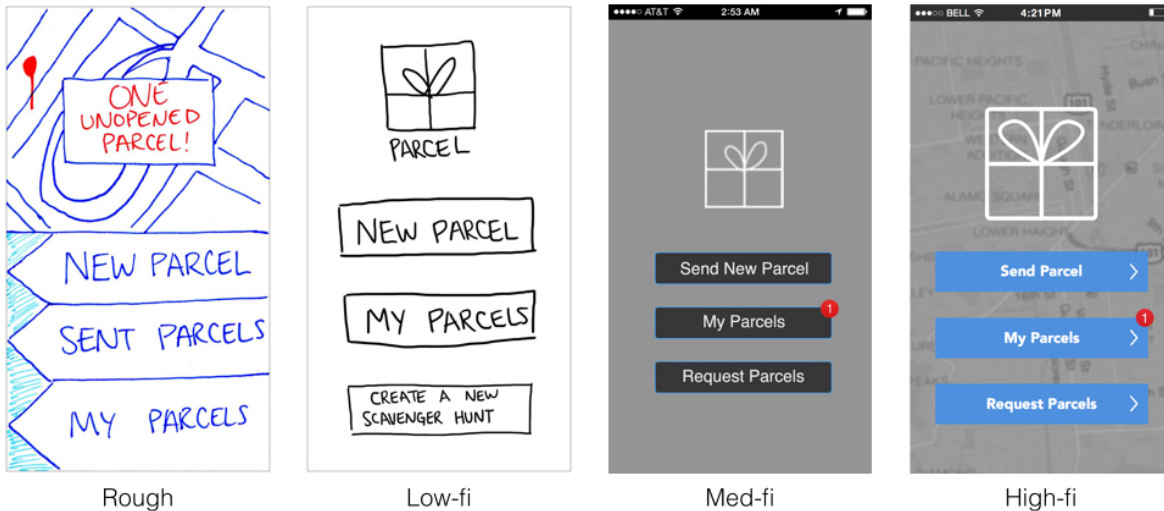


- D. We created a "social" screen so that users can see the Parcels that their friends send to one another. This screen is found by the three buttons at the top in the middle of the screen.



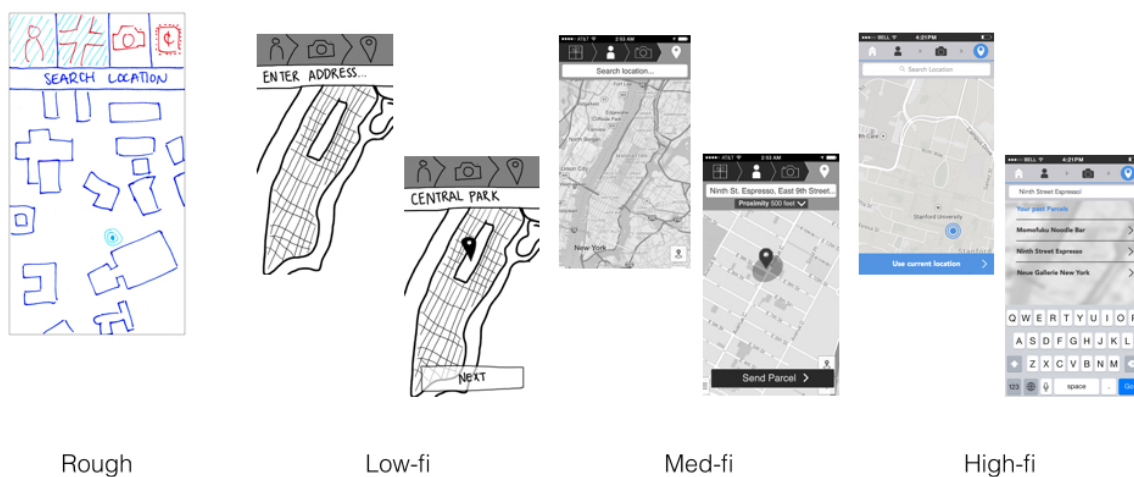
5. Design Evolution

Home screen



For our homescreen, we always kept a button to send a parcel. However, the other buttons on the homescreen changed. First, we removed the “sent parcels” between sketching and low-fi because it seemed too specific to be on the homescreen. Second, we switched “create a new scavenger hunt” to “request parcels” because our task changed. This happened between low-fi and med-fi. From med-fi to high-fi, we kept our screen constant but changed design.

Searching location



Rough to low-fi: not much changed because the idea of searching for a location remained the same from contextual inquiry. Low-fi to med-fi: we changed the bottom actionable button to “send parcel” because we learned that it was more clear what the next step was. From med-fi to high-fi: we changed the coloring of the actionable button to blue to make it clear that was the button that the user needed to push to move to the next step.

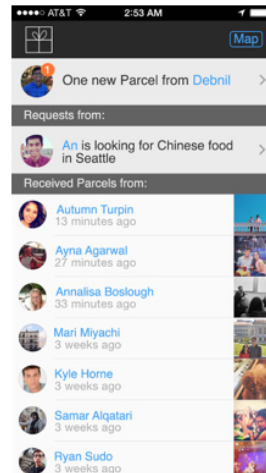
Inbox



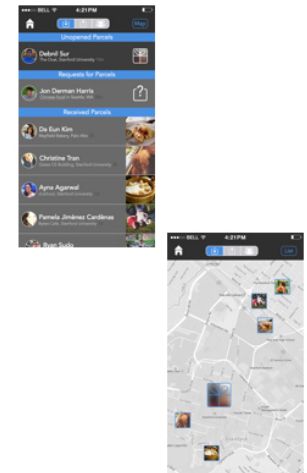
Rough



Low-fi



Med-fi



High-fi

Rough to low-fi: we decided to create an inbox page because it had a real-life equivalent. This made the metaphor of Parcel clearer because you could now check your Parcels in an inbox. Low-fi to med-fi: we decided to remove the tab layout at the top of the inbox to an inbox that was organized by time. This way, the most recent activity is at the top. This design change was due to usability testing as well as implementation limitations. Med-fi to high-fi: we decided to add an extra feature that would lay out all previously received Parcels on a map. This was an added feature that we thought users would enjoy because it's a fun way to see your past Parcels.

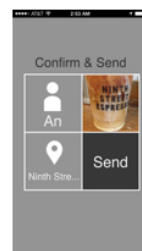
Sent Parcel confirmation



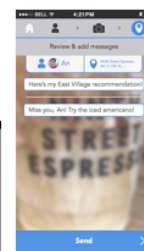
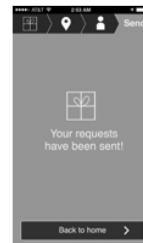
Rough



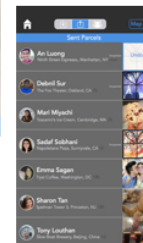
Low-fi



Med-fi



High-fi



Rough to low-fi: we decided to use a map as a confirmation that the Parcel to reinforce our physical metaphors. This feature resulted from brainstorming Low-fi to med-fi: we decided that the hypothetical map was not very necessary and that there were better methods for confirmation. So, we decided to just create a screen that stated that the Parcel had been sent. Med-fi to high-fi: we finally decided that the confirmation screen was superfluous and

slowed down the task. We supplanted it by having a summary of their Parcel's 'contents' on the same screen that they added their message to. Then taking the user to their inbox, which included an undo option for several seconds that would allow the user to catch if they recognized they made a mistake. We believed that this would be more useful for the user. Overall, this feature changed drastically throughout our iterative process, and we really think we found the best design near the end. This was an important feature, and we learned just how important iterative design was when trying to get this feature right.

6. Prototype Implementation

Building the prototype presented two initial, significant problems. First, the scale of Parcel is massive: it's a messaging application and social network (with individual/public privacy settings for messages) and has an entirely new aspect of locations bound to messages. It contains every engineering problem of Snapchat with much more required service space and an entirely different dimension. Second, nobody had experience with mobile development before it. The combination, and the lack of time given to build the prototype, meant that building an actual messaging app was unrealistic and not feasible within the parameters of the class. Instead, we used **the primary tool of XCode/Objective-C** to build a prototype that could be run on the device that would demonstrate the progression of the application without storing actual data. The tool was helpful in allowing us to actually test the device on the phone and see how it worked in a more realistic way. Tools like POP are helpful in simply arranging screens and testing transitions, but actually coding helped us visualize the experience as the end user would. (It also taught us a ton about mobile development and how the model/view/controller worked, but that's external to the actual prototyping process.) Providing a more realistic process through including elements like keyboards also helped us understand where one click might be too many and where a confirmation screen may be beneficial. In short, the standard iOS development tools served the desired functions of helping us build a realistic interface for the app. They weren't as helpful from a development perspective, though: the support for most iOS problems is not very helpful, to say the least, and involved a lot of running through StackOverflow pages at late hours of the night. In terms of the actual functionality, though, it was sufficient.

As mentioned above, the app required many "Wizard of Oz" techniques to work due to the scale of the application. The messages and social network were all "Wizard of Oz"; rather than building the application, we focused on incorporating the heuristic evaluation, building a good interface, and making the interaction design smooth and effective. We also added another feature -- responding to a request for a Parcel -- to make up for the lack of functionality. As a result, basically all the screens in play are hardcoded data. In future, we would focus on actually implementing the functionality: this would entail (1) creating the users/social network; (2) building basic photo messaging capabilities; (3) adding in the element of location/maps (through interfacing with Google Maps/Yelp); (4) adding the turn by turn directions to receive a parcel; (5) enabling public/private views for messages; and (6) implementing the "request" feature (again, interfacing with Yelp). Moving forward, desired functionality would include sending non-photo media: video/audio come to mind, and we'd also love to enable the sending of cash and maybe even other, undecided items. And, of

course, we'd continue to work on the design and make it cleaner/friendlier. After those functionalities are built, we'd work on other, unthought of improvements.

All icons, drawings, screens are original except screenshots from Google Maps, and several iPhone elements (the red "1" notification, the magnifying glass in the search bars, and the blue index on selecting friends screens) from Teehan + Lax's iOS 7 Sketch layout (<http://www.teehanlax.com/tools/iphone-sketch-app/>).

Thanks for the class -- we had a great time working together and really enjoyed going through the design process!