

IXDS FALL 2017

HomeMinder

a peer-to-peer home monitoring service

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DEC 7, 2017

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PROJECT OVERVIEW

Develop a responsive website which uses a peer-to-peer value exchange to solve a problem in a chosen domain (team selected "neighborhood watch").

PROCESS SUMMARY

Used "Guerilla Research" techniques to get information on domain and problem area.

Designed personas, scenarios, and storyboards around package theft.

Rejected selected problem area due to prevalence of existing solutions - re-evaluated other domains from research phase.

Identified related problem area (home monitoring while away), created prototypes and wireframes.

Propose final web design.

CHALLENGES

Narrowing the industry to provide focus to the problem.

Determining an equitable exchange of services between provider and consumer.

Finding a novel yet feasible solution to the problem.

Determining a simple, visually-oriented user interface for the mobile and desktop versions.

GUERRILLA RESEARCH

Neighborhood Watch

Goal is to quickly learn about neighborhood watches - history, participants, operating model, and what they do and don't do well.

Team brainstormed various aspects of the domain and then researched them in more depth independently by interviews and secondary research.

WHEN IT WORKS

- close, collaborative communities
- clear roles and responsibilities with local police
- volunteers (residents) are committed to the cause

ACTIVITY TYPES

- surveillance but not pursuit
- reporting crimes
- looking for suspicious activities

INTERVIEWS


- "don't know my neighbors"
- "worried about theft/robbery"
- "I have never reported a crime"
- general feelings of safety in city of residence

IDEATION: Personas

Package theft as related domain

Online deliveries continue to trend upwards and package theft is a known problem in urban and rural areas alike.

We considered a solution where neighbors or other building occupants could hold and pick up packages, and generated personas for a customer (Lea) and a provider (Adam)



Lea
Strategist, Deloitte

About

Lea is a consultant who travels often for work, sometime with little advance warning. She enjoys online shopping and is willing to pay for convenience and quality.


Motivations

Because she is away from home often, she worries about her packages getting stolen. She has limited free time from work and wants to avoid spending a lot of effort contacting the shipping company or driving to the delivery depot for a missed package.

Barriers

- Limited patience for waiting or navigating a complicated process
- Lack of trust with anonymous delivery and shipping personnel

Customer: values time, convenience



Adam
Freelance
UI Designer

About

Adam is a UI designer living in an apartment in downtown Pittsburgh. His clients are countrywide so he chooses to work from home and sometimes wants to be available for them at all hours. He likes living in the city but realizes it can get expensive.

Motivations

Adam is interested in getting some extra money to spend ahead of the holidays. Because his schedule changes frequently, he thinks he can dedicate a few extra hours a week to other gigs but he wants to maintain flexibility for his primary job.

Barriers

- Having to travel too far away from his house.
- Working around a somewhat erratic schedule.

Provider: wants additional money but not at the expense

IDEATION: Scenarios

Sample of scenarios from provider and customer perspective.

We also wrote some from an intermediary (shipper) perspective when we were considering solutions that included a business entity

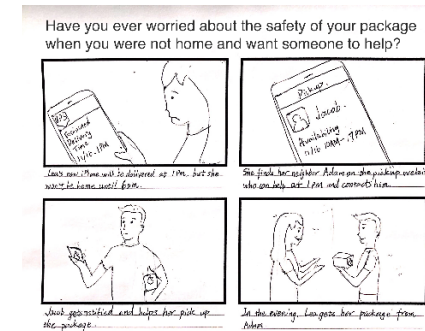
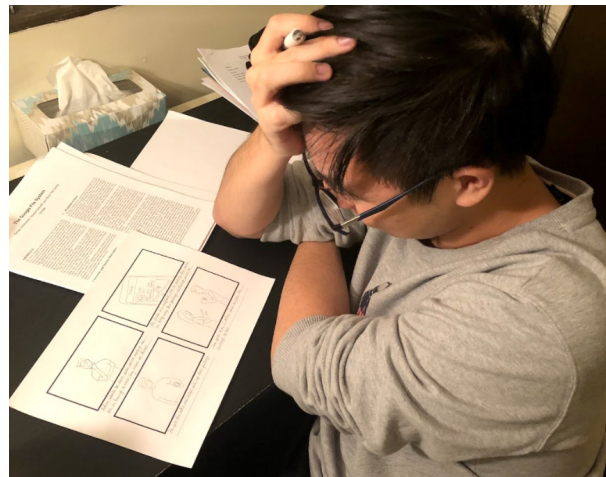
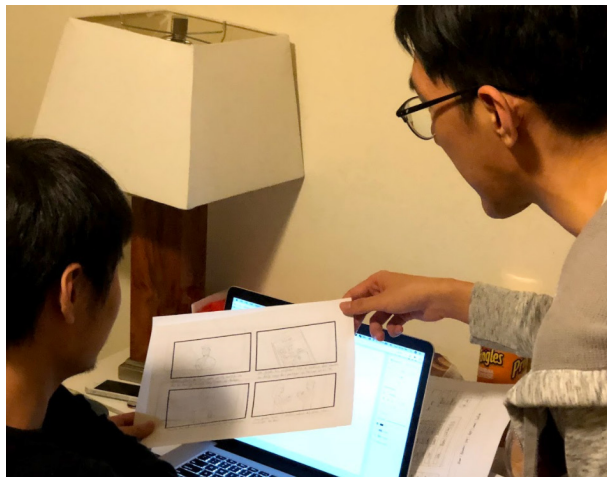
The screenshot shows a Google Docs spreadsheet titled "Scenario Brainstorm". The spreadsheet has columns labeled A, B, and C, and rows numbered 1 through 15. The content in the spreadsheet is as follows:

	A	B	C
1	Explore many different ways customers and providers exchange value and/or co-construct value. These should be different ideas and not slight variations of the same idea. Take risks and push past current social mores and conventions in order to discover new opportunities. All scenarios should involve users operating in the customer and provider role. Each scenario must set up a situation with a trigger, describe the interaction taken, and point to the value created.		
2			
3	<i>Scenarios should be three or four sentences long</i>		
4	1	Adam bought a new iPhone X, and	
5			
6	2	Liam is having summer vacation	
7			
8	3	Adam is working in his office. His	
9			
10	4	Adam won't be home for the next	
11			
12	5	Adam is coming to Cancún for his	
13			
14			
15		Adam is working in his office. His	

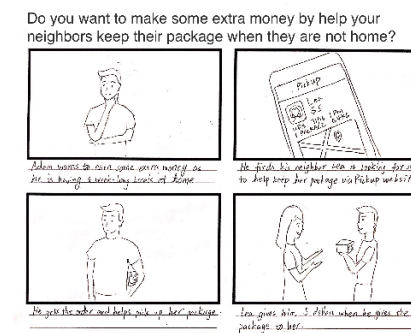
IDEATION: Scenarios and Storyboards

Package theft as related domain

We speed dated two storyboards from the provider and customer perspectives.



Customer side



Provider side

FEEDBACK:

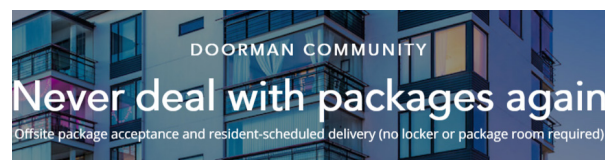
- unlikely to consider providing this service for extra money
- "is this job lucrative enough on its own? why not drive for Uber?"
- how to build trust if neither party has met each other before?

DOMAIN PIVOT

Is package delivery already saturated?

Speed dating showed that while there was interest in having packages hand-delivered or watched for you by a neighbor or a person nearby, there was less willingness to act as provider - especially if there was no financial incentive to do so.

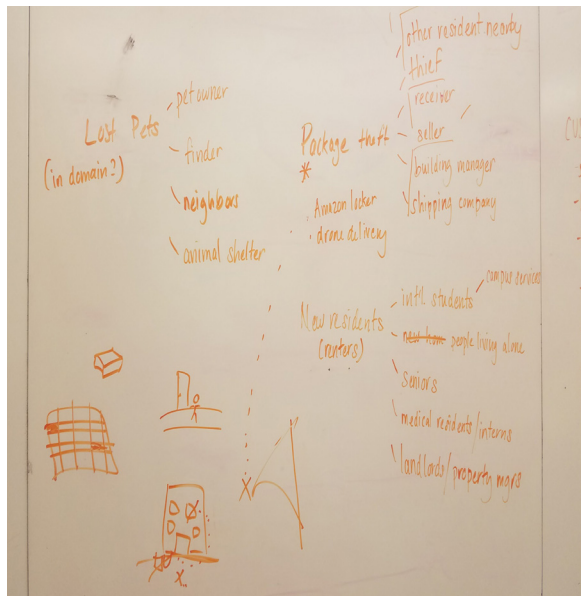
Additionally, there were a number of other solutions which combined web and hardware in the market. The team decided to re-examine other categories from the initial ideation.



DOMAIN PIVOT

What else?

On our short list for problem areas alongside package theft were: lost pets and a shuttle/escort service similar to what is offered at many university campuses in the U.S.



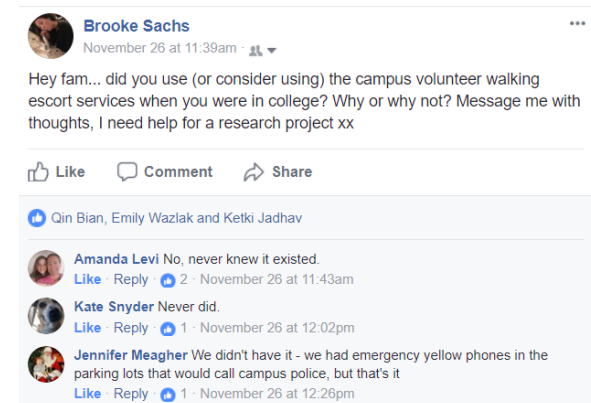
Lost pet solutions was ruled out for being a saturated area, too

... and a quick survey showed little demand for escort shuttles.



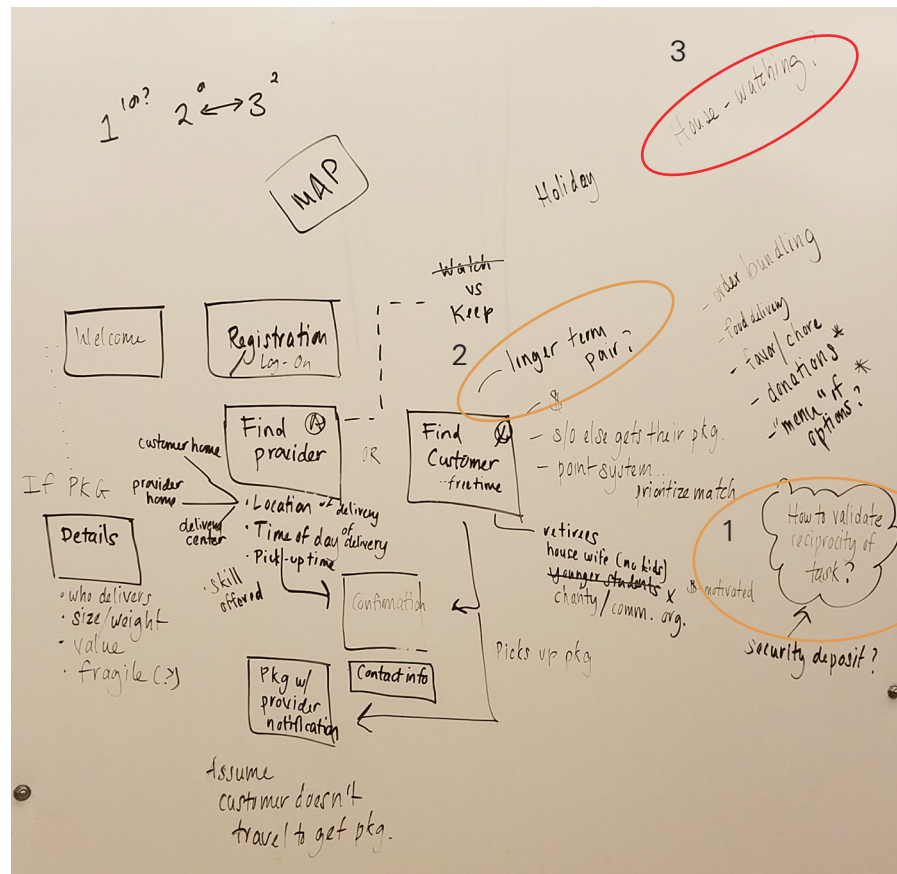
Finding Rover

Protecting our best friends



DOMAIN PIVOT

Broaden original idea - find more equal exchange of value



The short list yielded no compelling alternatives so the team dove deeper into the original problem.

1. Determine what would motivate the provider-customer pair to interact and how the value exchange would be equal.
2. We decided that having a longer-term vs single-transaction relationship would be a more effective way to encourage reciprocity of service.
3. Home-watching emerged as a possible area - broader than package watching but similar in that it requires one party to be present while another is away.

DOMAIN PIVOT

Revised Personas/Scenarios



Kevin Wong
NGO staff

About

Kevin is an NGO staff who just moved to a community near Washington DC with his wife Michelle. Every winter they spend a long holiday in the South or pay a visit to their relatives in San Francisco.

Motivations

Their house is relatively old and the water pipes are easy to get frozen. Kevin wants someone to watch their house during the winter. And they don't want to spend money hiring somebody for help.

Barriers

Don't know many people in the community who can help.

Scenario 1

The Wongs just moved to a community near Washington DC. They will be leaving on a 2-week trip to San Francisco to visit friends and family. They live in an old building and they are worried about the pipes freezing while they are gone. They use the Homeminder to find their neighbor the Johnsons will go on a vacation one month later. Kevin Wong contacts Tom Johnson and Tom is willing to help. Kevin goes to SF with his family and will help the Johnsons watch their house when they come back home.



Tom Johnson
Technician

About

Johnson lives in a community near Washington DC with his wife and two children for 10 years. They usually go on vacation in winter or summer when their kids have days off of school.

Motivations

Johnson's wife cultivates a lot of plants, she needs someone to water them when they are away. And they also want someone help with garbage and packages.

Barriers

They have asked someone to help and don't want to bother them again.

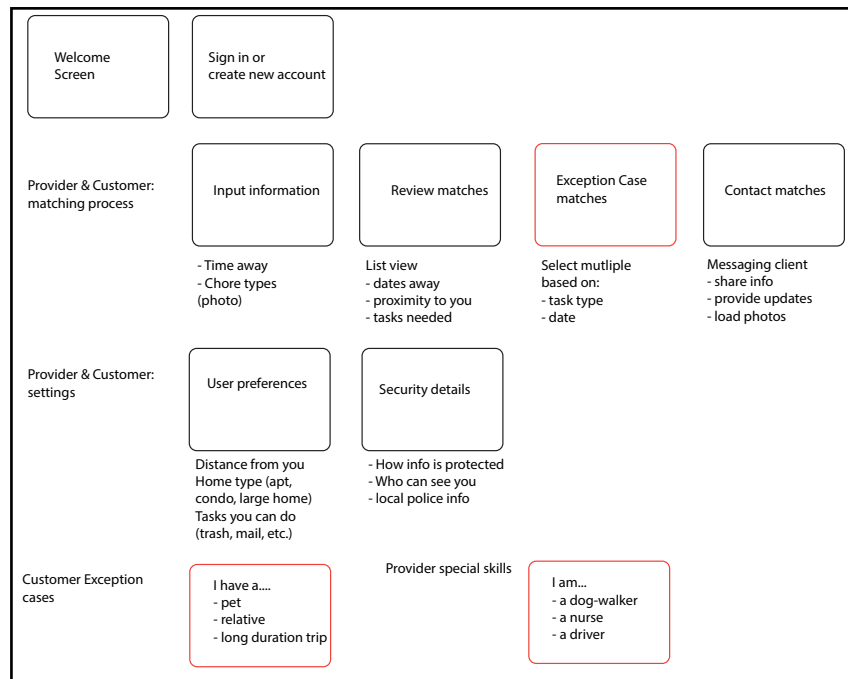
PROTOTYPING

Screen Map and Inventory

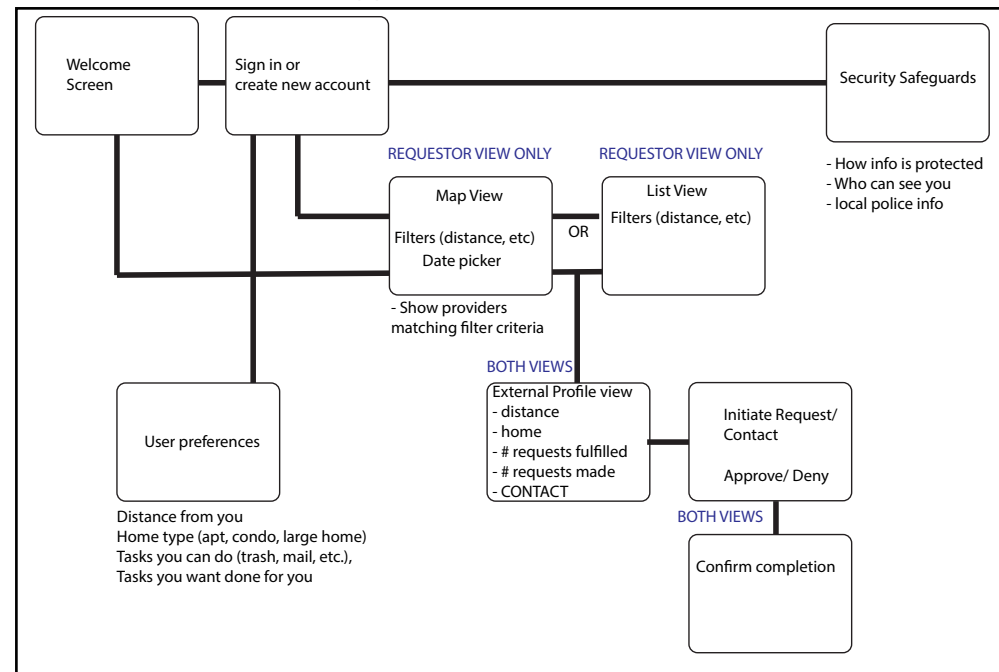
Because we recognized that users would be both providers and customers in the exchange, there wasn't much differentiation in the interfaces for either role.

We designed for mobile first and then adapted to desktop. At the early phases of design, we didn't believe there were contexts where having mobile functionality would be preferable to desktop so the elements were largely the same but scaled down based on screen size.

First draft



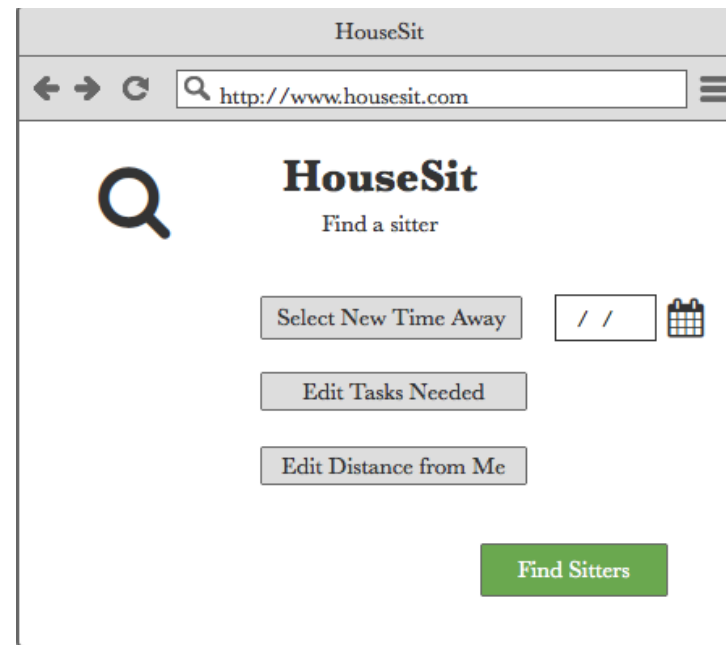
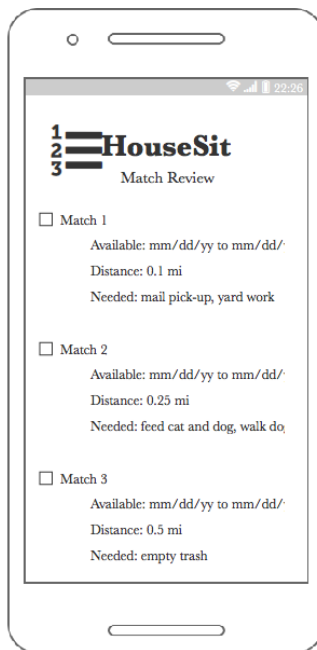
Second draft - flows mapped and screen count reduced



PROTOTYPING

Low fidelity versions and feedback

With the new value exchange system in place, we quickly designed a low - fidelity prototype which attempted to identify the key elements and interactivity.



FEEDBACK

Too cerebral - high cognitive load

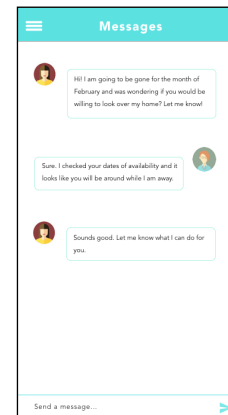
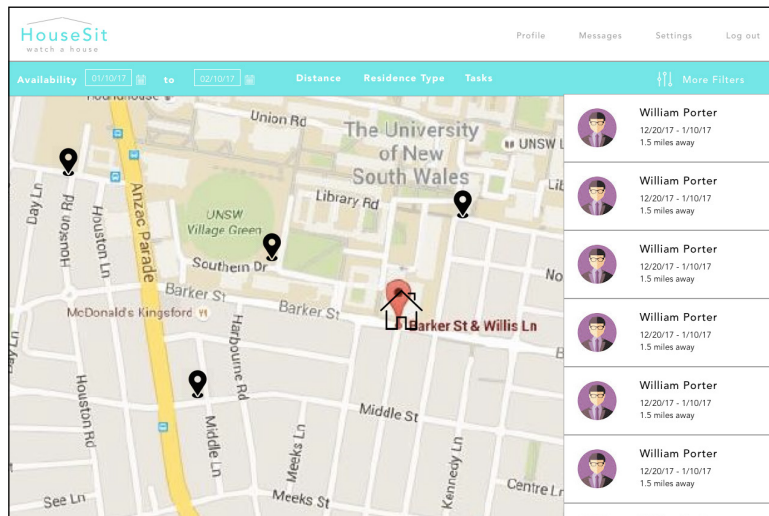
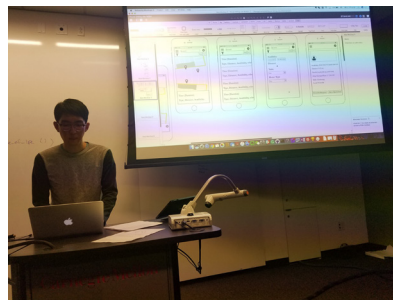
Not visual enough

Map feature would be helpful

PROTOTYPING

High fidelity version and feedback

Our next prototype was an attempt to include the feedback from the critique. We wanted to make user selected elements more visual and easier to distinguish. (Chongrui please edit and discuss the process)



FEEDBACK

De-emphasize the filtering and rating features - this should be friendlier and focus on building relationships between neighbors

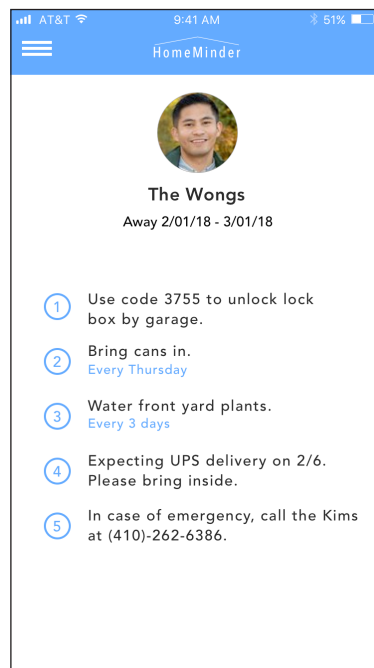
Simplify, improve resolution of photos

Is in-app messaging necessary?

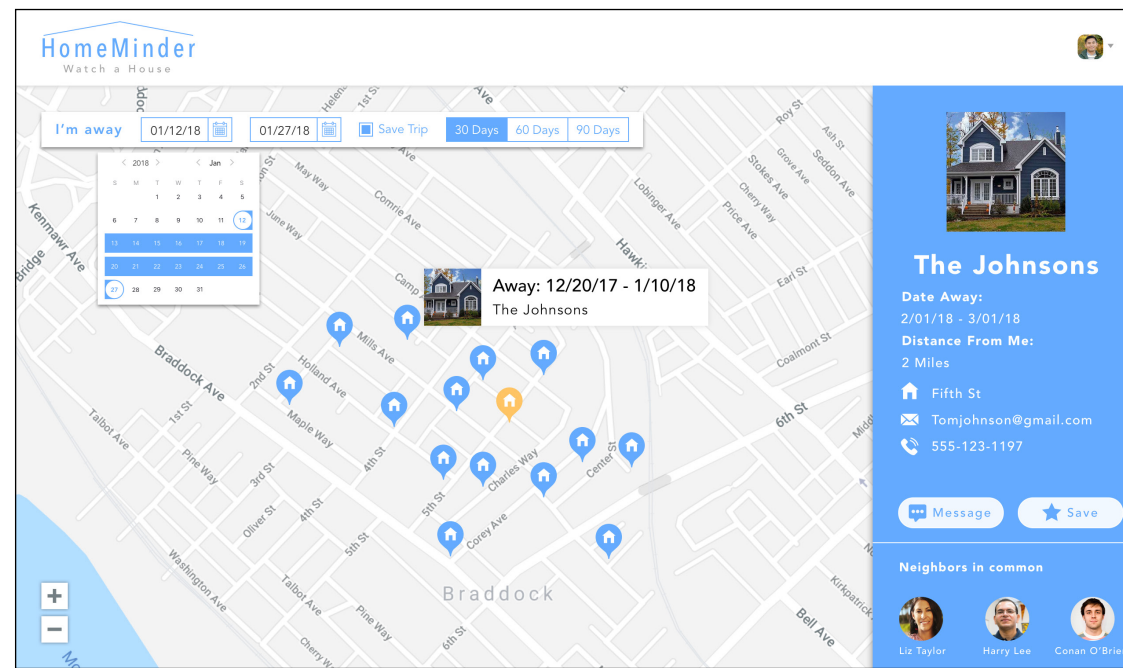
PROTOTYPING

Final Design

We tried to consolidate screens and make use of pop-ups and modals where appropriate. Two new features we invented were having allowing users to input and then send their home task lists between desktop and mobile (1) and users can opt-in to sync and show their Facebook or LinkedIn connections as a way to help make introductions to potential home sitters (2)



1) Mobile view of received task list



2) Desktop view of dynamic map and neighborhood results: pop-up on-hover and more detailed user profile appears in slide-in bar on right