@Home - Low-fi Prototype Report

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Introduction and Mission Statement

In this report, we are evaluating a prototype of @Home, the fastest and easiest way to solve problems at home. This mobile application allows users to quickly have a home service provider to come to their home and fix the issue is in front of them. We've designed a system that connects users with these home problems with people who are most capable to fix them. In order to understand the performance of this system design, we have conducted usability tests on our prototype. We wanted to understand how easy to use the system is and what real-world constraints exist to consumers and service providers using @Home.

@Home aims to solve people's home problems in the most seamless way possible. By creating a powerful and easy-to-use network of users and problem solvers, we hope to connect these problems with the problem-solvers and create value for everyone in this space.

Prototype Description

Since @Home is designed to be an application for iOS and the iPhone, our prototype consisted of a series of paper cutouts that represent different iPhone screens. Each "screen" is the size of an iPhone 5 screen (4.5'') so the user testing it is observing the same scale that the final product would be. There is one page of "cutouts" that we made shown in Figure 1 that have removable pieces of paper for the top bar and other sections where the same graphic was used multiple times. For the rest of the prototype, it works where the user will select an option illustrated on the paper screen and the interviewer will swap pieces of paper in front of the user to simulate what the next screen would look like. All the screens with no text at the top would have the top bar cutout from figure 1 placed in position. For example, at the home screen (Figure 2) if the user were to "tap" the bolt of electricity and the "Electrician" tab, the next screen that would appear is Figure 3. We created screens for all of the options the user can see to select from the home screen and their subsequent branches as well as bonus screens such as signup (Figure 4), the settings dropdown (Figure 5), and a profile detail screen (Figure 6).

Other screens are simply continuations of the UI we previously roughly sketched out. They include, the remaining two screens to follow up the home screen, (Handyman selections Figure 7 and Plumber selections Figure 8), the time selection screen (Figure 9), the work selection screen (Figure 10), the map tracking arrival screen (Figure 11), the satisfaction rating and make payment screen (Figure 12), and a screen displaying user requests for the service worker side of the interface (Figure 13). The service worker side to @Home functions mostly the same as

the consumer side however when the worker opens the app they see requests for work on their screen and are able to view details and reviews of the people before accepting the job and being transferred to the map arrival screen.

Method

For our usability test, we had to split the tasks into two user categories; from the perspective of the service provider, whose tasks included accepting or rejecting incoming help requests and confirming payment for accepted requests, and then from the perspective of the customer, whose tasks included sending requests and paying for them. Both of these categories had to sign up, so we made them go through the sign up page first before carrying out these tasks. To this end, we split our participants in such a way that one of them was to use the app for finding work, and the other two were to use the app for finding help. The former was a custodian in one of our dorms, in his early 30's, who said that he would love the opportunity to look for last minute jobs when he has the time and someone needs help around their house. The first potential customer was a Palo Alto resident in his 40's who had raised a son and a daughter in his current home. Lastly, our third participant was a 21 year old college student who we randomly selected from the History corner. Though college students aren't our main focus, this girl had grown up in San Francisco and said that she had had to deal with many home issues growing up, so she is definitely within the demographic we would like to target.

Because of the different backgrounds of our participants, all our tests were performed in different places. For the custodian, we performed the test in the lounge of the dorm, as that's where we had been working when we asked him. The Palo Alto resident was interviewed in a café on University Avenue, with a large enough table that we could lay out our interface. Lastly, the girl we asked in the History corner was interviewed at Olive's. We had two different scripts, one for demoing to the custodian, and the other for demoing to the other two participants. Because we conducted the interviews in such different locations, and the interview with the custodian could not be planned since we weren't sure of his schedule, we ended up having one team member each conduct each interview. This way, that one team member played both roles of facilitator and data recorder.

The team member conducting the interview would start by explaining the time commitment to the participant and asking them to fill out the consent form. We would then proceed to demo the lo-fi prototype to the user to show them how our system works. After answering any questions they had, we would then proceed to show them the UI for the tasks they were being interviewed about, and ask them to carry out the tasks on the UI. We noticed how they reacted and voice recorded all their comments (with their consent of course). We used this to measure how intuitive they found our UI based on how many questions they asked and how long it took for them to carry out the tasks. Once they had gone through the tasks and our interface, we asked them to fill out a questionnaire about the task. The questionnaire generally asked how useful they found the task, how easy the interface made it for the task to be performed, and how clear the UI was.

Results

Person 1 - Stanford Custodian
As the first person on the service provider side to be exposed to our idea and UI, we learned a great deal from this participant's results. He performed very well in the UI, easily identifying the next steps in the workflow with no wrong taps. He took some time to get his bearings with the UI, but he insisted that it was due to the paper interface as opposed to the arrangement of the UI elements themselves. After his interaction with the prototype, he was curious about specifics. In particular, he was curious about scheduling tools and how he could get work during times when he was consistently free. He also wanted to know how to set or adjust the price so that he can be sure to get work. In summary, the UI and workflow worked well, but questions remain about the price and timing mechanisms that make the network run.

Person 2 - Senior Living off Campus
The Senior living off campus had an easy time interacting with the UI and completed the tasks very easily. She was very fast in tapping through the UI and going through the workflow. The only time there was confusion was at the last screen; where the screen has an option for rating the worker as well as "making a payment," she was wondering if rating the worker will mean that the charge will go through automatically without her confirmation. We realized this was confusing, as we had two important inputs on the same screen, and both inputs are such that one would imagine clicking through them would put us on to the next screen. For this reason, we decided that for the next assignment, we'll make the person pay first and then rate the worker.

Person 3 - Palo Alto Resident
The Palo Alto Resident had a very easy time interacting with the UI and completing our tasks. After going through the signup page the user easily identified all the correct taps to complete the first task of identifying the problem and finding a service provider. There was a bit of initial confusion when looking at the time frame page where the user wasn't sure of what the time meant. This was valuable to learn because it will help us improve our UI in the next revision. The user completed task two after some debate on which service provider to choose based off of rating and price. He commented how he liked all the information laid out on that UI page because it made it easier for him to compare statistics from providers. He offered some great suggestions while completing task three with ease. Instead of rating his service provider and then completing the payment, he wanted to be able to pay the person and then rate them after they left in private. This information will be used to alter the UI for the final task @Home accomplishes.

Discussion of Results

In summary, we've learned the following:

- Our general UI is easy to use and intuitive. There's little confusion about the general layout and workflow of the tasks.

- We need to investigate the service-provider – user relationship more. There are issues about price setting, changing, and payment that need to be refined. Right now. We allow service providers to set a price and a final price be decided upon finishing the work. We do not know the extent to which this type of flexibility is feasible.
- The app should have separate screens for rating and paying, with the rating occurring after the transaction is complete.
- We need labels and titles for the various screens while requesting and finding as service provider.
- Usability and intuitiveness should go up with more medium/high-fi prototypes.

Appendix

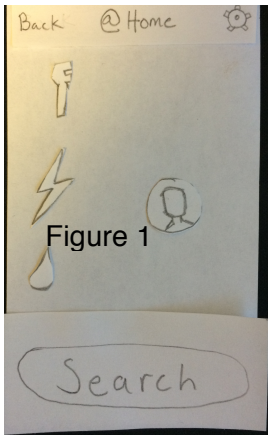


Figure 1

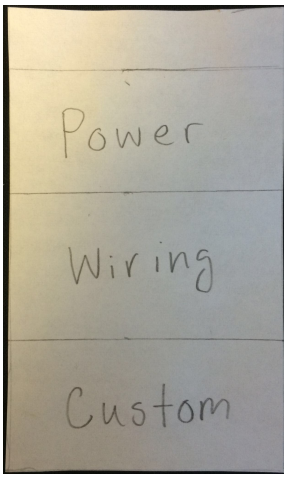


Figure 3

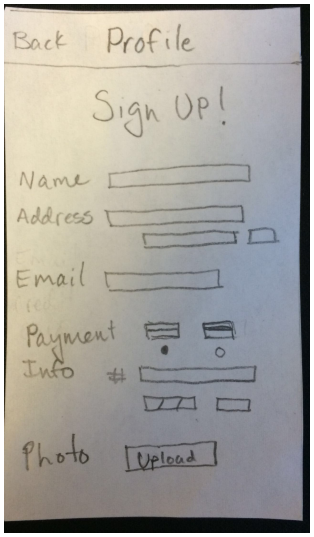


Figure 4

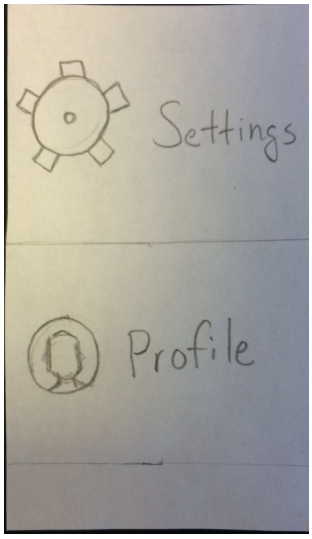


Figure 5

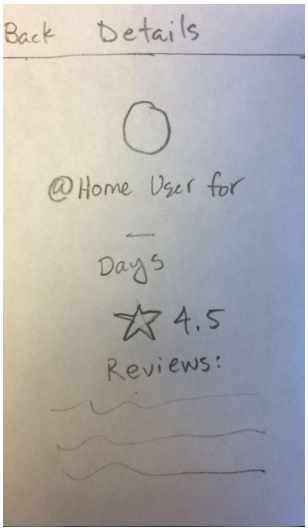
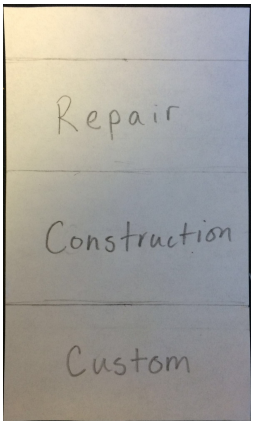


Figure 6



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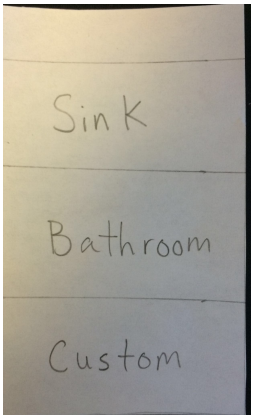

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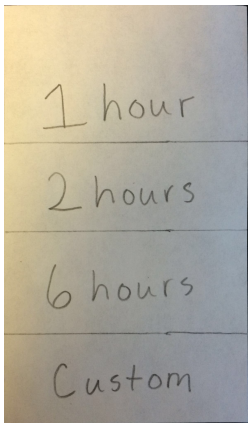
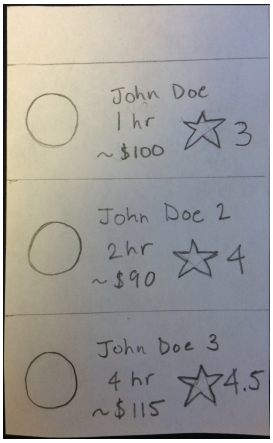


Figure 9



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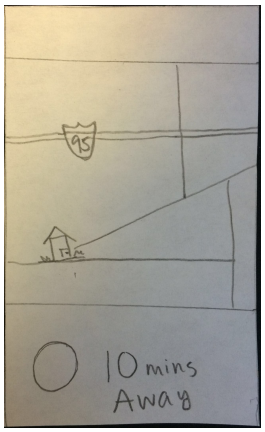

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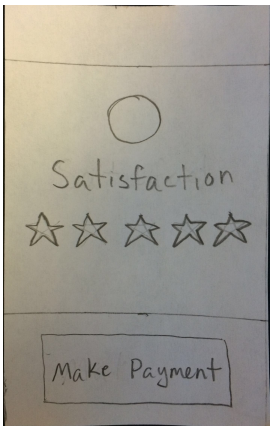

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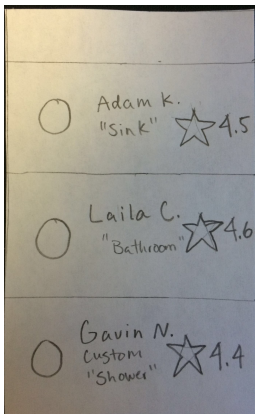

Figure 13

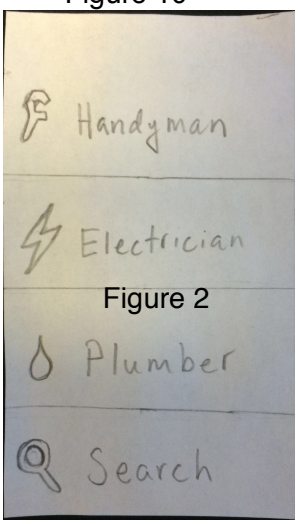

Figure 2