


CS147 Assignment 3: HE

Student: Lao Thao

Last saved: Thu Oct 18 2012 22:01:29 GMT-0700 (PDT)

Brief

As Carolyn Snyder writes, "Paper prototyping is a variation of usability testing where the representative users perform realistic tasks by interacting with a paper version of the interface that is manipulated by a person 'playing computer' who doesn't explain how the interface is intended to work." In this assignment, your group will conduct heuristic evaluations (HEs) of your paper prototypes and you will individually help out other groups by evaluating theirs. This will complete the prototyping phase of the project, providing you with the feedback you need to begin implementing.

 [Show more assignment details](#)

For each of the two prototypes you evaluated, include a list of the problems you found with it. Each problem should include a brief description and a severity rating. If a problem clearly falls under one or two of Nielsen's heuristics, indicate which heuristics they are. (But it doesn't, don't worry about it.) Don't forget to make your feedback comparative when appropriate! This means that, while you are talking about one prototype's problem, you can make a comparison to the other prototype. Or you can put all of your comparative feedback into a third list that comes after the first two. We don't really care--as long as we can understand the advantages and drawbacks of each prototype.

Prototype 1

- On the "My Pins" and search screen the pins were colored differently, and in some cases, not at all.
Consistency and standards, Rating: 1. I was trying to figure out the significance of each color but I couldn't detect a particular trend or pattern in the coloring. In the end, I simply continued on with the application without paying attention to the coloring of the pins.
- Icons for retrieving monthly, daily, as well as hourly forecast were not recognizable. **Help and documentation / Match between system and the real world, Rating: 1.** Each presentation of data had its own icon, but the icon did not imply or make any connections with viewing data in a different time frame. It would have been helpful at this point if there was a key of some sort to document the icons. Apart from the icon itself, I am accustomed to text options instead of icons in order to change between hourly or weekly views as in many weather apps. The icon, lack of help, and my exposure to text led me to a bit of confusion. This is actually a case where replacing the icons with text would match the real world and provide help at the same time. The text option was actually integrated into the second prototype, which made a lot more sense.
- Need to navigate inside the monthly view in order to see the yearly view. **User control and freedom, Rating: 2.** I was actually given the task to look up the wind stats for a whole year, but discovered that once I had chosen a location there is not a dedicated time view option to see the stats for an entire year. I had to view the monthly data and then choose to view the yearly data from the monthly data screen.
- Buttons with the same purpose. **Aesthetic and minimalist design, Rating: 1.** Once a pin has been selected, the current location button on the top right corner seems to serve the same function as the current tab view in the bottom left corner.
- Awkward "Done" button placement. **Match between system and the real world, Rating: 1.** The done button was placed before the text input option, which breaks a flow of logic since the user hasn't even had a chance to input text yet. I'm accustomed to it being placed lower, near the return key or in place of the return key. This convention can be found in the mobile Google Maps and even in non-mapping search functions in Facebook

mobile.

- Ambiguous representation of current data viewing option. **Consistency and standards, Rating: 1.** Once a wind data viewing option is selected, one of the hourly, daily, and monthly tabs was colored. Then, a non-selected tab was colored while another non-selected tab remained uncolored. I can understand coloring the current tab, but there didn't seem to be a pattern for coloring the other non-selected tabs. This can cause the user to be confused about which tab is active.
- No method to sort/order pins. **Flexibility and efficiency of use, Rating: 3.** Why should users keep searching for a pin? If it's close to their current location, the user might be more interested in that particular pin it should be listed first. This is especially relevant for the screen where there are pins in other states but I'm only interested in the pins in my current state. I need a way to sort my pins.
- Repeated wind direction. **Aesthetic and minimalist design, Rating 1.** In the current location screen, there are three different indicators of the wind direction: an arrow in the center of the screen, a text display of the wind velocity, and then drawings of the wind movement in a picture. The number display is vital since it shows the speed of the wind, but you can depict the direction of the wind and make the display less cluttered by removing the center arrow or the wind movement drawings. This was actually done in the second prototype.
- Lack of a visual map. **Match between system and the real world, Rating: 2.** The "My Pins" screen displays the current pins on a list with their location and wind velocity. When I think of pins, I imagine them being placed on a map, not displayed as a list. This is particularly true for applications like Google Maps where the pin is dropped onto the map and can be manipulated visually. Since I use Google Maps frequently, I am more accustomed to seeing pins on a map like in the second prototype.
- Did my search go through when I pressed done? **Error prevention, Rating: 2.** I should receive some sort of notification that it went through so that I don't go to another screen and lose my search progress. This might have been fixed by going to the "My Pins" screen and showing that my search did go through, but then this presents a navigation problem if I wanted to make multiple searches. If I wanted to stay on the search page, I would still need a confirmation message.
- Navigation to a previously needed screen as well as the homepage was not possible at times. **User control and freedom, Rating: 3.** I had trouble navigating to the screen before the search screen and actually had to go a screen further in the app in order to return to the screen I wanted. I also couldn't navigate to the home screen.
- Repeated yearly information. **Aesthetic and minimalist design, Rating: 1.** The monthly view tab for data already shows me which year I'm in, yet this information is displayed again right next to it. Why not combine them to save space and reduce clutter?

Prototype 2

- Home page has unnecessary buttons. **Aesthetic and minimalist design, Rating: 1.** In the home screen an interactive globe with pins in appropriate geographic location is presented. Also, the current pin is highlighted with an arrow indicating the direction of the current wind velocity. On this screen, the user can click a button in the upper left hand corner that will send them to the home page, which is the current screen. I ended up pressing this button before anything else because I was naturally drawn to the buttons. If the button was removed, I might have first focused on other areas such as the globe and pins.
- Confusion among non-interactive features. **Consistency and standards, Rating: 1.** Once I discovered that I could zoom in on a geographic area and click on a pin for data, I clicked on another feature of the screen that did not seem to be a part of the landscape. There was an arrow indicating the wind direction but I wasn't sure if clicking it would move me forward with the application. I clicked it, but it wasn't actually interactive. A help message could be beneficial, but it might not be needed if the interactive features differentiated themselves from the non-interactive ones.
- Homepage color scheme. **Match between system and the real world, Rating: 1.** The home screen contains an interactive display of the world. Why is the entire world orange instead of a varying color scheme or the regular colors of the world? I couldn't tell which part of the world I could tap.
- Lack of instructions. **Help and documentation, Rating: 2.** Due to the design of the home page, I wasn't sure how to first proceed. If the maker didn't tell me I should touch the world, I would have spent a few minutes pressing redundant buttons or staring at the globe trying to figure out what to do. A small caption would have helped.

- The map shows unnecessary data. **Aesthetic and minimalist design, Rating: 1.** The map that shows my pins is very big, but I'm not interested in certain parts of the map such as Canada or Mexico. Why not just focus it on the area my pins are in? The addition of a map is good. I was hoping for this feature in the first prototype.
- All the pins are the same size. **Flexibility and efficiency of use, Rating: 1.** There should be an option to change the appearance of certain pins. An option would be to make some pins larger so that the more frequently used pins appear larger so they're easier to access. Another option would be to make the current selected pin smaller and the non-selected pins slightly larger so that the pins that aren't selected can be easily selected.
- Missing navigation information. **Recognition rather than recall, Rating: 2.** The address of the current location is not presented throughout the use of the app like the first prototype. It isn't until I've clicked the pin three times that I can discover and confirm the location of the current pin. In the first prototype, the address is displayed once a pin is selected.
- Identifying interactive pin was a challenge. **Match between system and the real world, Rating: 2.** When I zoomed into my current location, I couldn't tell that my pin was actually a pin that I could click on. It looked static and similar to a tree that was actually a part of the landscape. If it differentiated itself with a "click-me" indicator or resembled pin protruding from a map such as those found in Google Maps, I would have pressed it intuitively. Instead, I just stared at the screen searching for something to press until the maker told me I could press the pin.
- Repeated wind velocity data. **Aesthetic and minimalist design, Rating: 1.** Once I've selected a pin, and then clicked it again after the map zooms-in, the wind velocity is displayed on the primary screen as well as a pop-up screen. One of these displays can be removed to avoid clutter.
- No introduction to the app at sign-in. **Help and documentation, Rating: 2.** If there was a message that mentioned what this app does from the login screen, it might have been easier for me to proceed once I logged in and arrived at the home screen. On a minor note, it would have helped me tell the difference between the two prototypes.

Issues for Both Prototypes

- Icon for "current location" button is not immediately understandable. **Match between system and the real world, Rating: 1.** From the appearance of the icon, I would not have been able to discern that it is the button for the user's current location. I am accustomed to the ubiquitous Google Maps and its button icon with a triangular figure to represent the current location. The icon also differs from the icon found on MapQuest's mobile site.
- For both prototypes there is no way to add, remove, or edit a pin. **User control and freedom, Rating: 4.** So far it seems as if I can only search for and select from predefined pins. This is a major issue that should be addressed since users must be able to input new pins and modify old ones.
- What does "All" mean in the monthly tab to view data? **Help and Documentation / Match between system and the real world, Rating: 1.** A source of confusion is that in the context of the monthly view, there is also an option to view the yearly data. Does the "All" option refer to the monthly or the yearly view? It's difficult to make a judgment since such an option isn't frequently found outside of the system.
- There is no option to set month range to view data. **User control and freedom, Rating: 3.** On the screen to view the monthly data there is no option to set the range of the months displayed. What if the user wanted to see more or less months?
- Ambiguous wind velocity. **Visibility of System Status, Rating: 2.** In the "My Pins" and search screen, a wind velocity is displayed. However, what velocity is this for? Is this a daily wind velocity or the current hour velocity? This same ambiguity can be found in the second prototype's home screen where an interactive world is displayed along with the wind velocity of a certain pin. The details of what the system is displaying are unclear.

Brief Comparison

Each prototype had many individual issues and when examined together, they both had several overlapping problems. Even though this is the case, there are several things that they can learn from each other.

First of all, the second prototype offered a simpler interface and was a greater match between system and world. When presenting a geographical illustration close-up of a pin, the second prototype illustrated the wind direction with only an arrow and without drawing the "movement" of the wind. This made the geographical illustration a lot less cluttered. To better match the world, it presented the pins on a map, something that Google Maps does, which is a

more familiar interface for me. The second prototype also chose to present the wind data viewing options using text instead of icons. The icons in the first prototype were a bit confusing because I couldn't make a connection between the content of the picture and the viewing option it was trying to illustrate (hourly, daily, or monthly). The second prototype simply had "Hourly" and "Daily" as buttons, which made the interface a lot closer to a weather-monitoring app and easier to navigate.

This isn't to say that the first prototype is without good features. The first prototype offered information about the app on the login screen, which is very helpful when a user is first navigating the app. I would have liked to see this assistance in the second prototype, which didn't offer much guidance at all. Also, the first prototype kept the address of the pin at each screen. This feature reassured me that I was indeed looking at the right pin and saved me time from looking up the current address. The second prototype had this information as well, but I had to dig through a few screens and pop-ups so it was not as accessible.

A possible path to take is to combine the presentation of the second prototype along with the assistance that the first prototype offers. Some considerations could include addressing the issues of both prototypes such as a familiar "Current Location" button icon or modifying the data presentation on the home page and viewing screens. All in all, I feel that making the app less cluttered, more recognizable, and clearer will do a lot to further the app.

Please include a few sentences reflecting on what kinds of things you found paper prototyping and HE valuable for -- and what kinds of things they're not very useful for.

Reflection

For me, paper prototyping was the most important step towards realizing my group's idea. I feel that as powerful as ideas are, they don't mean much until they become reality. Paper prototyping forced me to take my ideas seriously because my ideas now had a form and were tangible. From this point, I grew to critically analyze the state of my prototype as well as any modifications I wanted to make because there was a physical price to pay when adding or taking away a feature.

This transitioned very well into the heuristic evaluations because once my ideas became reality through the prototypes, I had to really be honest with myself on how I could make the prototypes better. Furthermore, through evaluating others' work, I learned to really criticize my own work. I also realized that as much as I want to, I will not be able to see every flaw or advantage in my design. This realization led me to appreciate the feedback from others.

I feel that prototyping and evaluating can be bad in the sense that they provide so much feedback on possible paths that I question the quality of my design. I also think that the two offer such rich feedback that someone can be trapped into paper prototyping, then evaluating, then prototyping some more, then evaluating again. At some point I have to break away from the prototyping and make my ideas a reality.

