Project 9 (Final Prototype)

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1. Introduction

Our prototype is intended to solve the problem of users finding new routes to navigate on. It is often the case that route planning is a time intensive process, especially when is unfamiliar areas. We intend to make it easier for users to be able to find routes that they want to travel recreationally on, based off of set criteria that the users can generate in app. Our problem is that we need to design the application in such a way that it minimizes the time required as compared to using other means, and that the app itself provides appropriate functionality in order to allow users of varying skill levels and usage frequencies to be able to make the best use of the applications designed functions. Our target user is people who frequently hike, bike, or mountain bike, and would like an app that would help them find new routes to do these activities in their area. Previously, the app was confined to only hikers, but at the behest of user feedback, we have slightly retooled the app so that it also targets bikers and mountain bikers. Hikers tend to be very active, so there is likely a lot of overlap between people interested in these hobbies. As such, our target audience remains the same, even after adding this functionality.

2. Materials

A storyboard summary of our prototype is presented in Appendix A. The myBalsamiq final prototype itself is presented in Appendix B.

3. Design Discussion, justification of design decisions made

When we were going through the analytical and empirical review, and doing the field research that accompanied that, a common theme that kept coming up was make our purpose clearer, make our app simpler, and make it easier for the user to follow along with where they are. There were some minor points made, such as cool features that could be implemented, and more advanced settings that are easy to save and repeat for repeat users, but the common themes were clearer, simpler, and easier to follow. So when we were approaching these latest sets of images, those were the things we were really trying to keep in mind and

address in a way that made the user feel more capable of tackling these problems.

The responses we received during the design galleries provided a considerable amount of information which informed our initial designs. A number of students discussed how some of our earlier use of certain symbols and design decisions led to confusion. We took steps to ensure that such designs were altered to be more in line with conventional application standards, using the student responses as a jumping off point. Unfortunately a number of complaints about certain button designs were unable to be made better, as a result of the limitations of our experience with the balsamiq platform.

It goes back partially to the attention investment model, our users attention is a scarce resource, and we want to make sure its being wasted as little as possible. For our new users, that means doing whatever we can to help them navigate as they go with limited needs to reference frequently asked questions and to make it as simple as possible for them to create their routes. In order to achieve this goal, we made the buttons that a user would need to hit to get started very obvious from the beginning. The “Find Route” button on the landing screen gives them a strong information “scent” for what they would be using our app for (primarily finding new trails to hike).

For our advanced users, we have built in the ability to quickly be able to get on their route and on their way with as few clicks as possible, as well as use additional features to make their own routes. We figured that these users will be using the app enough that they will want to dig into making their own routes for sharing, reviewing other people’s routes, and saving a list of routes for themselves. As such, these expanded functions can be accessed from the side bar menu, which the advanced user will be likely to find by exploring the app. Additionally, the app hints at these other functionalities on the Route Complete screen. The user sees several buttons which will take them to the screens for community, reviews, etc. This will expose newer users to these functionalities if they would like to experience them. By having these buttons on the Route Complete screen, we think that we will be more likely to make more novice users into advanced users.

Our app is in a unique situation that we want to get people out of it and on their way as quickly as possible. From the user questions, we realized that our users, when they are looking to start doing a recreational activity, are looking to spend as little time preparing on an app as possible so they can go out and get started with their recreational activity right away. These are the justifications we have for the way we have structured our app.

4. Changes Since Initial Prototype

Previously the settings screen had the information on the user such as name, address, phone, etc. We decided that this didn’t quite fit what a user might be looking for when they wanted to access settings. We changed the settings page instead to deal with push notifications, user tracking and and sound options. In keep with the common heuristic of settings screens, we felt these were more reasonable and expected functionality of typical settings screens. With the Settings page revamped we decided to create a different screen titled Profile to deal with a user’s name, address, phone number, etc to follow common heuristic practice which will help users keep the “scent” of functionality.

The profile screen previously had an edit button but after taking a step back and evaluating from a user’s perspective we realized that the Profile screen already has input fields which are assumedly changeable by the user. It would be redundant to have an Edit button when

you can already just changes the values. We decided instead to have a Save Changes button which makes it obvious to the user that whatever changes they have made will be saved on clicking that button. The thinking was this a more familiar interface for data entry and manipulation for user information. We also fixed the link on the Profile icon in the top right to the profile screen. The profile screen was previously found on the “Settings” screen.

A bit of feedback we received from both the TA and commenters on Canvas was that the “Home” button should be at the top of the menu list and the overall size of the “hamburger” icon. The mental models formed by common users of web applications is a hierarchy for menu items and a very obvious menu icon. When making a mental model of my own for our application, the first thing I imagine is the menu / “hamburger” icon being quite large and obvious just like what was noted from our feedback. Secondly I envision listing options from the most commonly used to the least commonly used screens for the application. It became obvious to us from their feedback that having this expectation unmet resulted in a bit of confusion when it came to understanding our menu. By placing the Home option at the top of the menu we believe this will increase the usability of our application and meet user expectations. Also, we placed a small message pointing to the hamburger at the top of the home screen, indicating that clicking it will show more options to the user.

Another thing that was changed in the design of the app was that we added functionality for selecting type of trail. This was a suggestion from one of the TA’s, and was easy to implement. The app already is targeting hikers, and those who are interested in hiking may be also interested in other activities such as biking or mountain biking. Also, the app already is all about routes, so it would be logical to include biking/mountain biking routes as well as hiking routes. In order to build this new functionality into the application, we added options to the home screen wherein the user can select activity type. The user can select between hike, bike, or Mountain Bike. After selecting the activity type, the trails shown on the next screen are trails which match that type. Just like with difficulty and distance, there is a toggle switch that the user can hit if they don’t want to specify an activity type. Finally, on the My Reviews, Community, Routes, etc. screens, the type of route is now shown, in addition to the distance and difficulty already shown.

Another piece of feedback that we received was that the Profile icon in the top right didn’t link to anything. In most apps, clicking on the profile icon in the top right leads to the screen where users can update their profile information. Previously, clicking Settings took users to a screen where they could edit this information. Now, clicking on the profile icon in the top right takes users to a screen where they can change their profile info. The “settings” button in the sidebar menu now takes users to a separate settings screen. On this settings screen, users can toggle notifications, sound effects, and location tracking on and off. It made sense from a design perspective to keep profile information and general app settings in separate screens so as to make sure the user doesn’t get confused as to each screens purpose. Keeping them together may have muddled things.

Speaking of the user profile information, some minor changes have been made to the user profile screen. It used to be the “Settings” screen, but in order to make it into a more-focused Profile screen, we did the following. First, we changed the title to Profile. Then, we changed the title of the box surrounding the fields that a user can enter information into. Finally, we moved the notifications toggle to the separate “Settings” screen, and added a save button. Hitting the

save button will prompt an alert to appear letting the user know that the information has been saved.

Our earliest concepts included a concept regarding an audio guidance system to help users following a route so that they would not need to refer to their phones. The responses on the first canvas post made it seem that people really took to the idea, but the concept has not been given any representation since, so we have added a “listening” button to the Active Route pages, as a representation of the audio directions concept. The button doesn’t direct anywhere as its placement is entirely symbolic of an as of yet unimplementable audio system.

One of the comments that we received from the TA was that the “Stop” and “Reset” buttons in the “Active Route” screen didn’t have any feedback. It was hard for the user to know what was going on when they hit one of those buttons. In order to improve feedback on these buttons, new alert screens have been added that will appear when the user hits one of those buttons. When the user hits reset or stop, warning messages will appear asking if they really want to reset or stop. If they hit no, then the app will return to the “Active Route” screen. After hitting reset, if the user then hits yes, then the route will reset after showing them a message stating that the rout will be reset. After hitting stop, if the user then hits yes, then the app will show them how far they traveled in what amount of time, and then return them to the main menu. This increased feedback should make it clear to users what is going on when the reset or stop button is hit. As such, the feedback of the app has been improved.

It was brought to our attention that a few of our screens overlapped too much in their overall layout and functionality. Two screens in particular were the My Routes and Community pages. Since we have moved from a low fidelity prototype to a more high fidelity prototype we worked on making it more obvious how these pages differed by adding different images for the saved routes and making it clear that different users generated the routes you see on the Community page by adding user icons with differing user names than the current user.

Work Distribution:

William Dillon: Making several changes to the My Routes, Community, and My Reviews screens, adding the screens with alerts. Addressing other TA recommended changes.

Kenneth Thompson: Took part in group discussions, created document for group reviewing of TA notes, updated several of the slides in balsamiq, made several revisions to group doc.

Sean Cramsey: Created a small number of screens and edited more. Added to the introduction and justifications

Harrison Latimer: A large number of the Balsamiq screens.