

1. **Title**

SubTrackr

2. **Each Team Member's Name and Role**

Andrew Murray: Scenario Developer

Ian Wagner-Smith: Project Manager

Tori Yan: Usability Researcher

Valerie Ziyi Huang: Visual Designer

3. Problem and Solution Overview:

Recently many services have been adoption or moving over to the subscription model. This has created some challenges for users because it abstracts the cost of the service and making it harder to evaluate the actual cost of maintaining a subscription. Moreover, companies often make it difficult to unsubscribe from a service by automatically renewing your subscription at the end of a pay period forcing you to end the subscription explicitly. This is challenging for users as it requires that they set up reminders to remember that a service is about to end and to cancel early. Our proposed design would address these issues by both tracking the use of a service, making the costs and benefits less obscure to the user, and by automating the renewal process eliminating the need for users to track it manually. Our design would make use of these two features to take better advantage of the free trials offered by many services. Giving users a concrete way to evaluate their product trial and eliminate the concern of accidentally paying for a service they decided not to continue using.

4. Initial Paper Prototype:

The paper prototype consists of several hand-drawn screens illustrating the user interface of the SubTracker app:

- Notification on cell phone:** A smartphone screen shows a notification: "Your Amazon Service is due in 7 days! Click & Renew now!"
- Main Page:** A dashboard view showing service icons for Amazon, Netflix, Hulu, Metro card, and YMCA. A red box highlights the "Metro card" icon.
- Add service:** A form for adding a new service. It includes fields for "Enter Subscription" (with placeholder "SubTrackr"), "Free trial" (checkbox), "Cost" (\$□ per □ month), "Pay period" (12 months), "Start date" (Today or Date of Another Day), "End date" (2018/01/01), and "Remind me" (checkbox) with options for Email or Text message. Buttons include "+ Add Another Service" and "Complete".
- Account setting:** Account settings screen with "Notify me by email" (checkbox) and "Notify me by text" (checkbox). The "Email" field contains "user@example.com" and the "Text" field contains "(400) 555-1234". A "SAVE" button is at the bottom.
- Usage Detail:** A detailed usage report for Netflix. It shows "USAGES THIS PAY PERIOD: 32", "COST PER PAY PERIOD: \$9.99", "PAY PERIOD PERCENT COMPLETE: 60%", and "COST PER USAGE: \$0.16". A bar chart visualizes the usage data.
- LOG USAGE:** A screen for manually logging usage for non-recognized services. It has a "LOG USAGE" button and a note: "Manually log usage for non recognized services".
- Reminder of trial expiration:** A reminder message: "Your free trial is about to end in 3 day. Are you going to subscribe to it? [Yes] [No] [Ask me later]".

Task 1: Receive alerts at the end of a pay period

Task 1.1: Changing Service Settings: In this iteration of the prototype, you could change notification settings and see warnings about the expiration of your service on each service's usage report page.

Sub tracker

USAGE REPORT FOR Netflix:

Your usage:

| Date | Usage |
|------|-------|
| 3/1 | 1 |
| 3/2 | 2 |
| 3/3 | 3 |
| 3/4 | 4 |
| 3/5 | 5 |
| 3/6 | 6 |
| 3/7 | 7 |
| 3/8 | 8 |
| 3/9 | 9 |
| 3/10 | 10 |
| 3/11 | 11 |
| 3/12 | 12 |
| 3/13 | 13 |

USAGES THIS PAY PERIOD: 32
COST PER PAY PERIOD: \$9.99
PAY PERIOD PERCENT COMPLETE: 50%

COST PER USAGE: \$0.16

Your free trial is about to end in 3 day.

Are you going to subscribe to it?

Yes No Ask me later

Service Setting

free trial

Period:

month(s)

Start date:

Cost:

\$ per month(s)

End date:

Remind me days prior to end date.

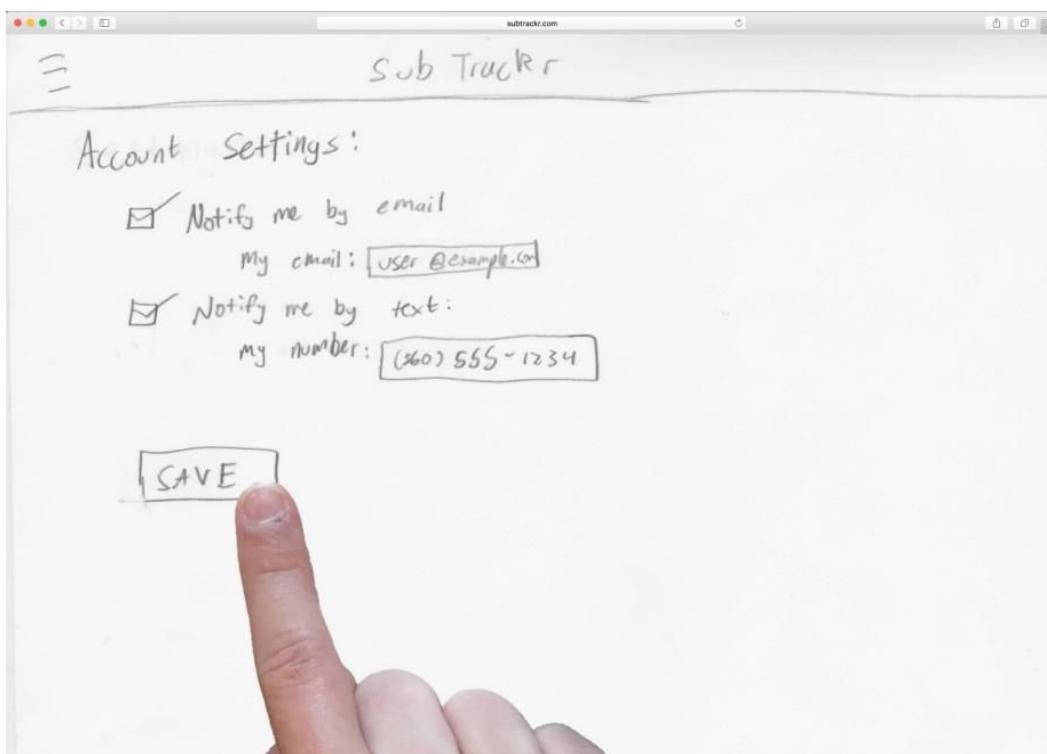
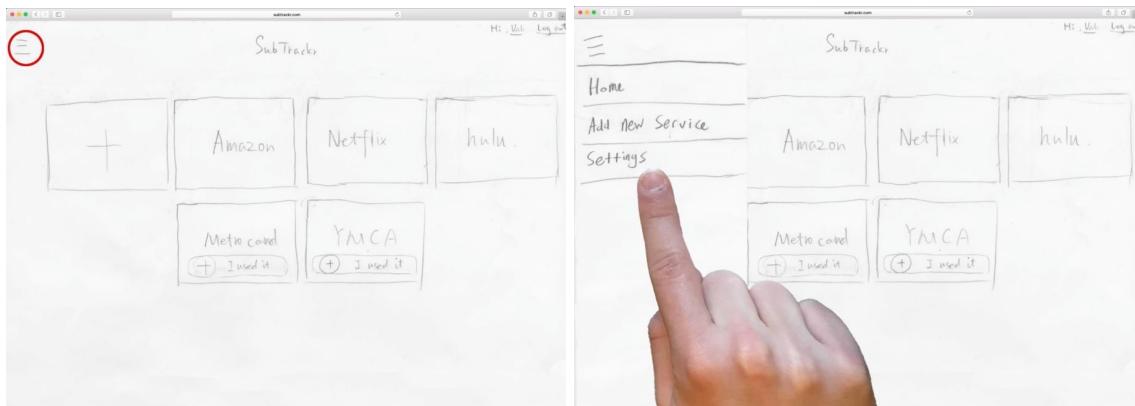
Remind through: Email Text

I no longer subscribe this!

A finger is pointing at the "SAVE" button.

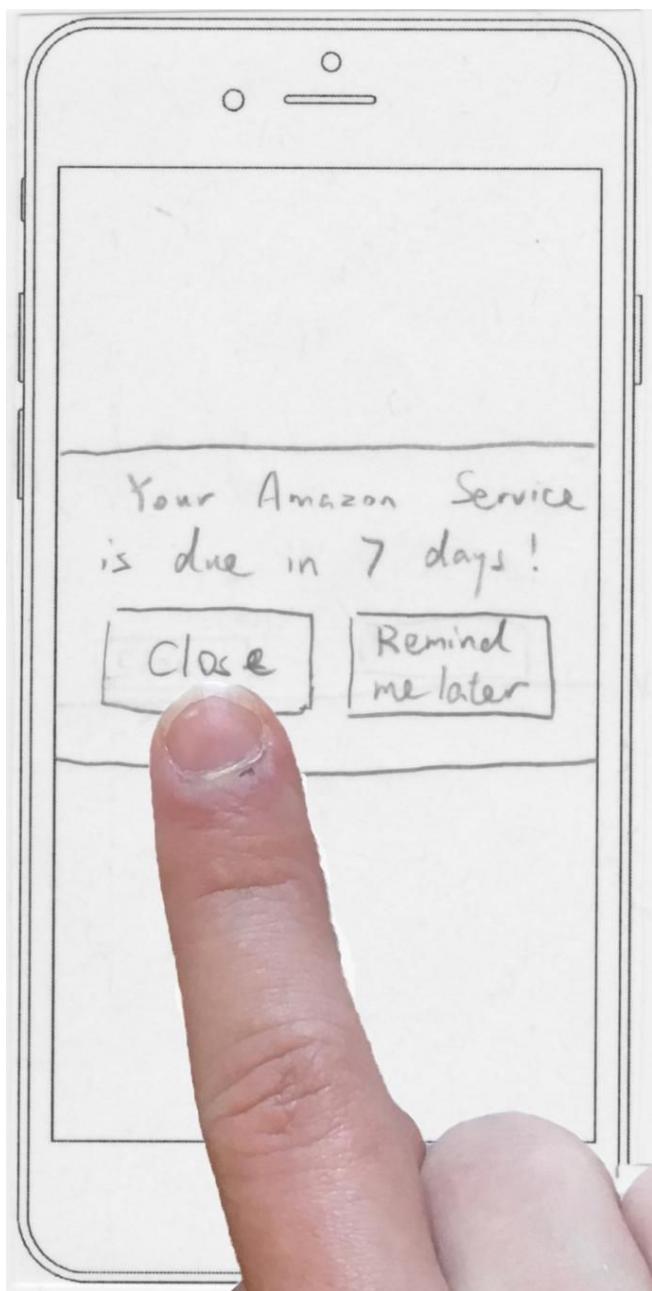
Task 1: Receive alerts at the end of a pay period

Task 1.2: Updating Notification Settings: In this iteration, the text and email settings were on a settings page accessible only through the “hamburger.” There was a page called “Account Settings” that was distinct from the settings for each service.



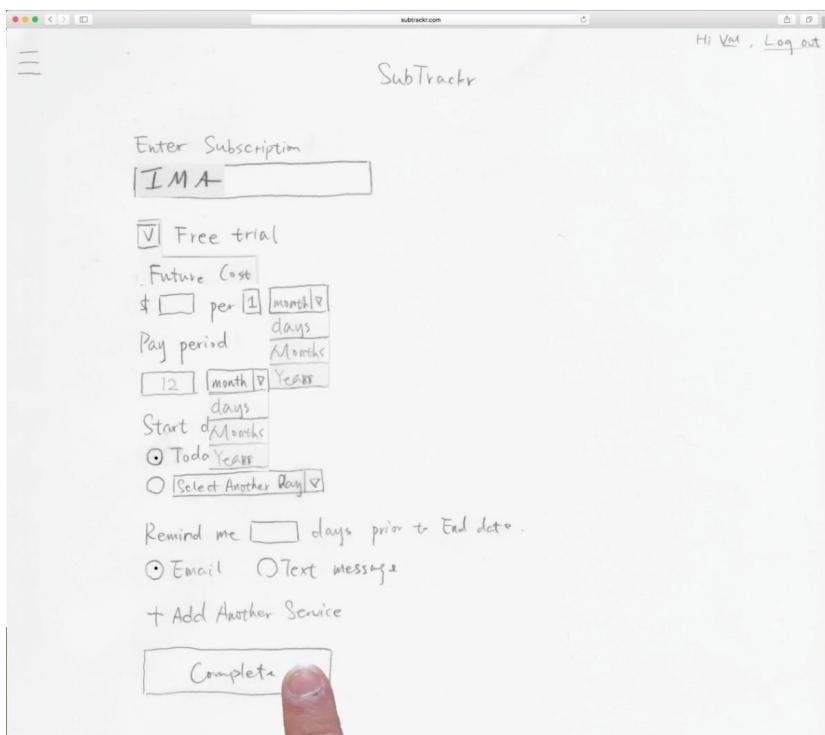
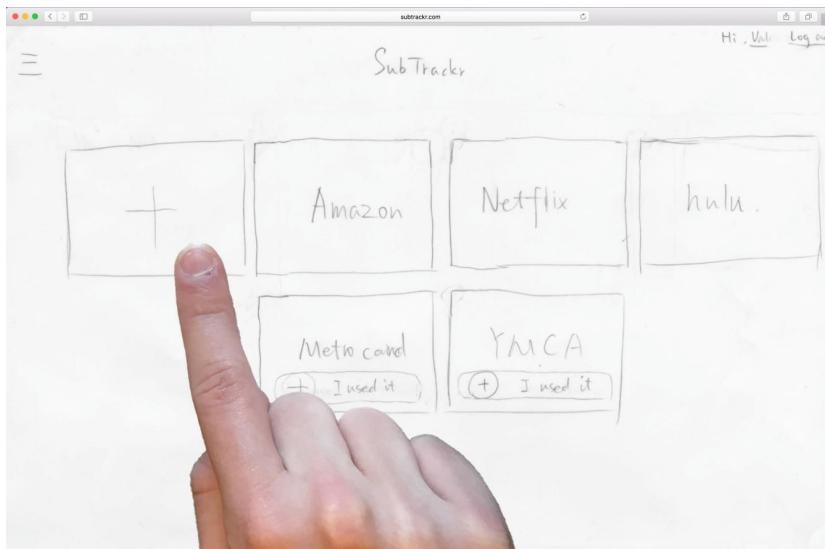
Task 1: Receive alerts at the end of a pay period

Task 1.3: Getting the Notification: The user receives a phone notification that they can hit “remind me later” on to delay notification of account expiration.



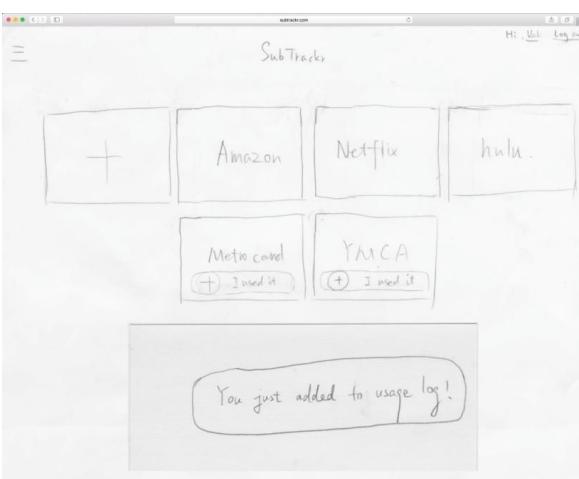
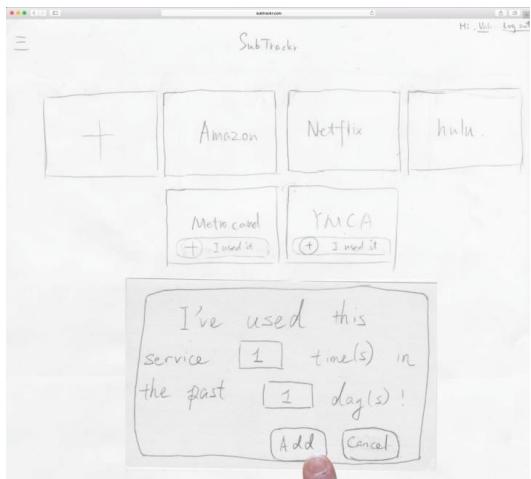
Task 2: Evaluate Usage Data

Task 2.1: Adding a New Service: The user can select the plus icon at the beginning of their list of services on the main screen and it takes them to a page dedicated to adding the service. This page has many, many fields to enter. The first field attempts to autocomplete with possible supported services, and if it does, some (but not all) of the fields will automatically be filled (after asking the user to log into that site).



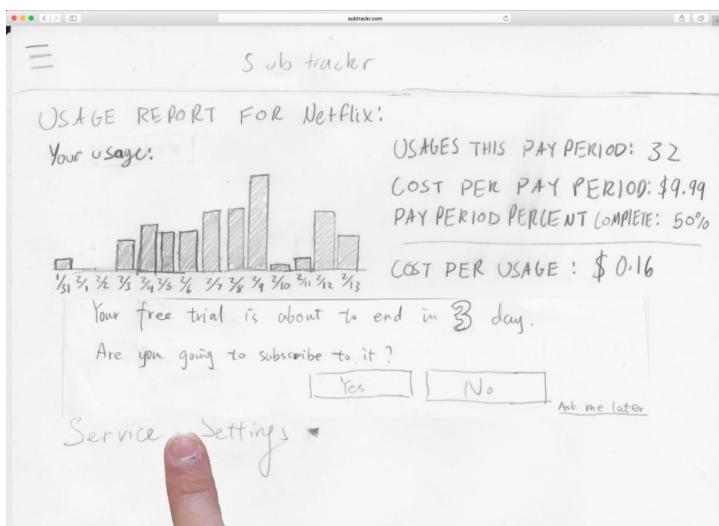
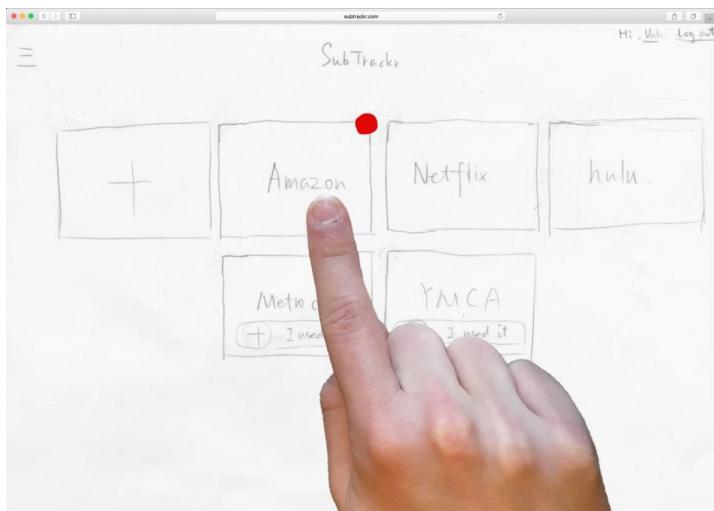
Task 2: Evaluate Usage Data

Task 2.2: Logging Usages (for manual services): In this iteration of our design, the user can log their usages of manual services by clicking a button that sits on top of the icon of the service on the home page. A pop-up appears and allows them to enter information. Notably, this can only be done for services unsupported by SubTrackr.



Task 2: Evaluate Usage Data

Task 2.3: Checking Service Usage Report: The user can select a service on the main screen in order to view its usage report.



5. Testing Process:

- Method Overview:

For each test, we introduced our website and provided a backstory as motivation for the participant. We told the participant that he/she just subscribed to Netflix and wanted to know whether Netflix reached their expectations. While the participant was exploring and completing the task, we didn't interrupt or provide help except occasionally prompting the participants to speak out. And we would give out pivotal time prompt, such as close to the end of the billing cycle, and then observe how participants react. After both tasks are ended (potentially incomplete), we debriefed the participant, asking them to interpret the information they got from the statistics the website provided, explaining the goal of the tasks, and asked them if they had any more questions or suggestions about the website.

- Roles for Each Team Member:

For the first and second usability tests, Tori played the role of facilitator, Valerie the role of computer and Ian the role of observer/notetaker. For the the third usability test, Andrew played the role of facilitator, Tori the role of computer and Ian the role of observer/notetaker.

- Participants:

Our first usability test participant is Kelly, a UW undergraduate student, who described herself as not "tech savvy". The test took place in a coffee shop on campus, an environment Kelly often studied and felt comfortable in. She was chosen partially because she is not involved in design research previously. Also she has an extensive experience and a good understanding on how subscription works. And she is not experienced with web application and tracking service. We want to have her participate in usability test to detect any hidden affordances we made.

Our second usability test participant is Alice, a UW INFO senior, who has extensive knowledge on site design and a specific site aesthetics. The test took place at her house, where she also works predominantly. She has a good understanding on subscription as well. We chose her because we wanted to test on the efficiency and external consistency of our site when serving an expert in websites.

The participant was Shawn, a male college freshman. The test took place in a common area near his dorm room. This participant was chosen to find diversity from other participants in that he is male and younger than other participants. Also Shawn represents a middle ground between the previous two participants in terms of expertise in website. We were hoping to observe how an average user approaches our website for the first time.

6. Testing Results:

- Heuristic Evaluation:

| Heuristic Violated | Specific description of problem | Change made |
|-----------------------|--|---|
| Consistency | Dramatic UI change after entering the subscription name | push sign up for services that require manual input as default and provide signup shortcut for services that we support |
| Documentation | No distinction between required and unrequired fields in sign up | We add in “* required field” notation to help distinguish required fields and unrequired ones in sign up and service settings |
| Match with real world | Service settings expansion triangle, by standard, should be to the right of corresponding text | We switched the drop down indication from right of text (“Service Setting”) to left |
| Recognition | The “I’ve used this” dialog doesn’t indicate what service the user is recording usage of | We add in the service name into the dialogue |
| Efficiency of use | Confusion between unsubscribing the service and stop on tracking the service | We reword the untrack button to clarify that it means “remove the service from SubTrackr” |

- Summary of Major Revisions (Based on Usability Testing Sessions):

Going from “The Hamburger” to the constant horizontal navigation bar:

Initially, our design had a constant “hamburger” element in the upper left hand corner of the screen, resting on the menu bar. Clicking this showed a sidebar that allowed for a way to get to the settings menu or the home menu. The “SubTrackr” icon was in the center. There were a few things wrong with this. First of all, the settings menu was fairly hidden. There are many websites on which this wouldn’t be an issue, but on ours it is a bigger deal because being able to mark that you’ve unsubscribed from a service, to turn off notifications, and many other important parts of tracking a service are stored in settings. Secondly, the “SubTrackr” logo itself was meant to be a

quick way to get back to the home menu, but without sitting in the upper left hand corner of the screen, it didn't read that way because it wasn't close enough to that convention. In the second and third iterations, we took the hamburger out and put the SubTrackr logo in the correct location. We made settings access occur through clicking a new "My Account" button on the top right corner of the screen. This worked fairly well, but we wanted to do things better.

Another recurring issue is that users were still not clicking the SubTrackr icon to go to the home page. To solve all of these issues, we added a constant horizontal navigation bar to the top of the site. This allows getting to usage reports, settings, home, and add new from any position in the app, which is very helpful because almost all of these pages need to be quickly accessed from time to time (especially home and settings). This is an especially good design for our site, because each of these pages are generally shallow, in that there isn't that long of a trail you can move from the home page by going to each of these pages. In this way, you can reach almost any page in the site from a single bar.

Management of Account settings and specific service settings:

We removed the ability to view settings for a specific service on its usage report, and moved those settings to the main settings page. Settings were now more crucial than ever, but users could only get to them from one spot. Upon further user testing, we found that some users indeed went to the usage report pages to find the settings, so we ended up linking to the settings page from that page once again, but this time with a slight difference: it would take the user to the general settings page (with a focus on the correct location) rather than opening the settings in that page.

Orientation of icons on the home screen:

Originally, all subscription icons on the home screen were part of a single list, with an add new service button at the beginning of this list. We thought this would be a nice way to make it easy to add a new service and see all of your old services.

Manual-tracking services were differentiated in that they had an extra button on them to allow quick logging of usages. This turned out to be confusing. It turned out, that even the members of our team were confused about what it meant for a service to be supported by SubTrackr, currently being automatically tracked, currently being manually tracked, and not being tracked. To solve this problem, we came up with better clues for the status of each service. Now, automatically tracked services are stored in a separate bank from manually tracked services on the main page.

Additionally, there is the idea of a "paused" service. Paused services still show up on the main page, but they are grayed out because they aren't currently being tracked. Users can still view your data from when they were being tracked if they like.

Information needed in adding a new service:

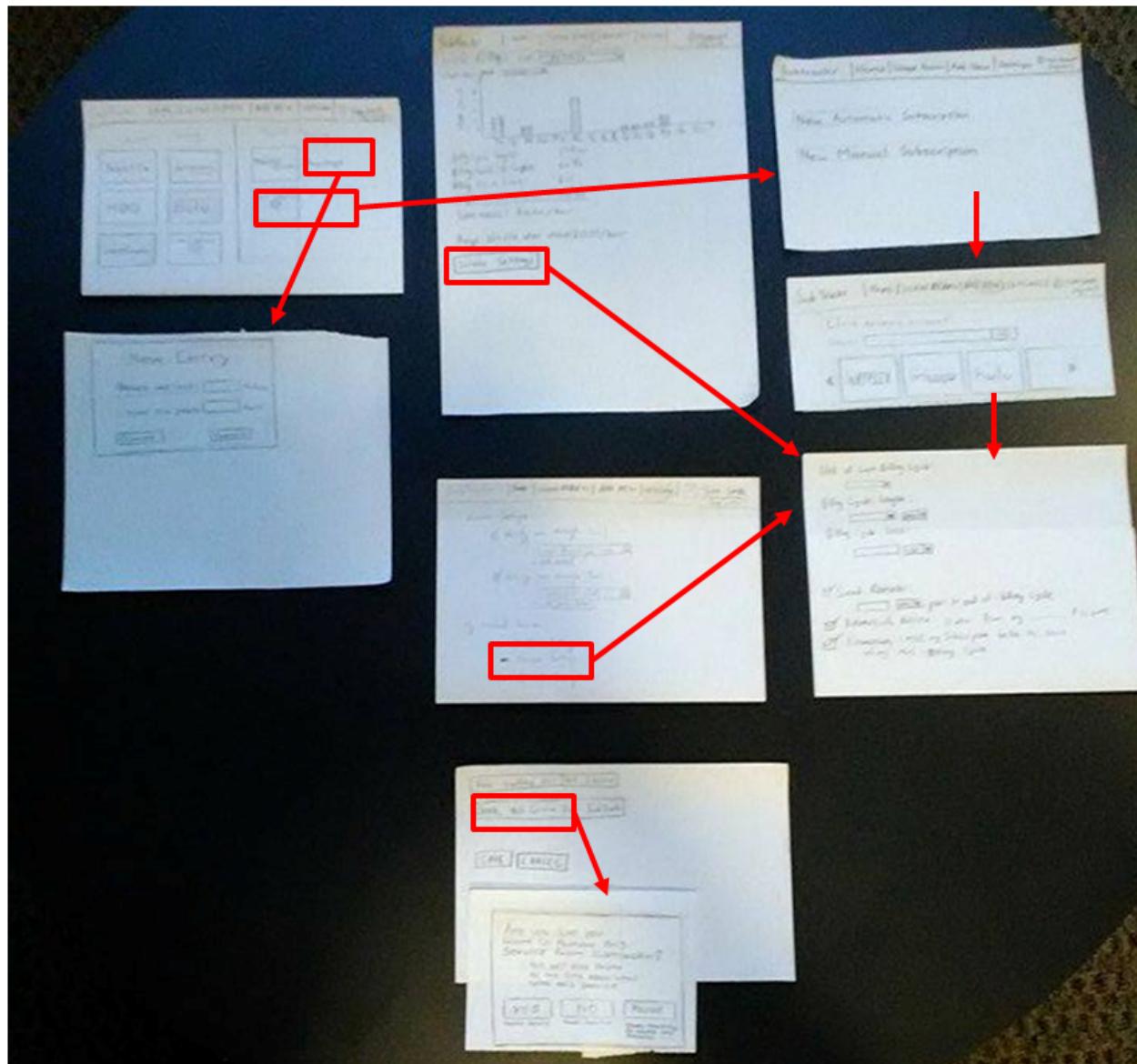
Originally, we had users enter a plethora of information about their service, including start date, end date, cost, etc. Later, we tried to slim this down as much as possible in order to reduce friction. One way in which we slimmed things down was by asking the user only for the end date of their subscription in order to infer how long the subscription lasts, but we realized that this was actually not enough information. It

made the assumption that users were adding their service to SubTracker on the same day they subscribed to it. Furthermore, it didn't allow for tracking over multiple pay periods. So after "slimming" things down a lot, we actually added more fields back in. For the times, we ended up doing start date and billing cycle length. We felt that this matched well with the changes we were making to the usage report pages, and it allowed for tracking over multiple billing cycles.

The "modes" of services is something that showed up a lot here, too. We realized that the idea of an automatically tracked service versus a manually tracked service was confusing with the idea of a service that is supported by SubTrackr versus a service that is not. Almost always, services that are not supported are services that are manually tracked, and services that are supported are services that are automatically tracked. However, we wanted to allow users to manually track their automatically tracked services if they so wanted. This was finally implemented by having the "add new" page split into a section for supported services and a section for adding your own. After finding the name of the service (either from our list or entering it manually) you are prompted to enter the rest of the information. Part of this information is whether or not automatic tracking is being used, and this option is grayed out if the service is not supported. This way, any option is possible, and each decision has a clear area in which the user chooses what kind is applicable to them.

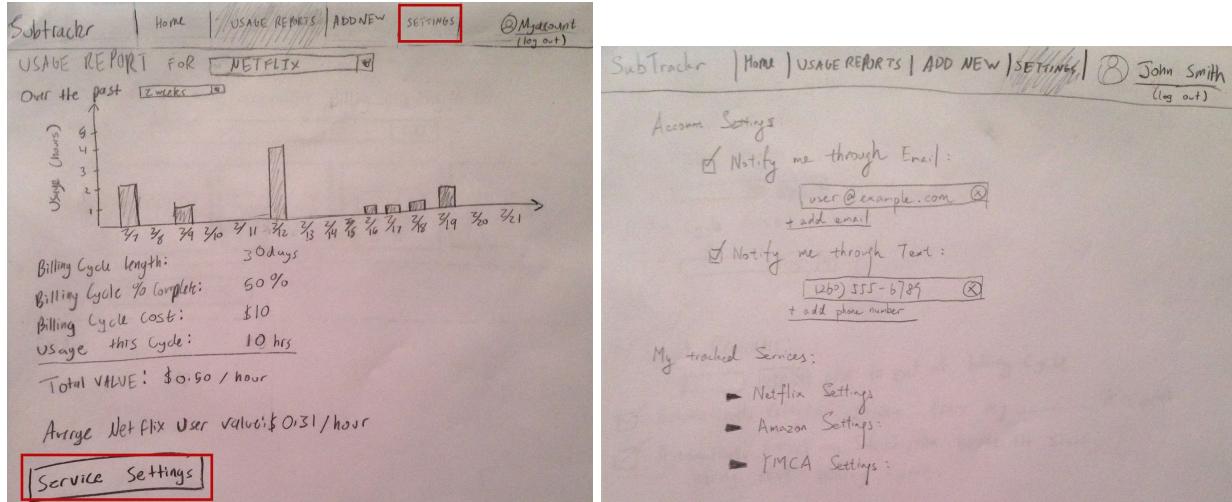
Note: Please also refer to our Appendix for additional information regarding changes made to our paper prototype. This information can be found in our heuristic evaluation tables and usability test tables.

7. Final Paper Prototype:



Task 1: Receive alert at end of payment period

Task 1.1: Changing Service Settings: When viewing the usage report of certain services, the user can go to the setting page by clicking the “Service Settings” on the bottom, or clicking the “Settings” on the navigation bar, if they want to change anything. Alternatively, they can get here by clicking the name of the service after clicking the settings button on the navigation bar.



Start of Last Billing Cycle:

Billing Cycle Length:

DAYS

Billing Cycle Cost:

USD

Send Reminders!

DAYS prior to end of billing cycle

Automatically Retrieve Data from my _____ Account

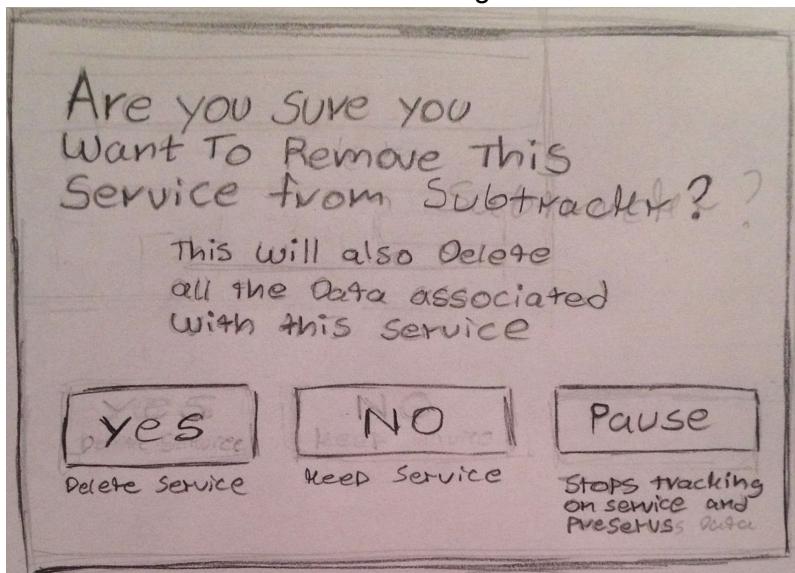
Automatically Cancel my Subscription before the Start of my next Billing Cycle.

Pause Tracking For This Service

Delete this Service from SubTracker

SAVE **CANCEL**

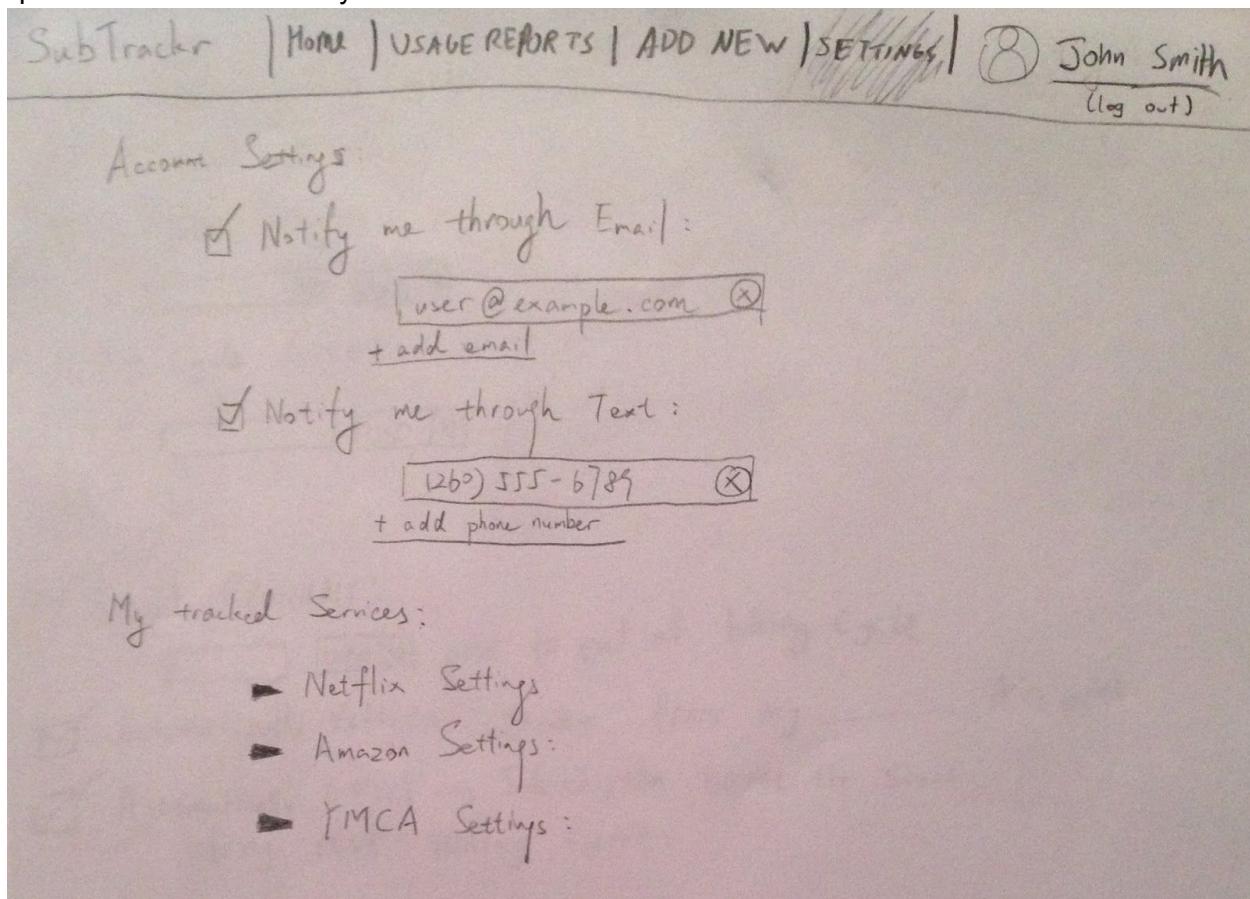
If the user would like to delete the service, a modal will pop up reminding that deleting the service will also delete all the tracking data.



Task 1: Receive alert at end of payment period

1.2 Updating Notification Settings:

On the settings page, users can also update information about their account, notably they can update when and how they are notified about their service.

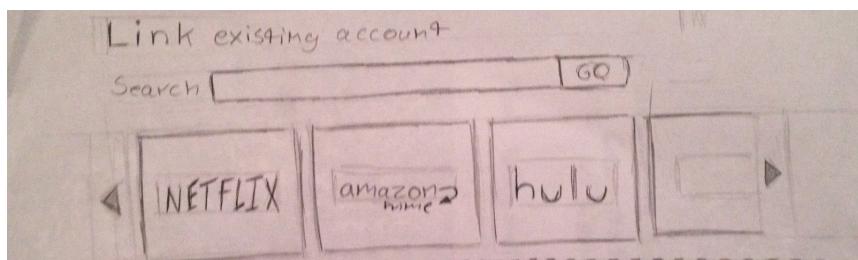
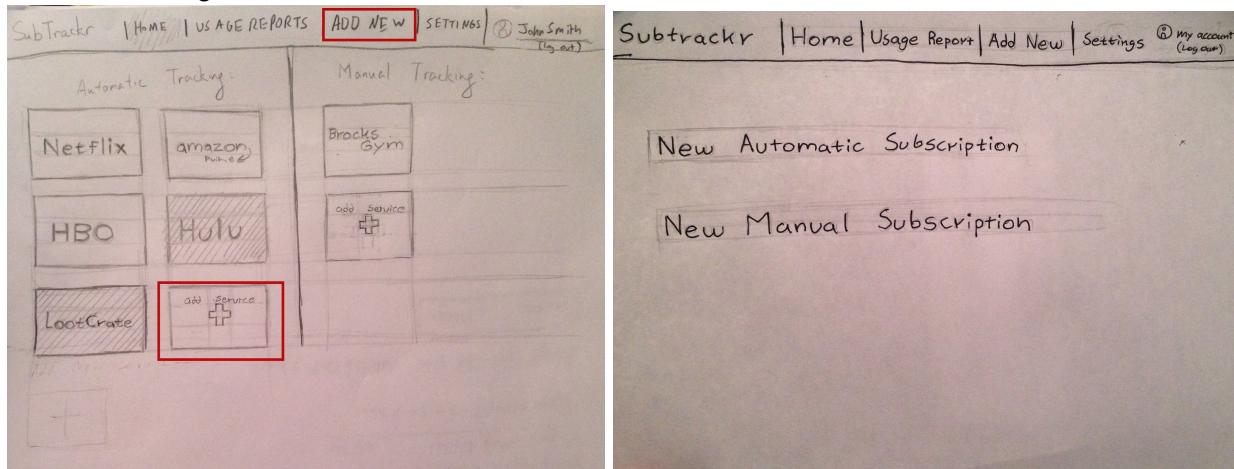


Task 1: Receive alert at end of payment period

1.3 Getting Notification: Once it reaches the notification date, the user would receive a notification on the medium(s) they've chose (text and/or email). For text notifications, they could respond to the text using a key phrase that would allow them to automatically have SubTrackr unsubscribe them from the service. Additionally, a link to the usage report page would be available on the text. Emails would be similar, but a simple link could be included for automatic unsubscription.

Task 2: Evaluate Usage Data

2.1 Adding a New Service: The user selects the plus icon at the main screen, or “Add new” on the navigation bar. The user is sent to a page for setting up a new service. From this page, they can either select automatic tracking or manual tracking. Selecting automatic tracking adds a section to the page for finding services supported by SubTrackr. Selecting manual tracking adds an element to the page for entering the name of the service. From there, users are asked to set the initial settings of their service.



Start of Last Billing Cycle:

Billing Cycle Length:

DAYS

Billing Cycle Cost:

USD

Send Reminder:

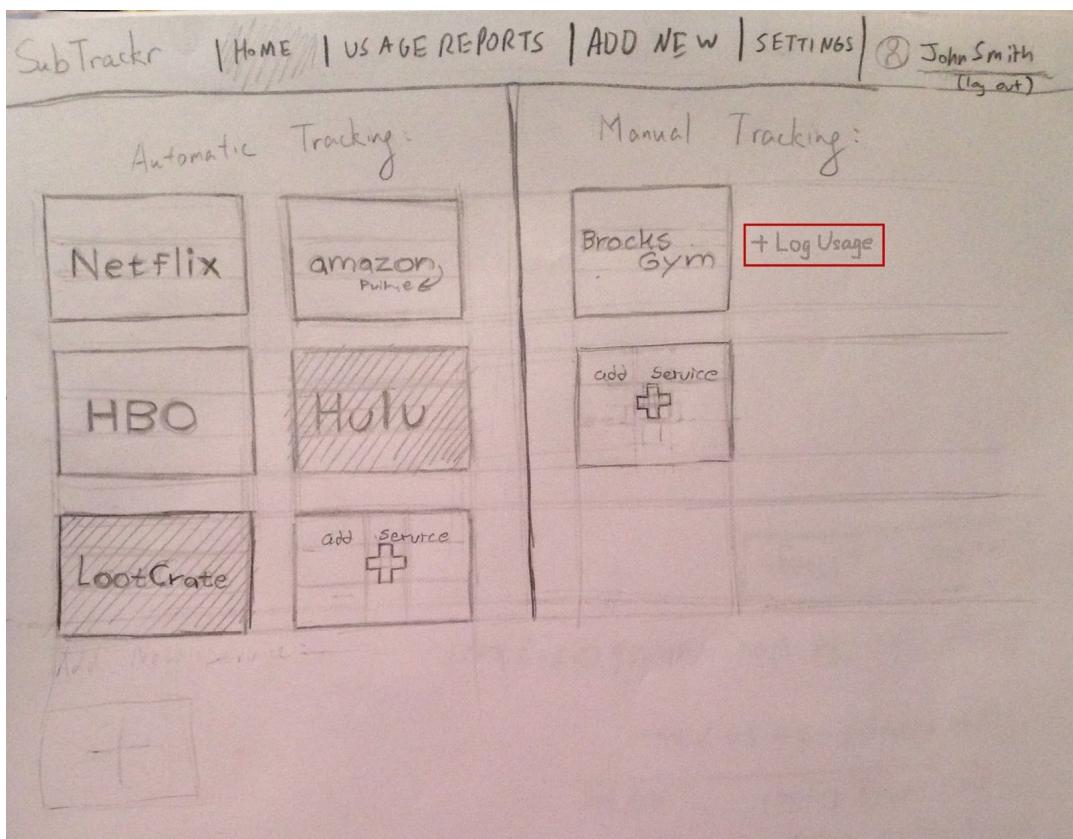
DAYS prior to end of billing cycle

Automatically Retrieve Data from my _____ Account

Automatically Cancel my Subscription before the Start
of my next Billing Cycle.

Task 2: Evaluate Usage Data

Task 2.2: Logging Usages (for manual services): Users can log their usages of manual services by clicking a button that sits next to the icon of the service on the home page. A pop-up appears and allows them to enter information. Notably, this can only be done for manual services.

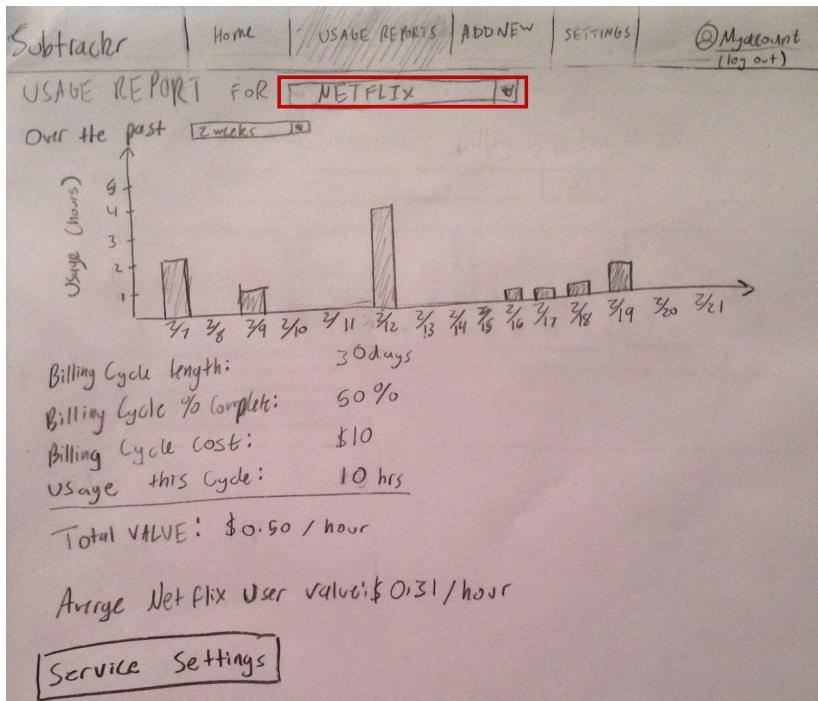
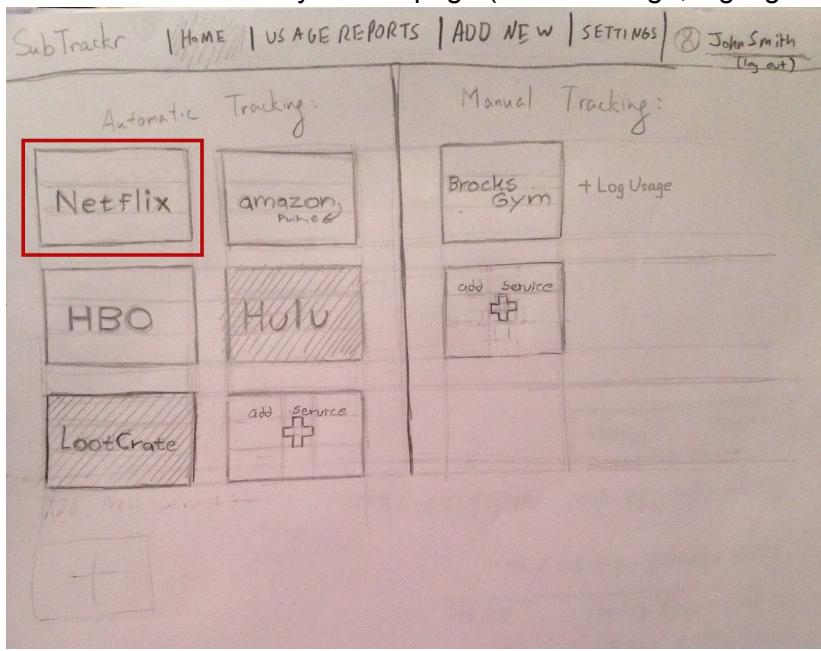


A hand-drawn wireframe of a "New Entry" pop-up window. It has a title bar "New Entry". Inside, there are two input fields: one for "Service was used:" followed by a text input field and a unit "time(s)". Below it is another input field for "Over the past:" followed by a text input field and a unit "day(s)". At the bottom are two buttons: "Submit" and "Cancel".

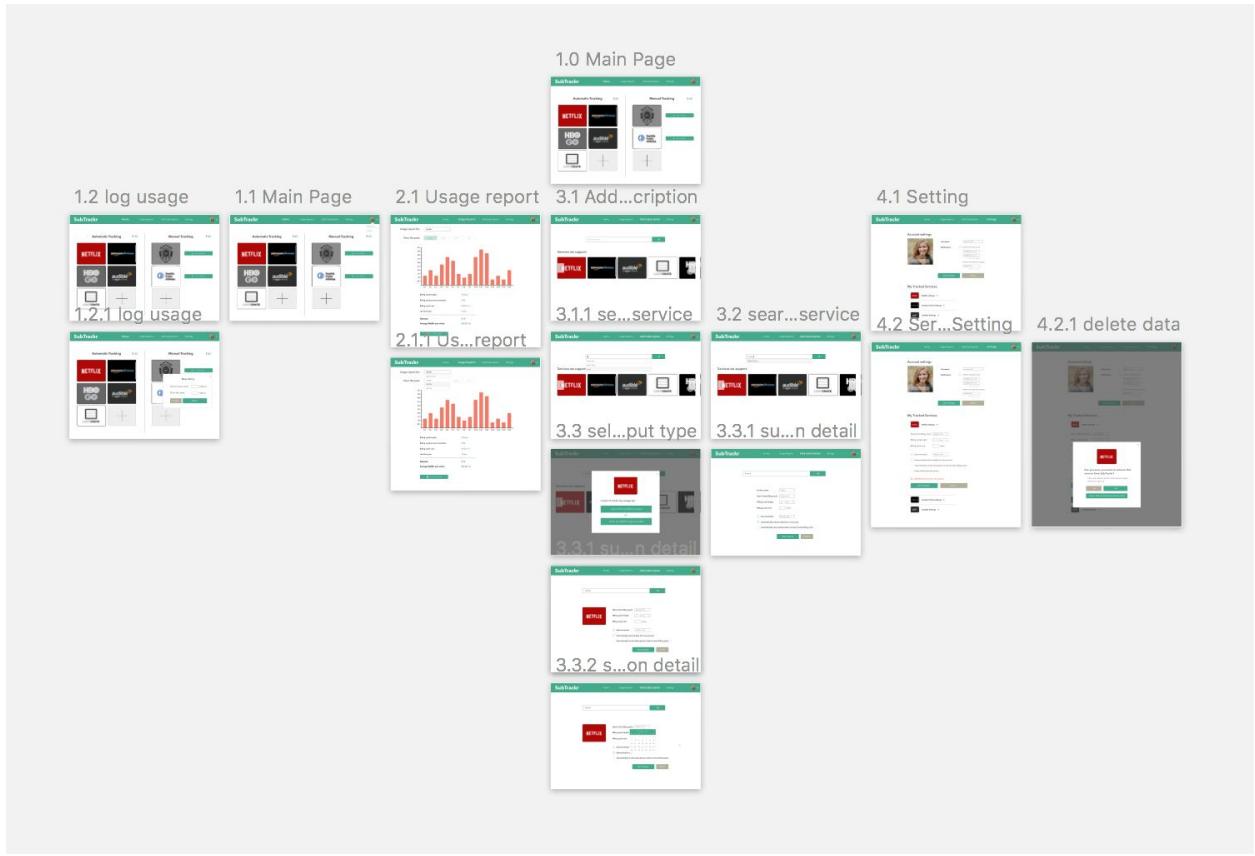
Task 2: Evaluate Usage Data

2.3 Checking Service Statistics:

The user selects the service they want to view. Here, they are provided with information about service usage in comparison to service price. The user can also get to the usage reports page by pressing the usage reports button on the navigation bar. The user is now allowed to switch between services easily on this page (second image, highlighted in red).



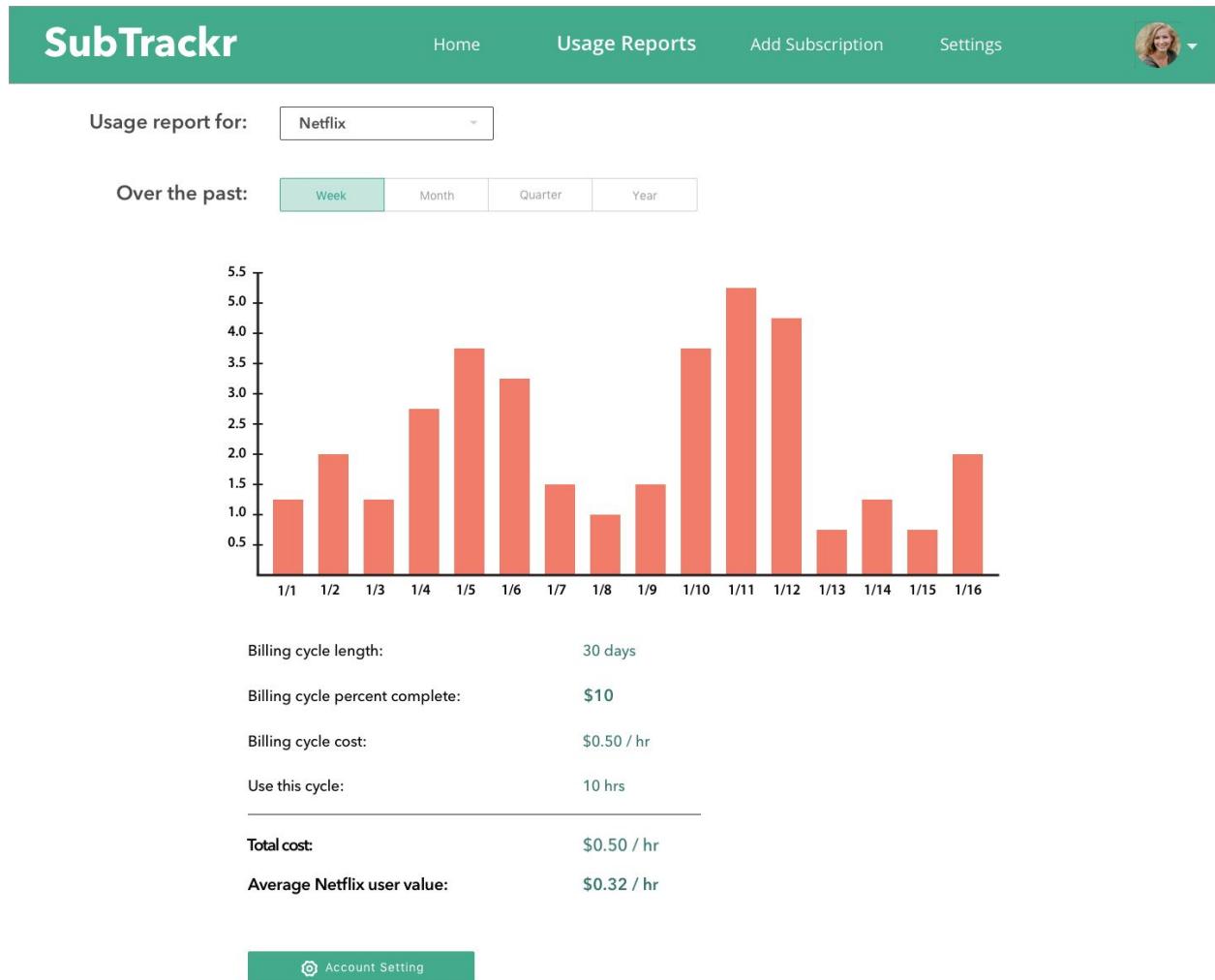
8. Digital Mockup Overview:



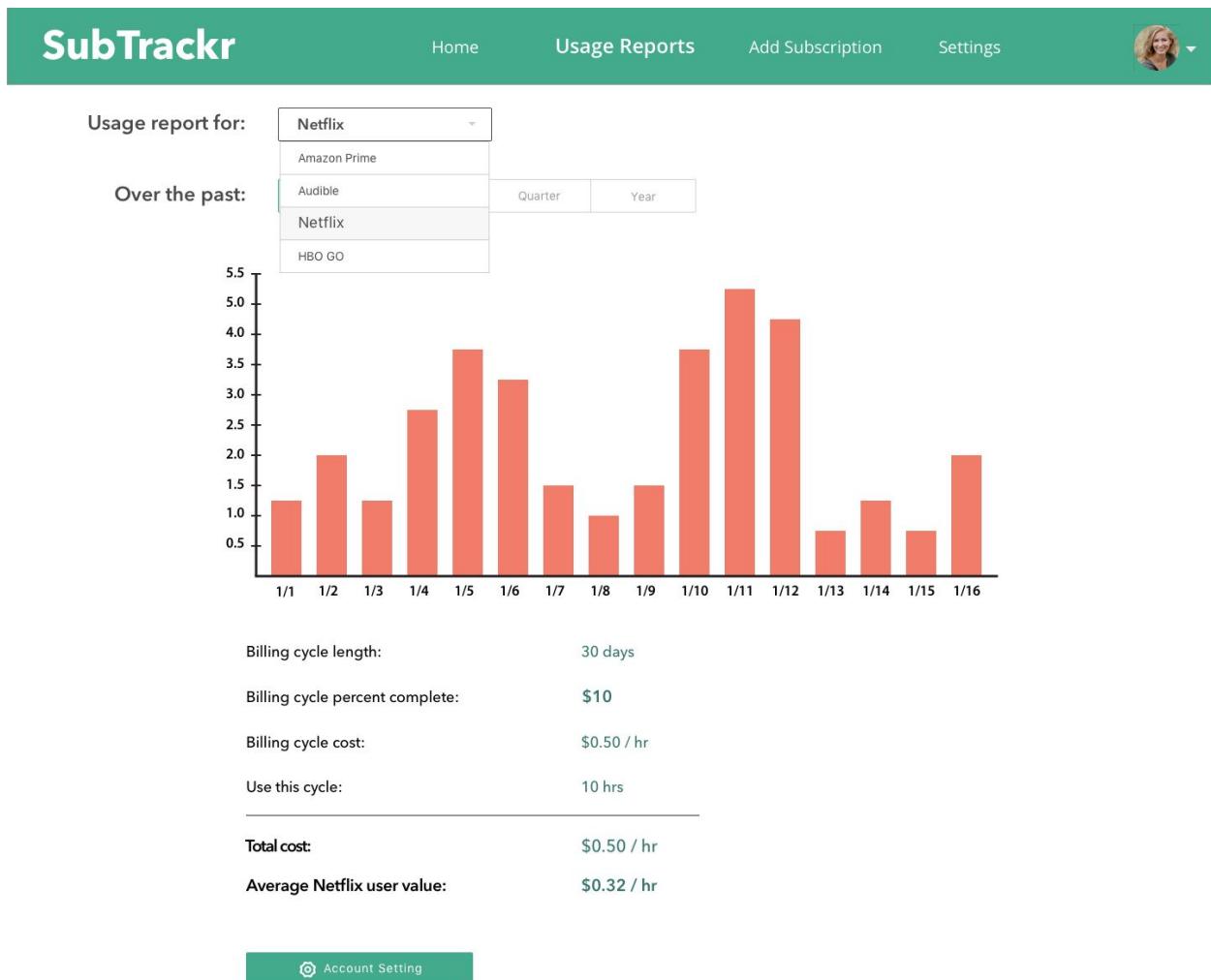
Task 1: Receive alert at end of payment period

Task 1.1: Changing Service Settings: When viewing the usage report of certain services, the user can go to the setting page by clicking the “Service Settings” on the bottom, or clicking the “Settings” on the navigation bar, if they want to change anything.

Changes we made: display all the possible time periods instead of using a drop down menu, so that the user can more easily manipulate the data.



The drop down menu allows the user to easily switch among the views of data of different services.



Task 1: Receive alert at end of payment period

1.2 Updating Notification Settings:

On the settings page, users can also update information about their account, notably they can update when and how they are notified about their service.

Changes we made: we added profile picture and username to fit the “convention.” We added “save changes” and “cancel” button to account settings and my tracked services separately. Simply because they are different forms and they should be submitted separately.

The screenshot shows the SubTrackr account settings interface. At the top, there is a navigation bar with links for Home, Usage Reports, Add Subscription, Settings, and a user profile icon. The main section is titled "Account settings". It features a profile picture of a woman with blonde hair, a "Change profile picture" button, and a "Username" field containing "AmySmith123". Below this is a "Notification" section. Under "Notify me through e-mail:", there are two entries: "email@domain.com" and another "email@domain.com", each with a delete "X" button. There is also a "+ Add e-mail address" link. Under "Notify me through text message:", there is one entry: "2069871234", with a delete "X" button and a "+ Add Phone number" link. At the bottom are "Save Changes" and "Cancel" buttons.

My Tracked Services

The screenshot shows the "My Tracked Services" page. It lists three services with their respective settings buttons: "NETFLIX" with "Netflix Settings ▾", "amazon Prime" with "Amazon Prime Settings ▾", and "audible" with "Audible Settings ▾".

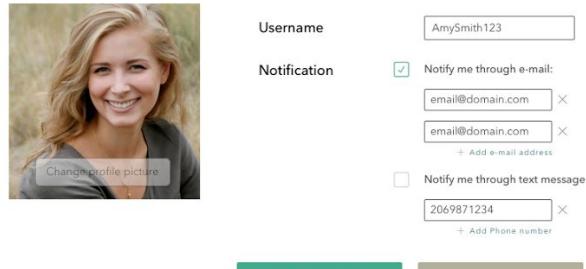
The service settings allow users to change information, pause tracking the service or delete the service.

Changes we made: we deleted the “pause tracking” and “stop tracking” buttons, because it is very difficult to tell how they relate to the “save changes” and “cancel” buttons. There is no clue whether clicking on “save changes” affects the decision they made to pause or stop tracking, or whether clicking pause or stop saves the changes they make. Use checkbox or pausing because it should be easy for users to select or unselect that option. Use red text to show the “seriousness” of stopping tracking which will delete all the data.



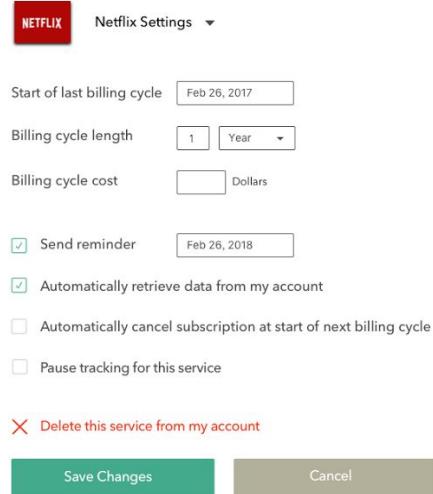
The screenshot shows the SubTrackr application's account settings page. At the top, there is a navigation bar with links for Home, Usage Reports, Add Subscription, Settings, and a user profile icon. The main section is titled "Account settings". It features a profile picture of a woman with a "Change profile picture" button below it. On the right, there are fields for "Username" (AmySmith123) and "Notification". The "Notification" section includes checkboxes for "Notify me through e-mail:" (with two entries: email@domain.com and another email@domain.com) and "Notify me through text message:" (with one entry: 2069871234). Below these are "Save Changes" and "Cancel" buttons.

Account settings



This is a detailed view of the "Account settings" form. It includes a placeholder profile picture and a "Change profile picture" button. The "Username" field is set to "AmySmith123". Under "Notification", there are two sections: "Notify me through e-mail:" with two entries (email@domain.com and another email@domain.com), and "Notify me through text message:" with one entry (2069871234). Both sections have a "+ Add" link. At the bottom are "Save Changes" and "Cancel" buttons.

My Tracked Services



This screenshot shows the "My Tracked Services" section for Netflix. It has a "NETFLIX" logo and a "Netflix Settings" dropdown. The "Start of last billing cycle" is set to "Feb 26, 2017". The "Billing cycle length" is "1 Year". The "Billing cycle cost" is listed as "Dollars". Below these are several checkboxes: "Send reminder" (checked, set to "Feb 26, 2018"), "Automatically retrieve data from my account" (checked), "Automatically cancel subscription at start of next billing cycle" (unchecked), and "Pause tracking for this service" (unchecked). A red "Delete this service from my account" link is present. At the bottom are "Save Changes" and "Cancel" buttons.

Amazon Prime Settings

Audible Settings

If the user selects to delete the service, a modal shows up reminding them the consequence and re-ensure their choice.

Changes we made: we decided not to provide explanation under every button. That can cause much more reading time and is not the most efficient way to encourage users to make right decisions. Only the one for “pause” is necessary. We use a less pleasant green to discourage users from stop tracking.

The screenshot shows the SubTrackr application interface. At the top, there's a navigation bar with links for Home, Usage Reports, Add Subscription, Settings, and a user profile icon. Below the navigation bar, the main content area has a title "Account settings". On the left, there's a placeholder for a profile picture with a "Change profile picture" button. To the right, there are fields for "Username" (AmySmith123) and "Notification". Under "Notification", there are two sections: "Notify me through e-mail:" with two entries ("email@domain.com" and another "email@domain.com") and "Notify me through text message:" with one entry ("2069871234"). Both sections have a "+ Add" link. At the bottom of this section are "Save Changes" and "Cancel" buttons. Below this, there's a section titled "My Tracked Services" with a "Netflix Settings" item. A modal window is open over the "Netflix Settings" item. The modal has a red Netflix logo at the top. The text inside the modal reads: "Are you sure you want to remove this service from SubTrackr? This will delete all the data associated with this service." At the bottom of the modal are three buttons: "Yes" (grey), "No" (green), and a larger "Pause - Stop tracking but preserve my data" button (green).

Task 1: Receive alert at end of payment period

1.3 Getting Notification: Once it reaches the notification date, the user would receive a notification on the medium(s) they've chose (text and/or email). For text notifications, they could respond to the text using a key phrase that would allow them to automatically have SubTrackr unsubscribe them from the service. Additionally, a link to the usage report page would be available on the text. Emails would be similar, but a simple link could be included for automatic subscription.

Task 2: Evaluate Usage Data

2.1 Adding a New Service: The user selects the plus icon at the main screen, or “Add new” on the navigation bar. The user is sent to a page for setting up a new service. From here, they can select a service, or type into the bar to narrow results. Typing a name that does not match a service subtracker supports leads to setting up manual tracking (see next page). Otherwise they are given the option to either set up automatic or manual tracking from this page, they can either select automatic tracking or manual tracking. From there, users are asked to set the initial settings of their service.

Changes we made: integrated the account information and “log out” under the profile picture, because we do not want our users to see “log out” frequently.

The screenshot shows the SubTrackr application interface. At the top, there is a navigation bar with the SubTrackr logo, Home, Usage Reports, Add Subscription, Settings, and a user profile icon. Below the navigation bar, there are two main sections: "Automatic Tracking" and "Manual Tracking".

Automatic Tracking: This section contains four service icons: Netflix, Amazon Prime, HBO GO, and Audible. Below these icons are two empty slots, one labeled "LOOTCRATE" and another with a plus sign.

Manual Tracking: This section contains two service icons: Seattle Public Utilities and a logo for "REWTER BY KANTO". Each icon has a green button labeled "+ LOG USAGE" to its right.

The screenshot shows the SubTrackr application interface. At the top, there is a navigation bar with the SubTrackr logo, Home, Usage Reports, Add Subscription, Settings, and a user profile icon. Below the navigation bar, there is a search bar with the placeholder "Search service" and a green arrow button.

Services we support: Below the search bar, there is a section titled "Services we support" featuring five service icons: Netflix, Amazon Prime, Audible, Loot Crate, and HBO Go.

Changes we made: We changed the phrasing of the buttons. Instead of “add automatic subscription” and “add manual subscription,” we made it more narrative and clearer.

The screenshot shows the SubTrackr application interface. At the top, there is a navigation bar with links for Home, Usage Reports, Add Subscription, and Settings, along with a user profile icon. Below this, a modal window is open, specifically for adding a Netflix subscription. The modal has a large Netflix logo at the top. It asks, "I want to track my usage by:" followed by two buttons: "Log in with my Netflix account" and "Enter my Netflix usage manually".

At the bottom of the modal, there is a "Next" button. The background of the main application shows a "Services we support" section with icons for Netflix, HBO GO, and ShowBox.

Below the modal, the main application area shows a search bar with "Netflix" typed in and an "Add" button next to it. The "Add Subscription" section is visible, containing fields for "Start of last billing cycle" (set to "Feb 26, 2017"), "Billing cycle length" (set to "1 Year"), "Billing cycle cost" (empty), and several checkboxes for "Send reminder" (checked, set to "Feb 26, 2018"), "Automatically retrieve data from my account" (checked), and "Automatically cancel subscription at start of next billing cycle" (unchecked). There are "Start Tracking" and "Cancel" buttons at the bottom of this section.

Example of a custom service:

Changes we made: instead of letting users to select “add your own” on this page, we decided to allow the user to simply enter any services they want to add, no matter supported services or not supported services. And if it is not supported, a form will appear directly on this page.

The screenshot shows the SubTrackr homepage with a green header bar. On the left is the SubTrackr logo. To its right are links for "Home", "Usage Reports", "Add Subscription", and "Settings". A user profile icon is on the far right. Below the header is a search bar containing the text "Pewter". To the right of the search bar is a green arrow button. Below the search bar is a link "Add Pewter...". Underneath this is a section titled "Services we support" featuring logos for Netflix, Amazon Prime, Audible, LootCrate, and Hulu.

The screenshot shows the "Add Subscription" page for the service "Pewter". The top navigation bar is identical to the homepage. The main content area contains a search bar with "Pewter" and a green arrow button. Below this is a form for entering subscription details. The fields are: "Service name" (set to "Pewter"), "Start of last billing cycle" (set to "Feb 26, 2017"), "Billing cycle length" (set to "1 Year"), "Billing cycle cost" (empty), "Send reminder" (checked, set to "Feb 26, 2018"), "Automatically retrieve data from my account" (checked), and "Automatically cancel subscription at start of next billing cycle" (unchecked). At the bottom are "Start Tracking" and "Cancel" buttons.

Pewter →

Service name

Start of last billing cycle

Billing cycle length Year

Billing cycle cost Dollars

Send reminder

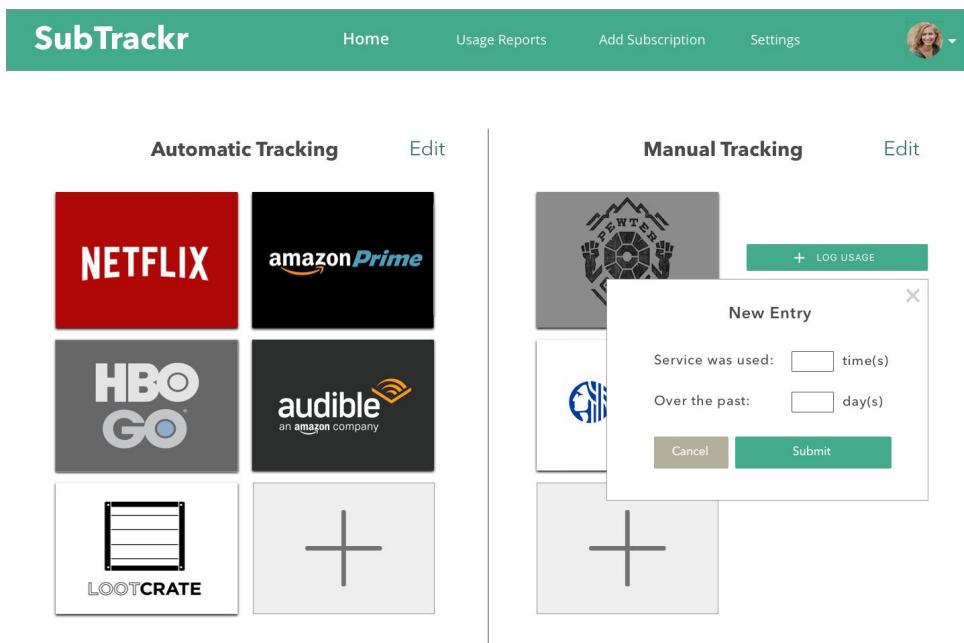
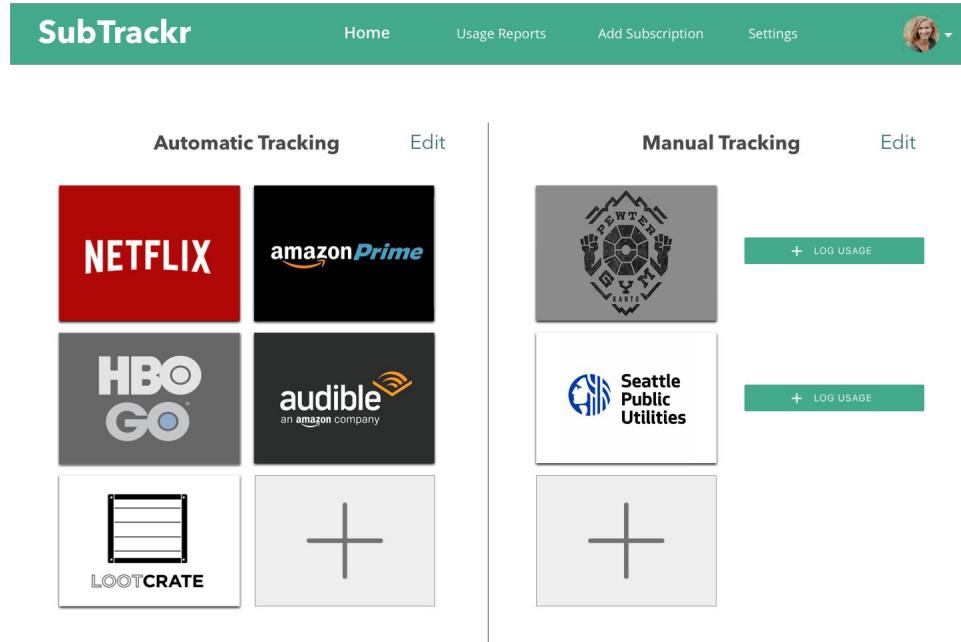
Automatically retrieve data from my account

Automatically cancel subscription at start of next billing cycle

Task 2: Evaluate Usage Data

Task 2.2: Logging Usages (for manual services): Users can log their usages of manual services by clicking a button that sits next to the icon of the service on the home page. A pop-up appears and allows them to enter information. Notably, this can only be done for manual services.

Changes we made: Added “edit” to easier manage the trackings. We highlighted the page currently on the navigation bar (bold), so that the users know what part of the process they are currently at.



Task 2: Evaluate Usage Data

2.3 Checking Service Statistics:

The user selects the service they want to view. Here, they are provided with information about service usage in comparison to service price. The user can also get to the usage reports page by pressing the usage reports button on the navigation bar. The user can allowed to switch between services by using the drop-down menu on the top of this page on this page.

Changes we made: The selection for how much data the user will see on their usage graph is a selection using buttons rather than a drop-down box. This looks neater and is easier to use.

The screenshot shows the SubTrackr homepage. At the top, there's a navigation bar with links for Home, Usage Reports, Add Subscription, Settings, and a user profile icon. Below the navigation bar, there are two main sections: "Automatic Tracking" and "Manual Tracking".

Automatic Tracking: This section contains four service logos arranged in a 2x2 grid. From top-left to bottom-right, they are: Netflix, Amazon Prime, HBO GO, and Audible.

Manual Tracking: This section contains two items. The first item is a logo for Seattle Public Utilities with a "LOG USAGE" button below it. The second item is a placeholder with a plus sign, also with a "LOG USAGE" button below it.

The screenshot shows the SubTrackr usage report page for Netflix. At the top, there's a navigation bar with links for Home, Usage Reports, Add Subscription, Settings, and a user profile icon. Below the navigation bar, there's a dropdown menu labeled "Usage report for:" with "Netflix" selected, and a time range selector labeled "Over the past:" with "Week" selected.

The main content area features a bar chart showing Netflix usage over the past week. The x-axis represents dates from 1/1 to 1/16, and the y-axis represents usage values ranging from 0.5 to 5.5. The bars show a general upward trend with some fluctuations.

Below the chart, there are several informational boxes:

- Billing cycle length: 30 days
- Billing cycle percent complete: \$10
- Billing cycle cost: \$0.50 / hr
- Use this cycle: 10 hrs
- Total cost: \$0.50 / hr
- Average Netflix user value: \$0.32 / hr

At the bottom of the page is a "Account Setting" button.

9. Discussion:

Our group has found that flexibility in thoughts and design is critical in iterative design process. For every single heuristic evaluation and usability test, our group redrew our paper prototype to reflect on the previous feedbacks and suggestions. The nature of sketching allowed us to make changes easily and quickly. But on the other hand, our group agreed to remain not too invested in the initial couple prototypes. With low fidelity, we were able to have the participants suggest what information they needed during exploration and prevent ourselves from being overly attached to the prototype. Also we got to look at our prototype from a participant's standpoint, where certain design choices and word choices didn't necessarily make sense.

Because we remade our design so often, the final design gained a lot of interesting features. The best example is probably the "Add New" page. Each time we drew this page, we were forced to reevaluate again exactly how we wanted to implement the details of asking the user for information regarding their billing cycle and how they would like the service to be tracked. Because of this, things like the start and end dates of the billing cycle went under serious iteration. The introduction of the bank of suggested supported services was a spontaneous idea during a prototype sketching session, and it ended up working well enough in usability studies that we kept it in the final design.

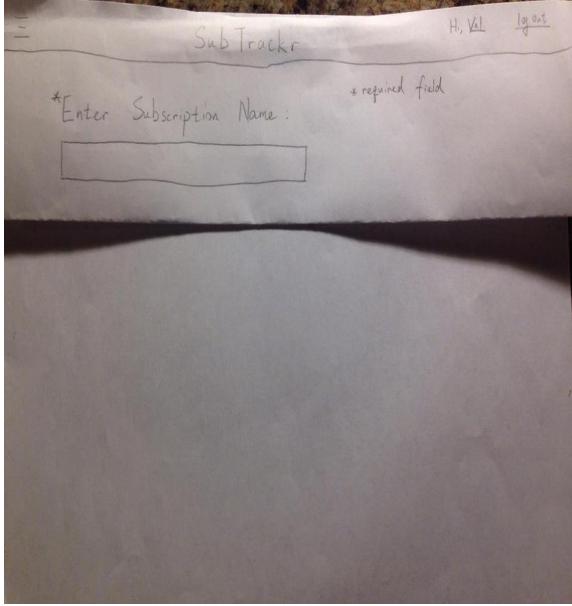
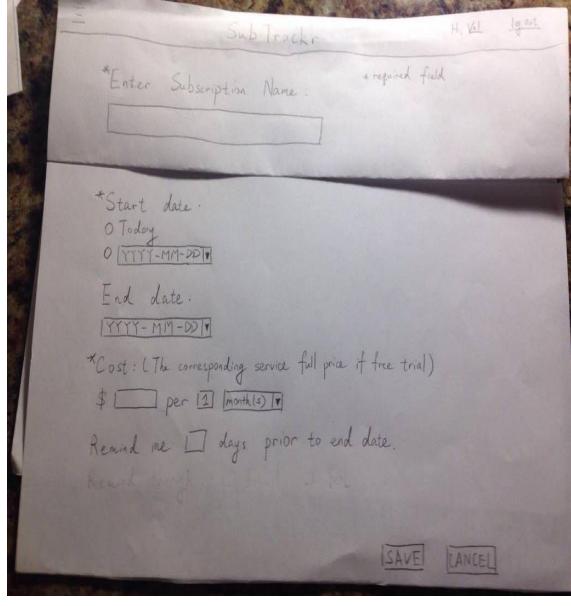
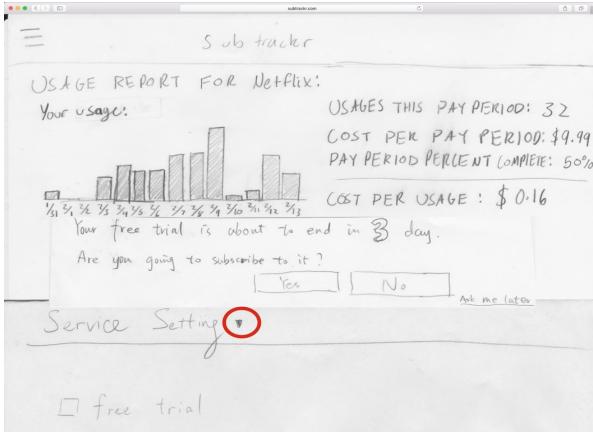
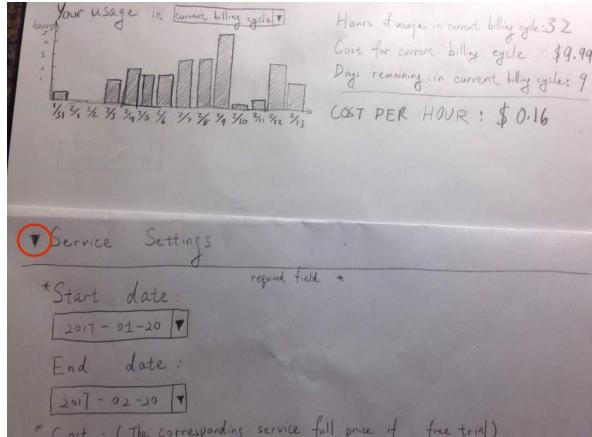
During the course of conducting usability tests, we discovered the task of wanting to "pause" the tracking of a service for the time being. This task wasn't initially obviously supported by our application, but you could delete services by clicking a small "x" button on the home screen. In further iterations, we added a checkbox under settings for whether or not the user wanted to end tracking. However, we found that users didn't immediately realize what this button would do, and wanted to ensure that it would work by doing other things, too. Finally, we added a button explicitly for this task under settings, and made it such that the icons on the home page become grayed out and move to the bottom of the list when paused. In this way, we took something from a way of deleting icons to a full task by analyzing how usability study participants reacted to it.

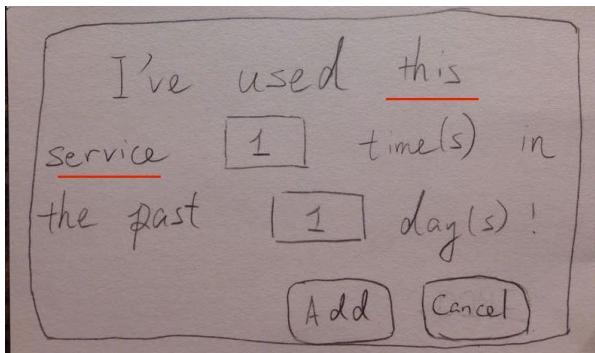
Although we're satisfied with the design we've produced given the time constraints, we would like to conduct additional usability tests, in order to get additional confirmation and feedback on our most recent changes, including the addition of navigation bar and the involvement of auto-unsubscribing, and see whether the transition from paper prototype to digital mockup affects the usability of our site. Additionally, since digital mockup remains a closer interpretation of the interface, we believe participants could give us more specific feedbacks, which would be beneficial for our current stage, and thus we'd like to more iterations.

10. Appendix:

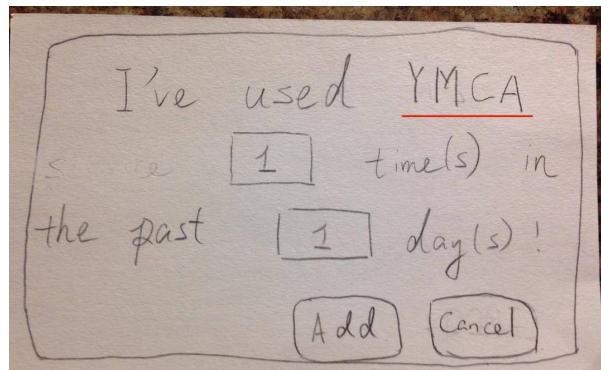
Heuristic Evaluation

Our group did 2 heuristic evaluations. Overall our prototype found problems in indicating clickables, remaining consistent with real world standard, being clear and understandable in wording and conveying statistical ideas.

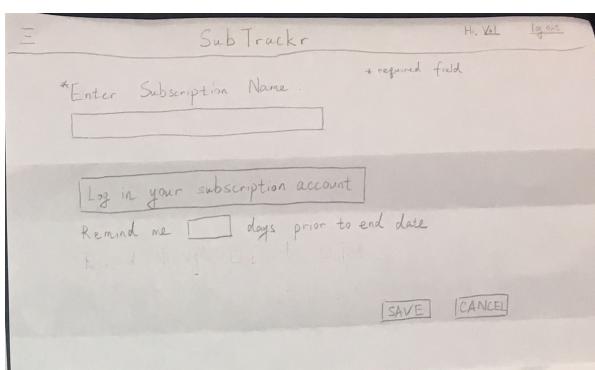
| Critical Incident: | Change We Made: |
|---|--|
|  <p>*Enter Subscription Name : <input type="text"/></p> <p>+ required field</p> |  <p>*Start date: <input type="text"/> Today <input type="text"/> YYYY-MM-DD</p> <p>End date: <input type="text"/> YYYY-MM-DD</p> <p>*Cost: (The corresponding service full price if free trial) <input type="text"/> per <input type="text"/> month(s)</p> <p>Renew me <input type="text"/> days prior to end date. <input type="text"/> days before end date</p> <p>SAVE CANCEL</p> |
| <p>Dramatic UI change after entering the subscription name</p> | <p>We decide to push sign up for services that require manual input as default and provide signup shortcut for services that we support</p> |
|  <p>USAGE REPORT FOR Netflix:</p> <p>Your usage: </p> <p>USAGES THIS PAY PERIOD: 32 COST PER PAY PERIOD: \$9.99 PAY PERIOD PERCENT COMPLETE: 50%</p> <p>COST PER USAGE: \$0.16</p> <p>Your free trial is about to end in <input type="text"/> day. Are you going to subscribe to it? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Ask me later</p> <p>Service Settings</p> <p><input type="checkbox"/> free trial</p> |  <p>Hours of usage in current billing cycle: 3.2 Cost for current billing cycle: \$9.99 Days remaining in current billing cycle: 9 COST PER HOUR: \$0.16</p> <p>Service Settings</p> <p>*Start date: <input type="text"/> 2017-01-20 End date: <input type="text"/> 2017-02-20</p> <p>*Cost: (The corresponding service full price if free trial)</p> |
| <p>Service settings expansion triangle, by standard, should be to the right of corresponding text</p> | <p>We switched the drop down indication from right of text ("Service Setting") to left</p> |



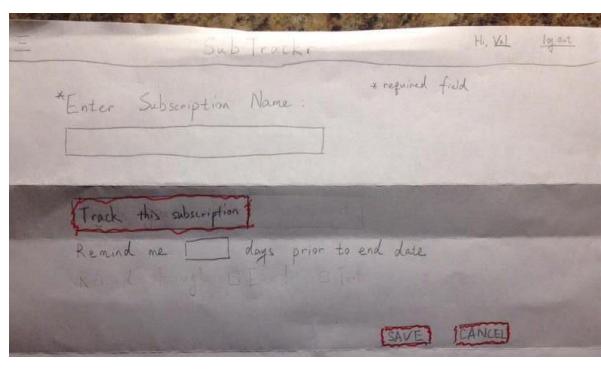
The “I’ve used this” dialog doesn’t indicate what service the user is recording usage of



We add in the service name into the dialogue



“Log in your subscription account” button is too large to be recognized as a button



We change the wording to “Track this subscription” in order to shorten the length of the button and give all buttons a special mark (red margin) to emphasize clickability. Also we’ll investigate more into the UI of buttons in future usability tests and leave this as a temporary fix.

SubTracker

Enter Subscription

Free trial

Cost: \$ per month(s)

Pay period: month(s)

Start date:

Today Select Another Day

Remind me days prior to end date.

Email Text message

+ Add Another Service

* Service Settings

required field *

* Start date:

End date:

* Cost: (The corresponding service full price if free trial)
\$ per month(s)

Remind me days prior to end date.

(I no longer track this service)

Service Setting

free trial

Period: months

Start date:

Cost: \$ per month(s)

End date:

Remind me days prior to end date.

Remind through: Email Text

(I no longer subscribe this!)

No distinction between required and unrequired fields in sign up

Sub Tracker

* Enter Subscription Name:

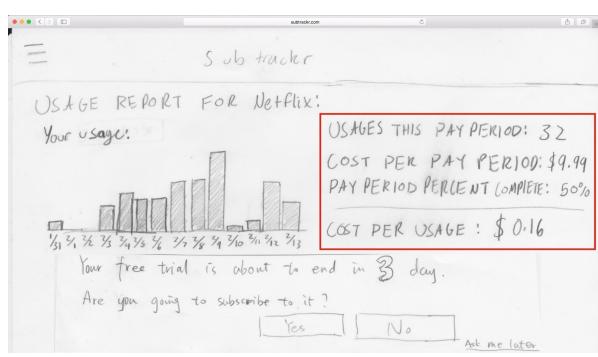
* required field

Track this subscription

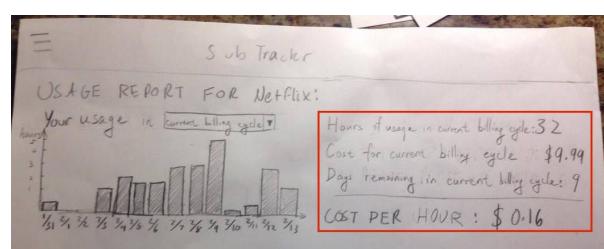
Remind me days prior to end date

I no longer track this service

We add in “* required field” notation to help distinguish required fields and unrequired ones in sign up and service settings



Wording of “usage this pay period”, “usage” and “pay period” is confusing



change the wording to “hours/orders/times you have used during current billing cycle” and specify usage as hours, orders or times according to the service.

free trial

Period:
1 month(s)

Start date:
2017-01-01

Cost:
\$ 9.99 per 1 month(s)

End date:
2017-02-01

Remind me 7 days prior to end date.

Remind through: Email Text

I no longer subscribe this! SAVE



Confusion between unsubscribing the service and stop on tracking the service

▼ Service Settings

* Start date: 2017-01-20 regard field

End date: 2017-02-20

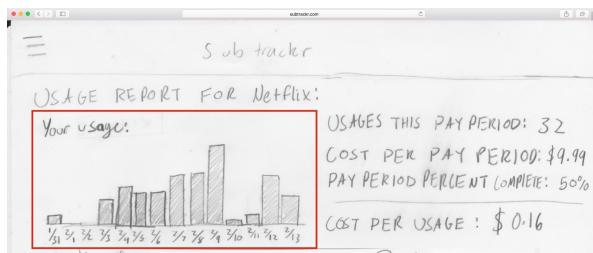
* Cost: (The corresponding service full price if free trial)
\$ 9.99 per 1 month(s)

Remind me 7 days prior to end date.
Rec. 1 month(s). Email Text

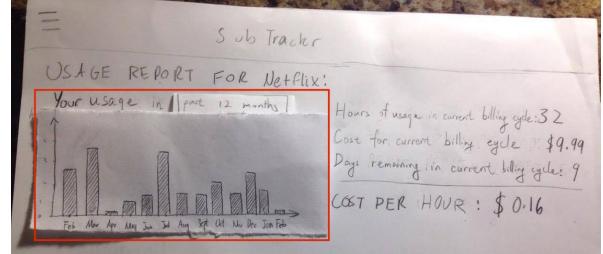
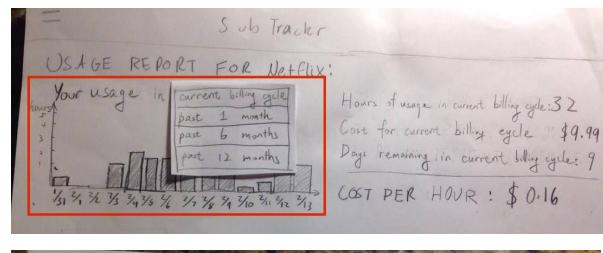
I no longer track this service

SAVE CANCEL

We reword the untrack button to clarify that it means “remove the service from SubTrackr”

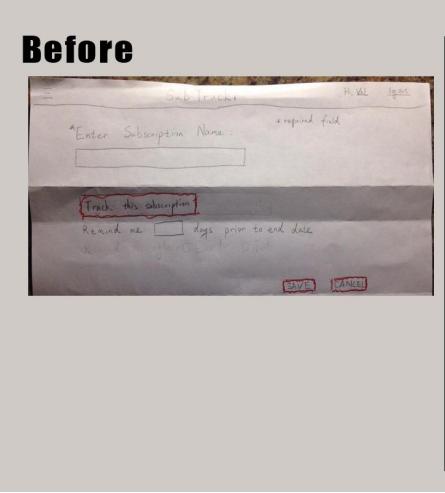


Desire of viewing usage in the past

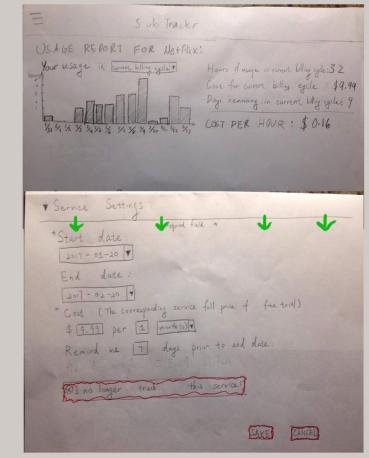


We include a drop down menu that would allow users to view usage graph of past month/6 months/year.

Usability Test #1:

| Critical Incident: | Change We Made: |
|---|---|
| <p>Before</p>  <p>On subscription page user was unsure of what would happen if you were to press save without completing the form.</p> <p>Not sure of the difference between “Track Service” and “Save” on subscription sign-up page.</p> | <p>After</p>  <p>Hid the save button and subscription length field under a drop down that would appear once an account is confirmed as being tracked. Get's rid of issues where user could attempt to submit subscription length without being subscribed to a service. Also ties each button to a specific command to get rid of confusion.</p> |

Before



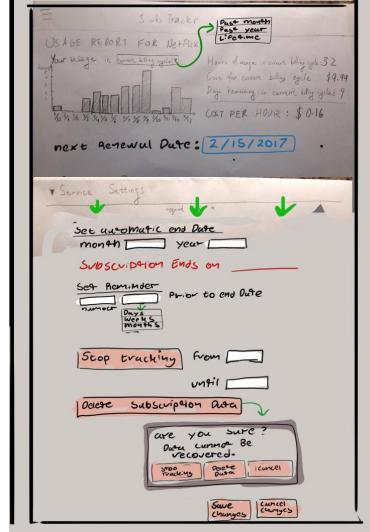
Graph axis missing units

What would happen if you were to leave the start and end data fields blank when trying to submit changes?

General ambiguity about what the start and end dates meant.

Potential issues where user might force a subscription to end in the middle of a pay period.

After



Added units to y axis on graph. Removed start date since that can be inferred from when you create the account. Changed cancel subscription function so it is based on payment period rather than a general date. Split pausing tracking and deleting data into separate operations so a user can pause tracking and still come back to their subscription later.

Before

Sub Trackr
Account Settings:
Notify me by email:
Email: user@example.com
Notify me by text:
Phone number: (260) 655-1234
SAVE CANCEL

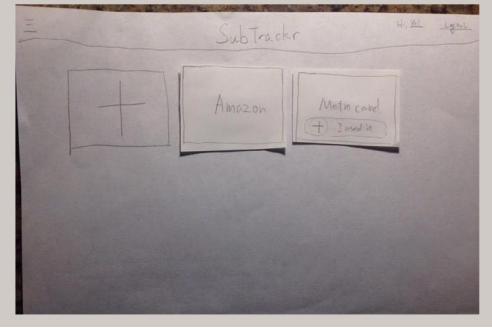
Ambiguity over which settings were actually being changed on this screen. User unsure if they were adjusting the settings of their SubTrackr account or the account belonging to one of their subscriptions.

After



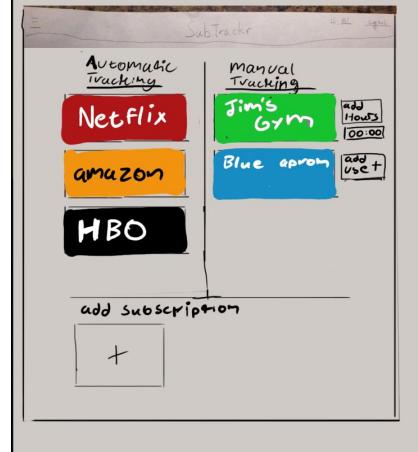
Grouped both types of notifications under a single notifications tab. Added a section listing the different subscription accounts associated with this SubTrackr account as well as links to adjust the settings of each individual subscription.

Before



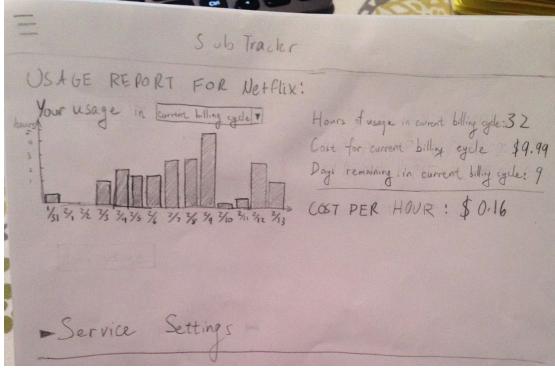
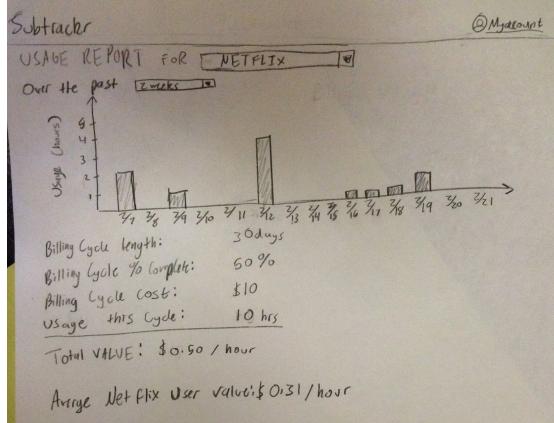
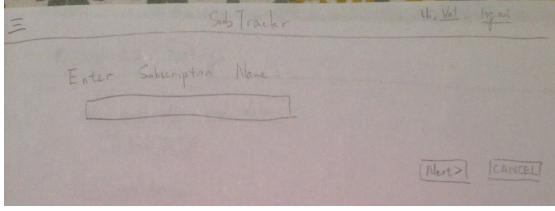
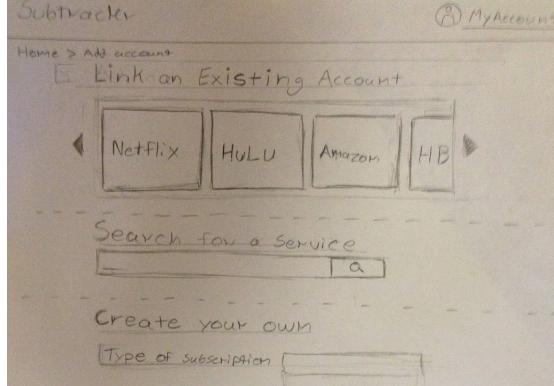
No distinction between subscriptions that are being automatically tracked and subscriptions that have to be maintained by user.
Subscriptions that do not support automatic tracking do not have an option for different kinds of records. For instance if the unit that you are tracking is discrete or continuous.

After



Separated the types of subscriptions into two different categories in addition to adding a column for entering records manually.

Usability Test #2:

| Critical Incident: | Change We Made: |
|--|--|
|  <p>This participant felt that the most important part of this page was the time graph. It's easiest to see and has the most visual appeal. They felt that it should be given more space on the page in order to draw more attention to it.</p> |  <p>We agreed with that point so we expanded the cost-vs-time graph to cover the width of the page.</p> |
|  <p>The participant felt that the add new subscription page was lacking. There wasn't really any visual queues to follow. More importantly, it didn't have a clear distinction of what to do when the service you were trying to track required manual tracking.</p> |  <p>We decided to add a suggestions bar listing popular subscription services. The intent was this would either be a starting point for the user, or make it easier to subscribe to common services. We also added a separate field for subscriptions that require manual tracking.</p> |

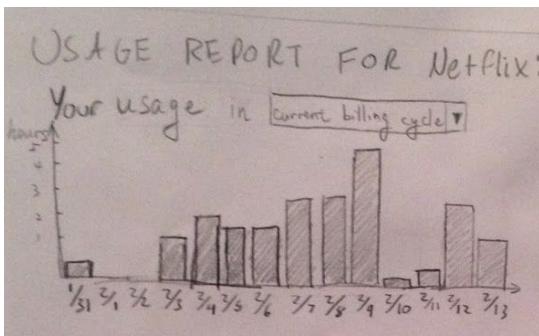
Hours of usage in current billing cycle: 32
 Cost for current billing cycle: \$9.99
 Days remaining in current billing cycle: 9
 COST PER HOUR: \$0.16

Participant felt that there wasn't much point in having the final cost-per-use value. They felt the information wasn't really useful and it wouldn't have much meaning to the end-user.

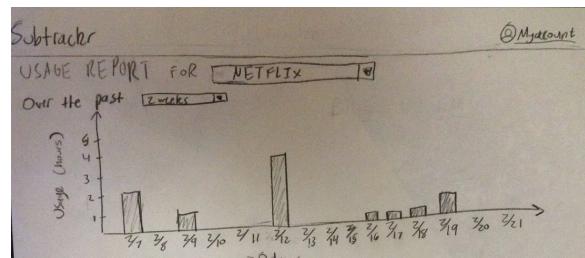
| | |
|---------------------------|---------------|
| Billing Cycle length: | 30 days |
| Billing Cycle % Complete: | 50% |
| Billing Cycle Cost: | \$10 |
| Usage this Cycle: | 10 hrs |
| Total VALUE: | \$0.30 / hour |

Average Net flix user value: \$0.31 / hour

Although the participant suggested getting rid of it entirely, we felt it was important for the user in order to determine the value of the subscription. We decided to include the ability to see average user statistics. That way they have some frame of reference to compare their usage to.

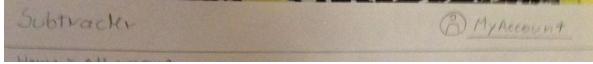
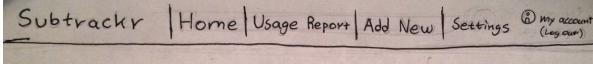
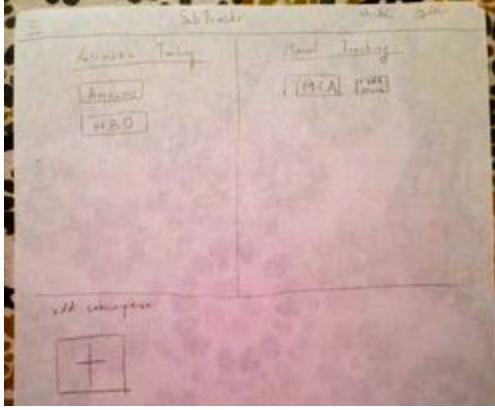
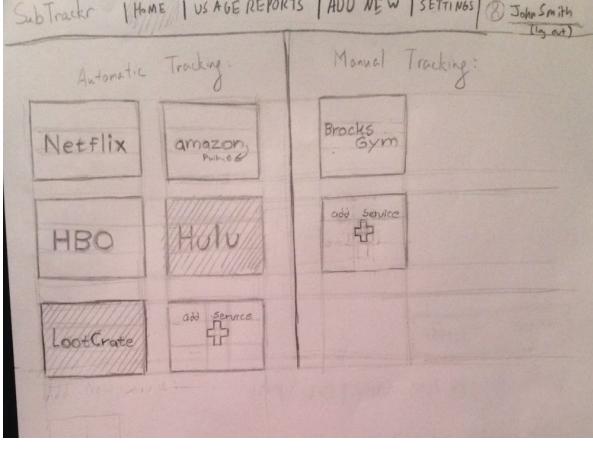
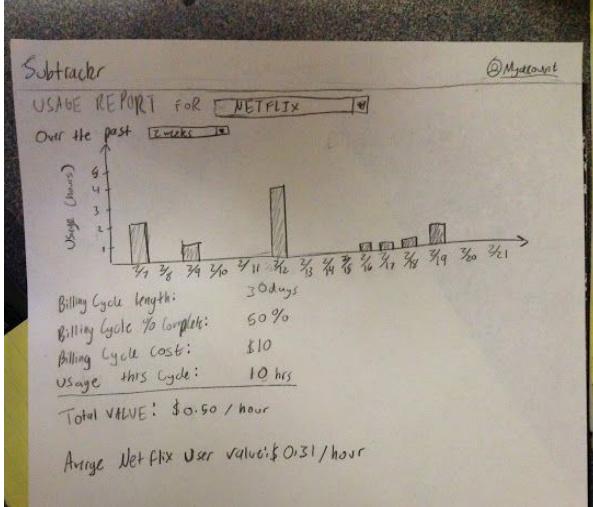
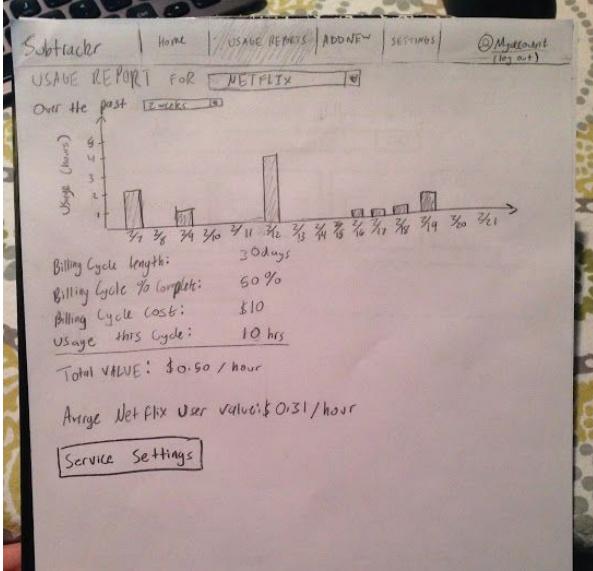


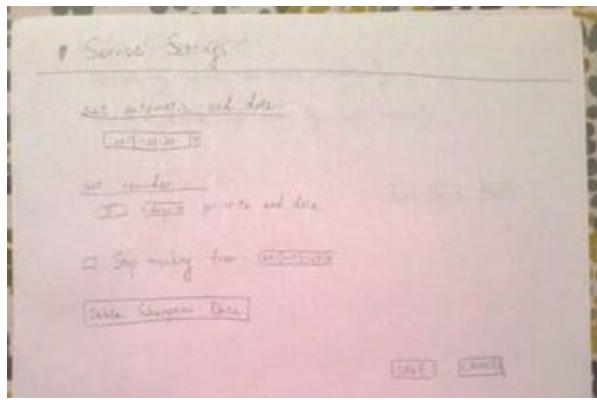
Participant pointed out the difficulty in navigating the Usage reports page. Moving from one reports page to another required navigating backwards to the main page and selecting a different subscription.



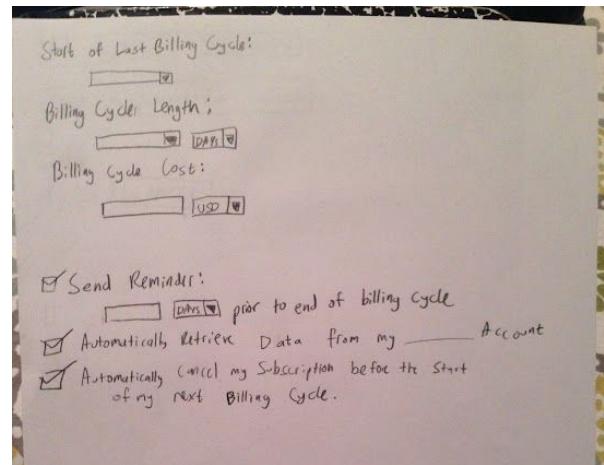
We added a dropdown menu at the top of the usage reports page. That way the user could use switch between different reports while staying on the same page.

Usability Test #3:

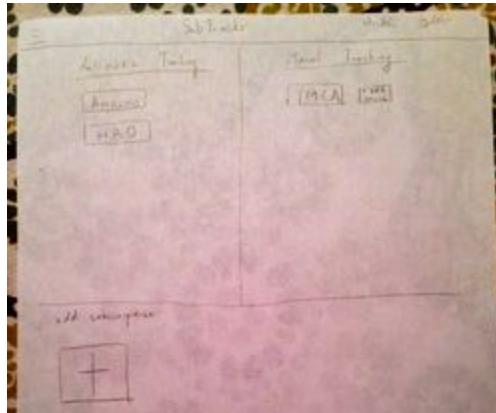
| Critical Incident: | Change We Made: |
|--|---|
|  <p>The participant didn't immediately know how to get back to the homepage (used his "browser's" back button).</p> |  <p>Adding a constant horizontal navigation bar.</p> |
|  <p>The participant went into his settings in order to find his usage reports. He didn't realize that the icons on the homepage were buttons.</p> |  <p>As we move from paper to digital prototypes, we are going to make sure that we use affordances and conventions to make these look more like buttons (shadows, underlines, etc.)</p> |
|  <p>The participant looked for service settings under the usability report page, rather than under the settings page.</p> |  <p>Adding a link under the usability report to go to the settings page (with the current service automatically opened there).</p> |



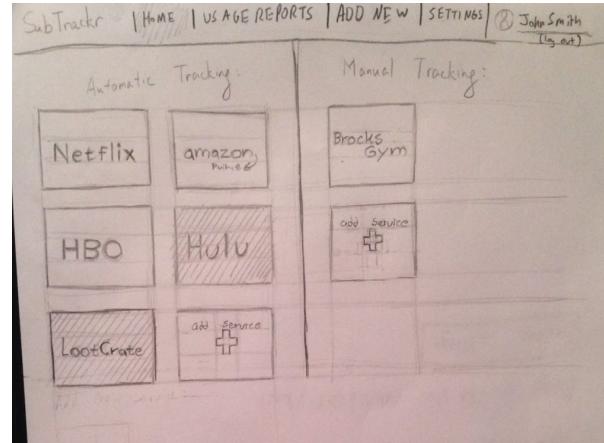
The participant tried to end tracking on his service by changing the subscription end date.



Rather than asking users for the end date of the service, we now ask them for the start date of their most recent billing cycle, and the length of the service. We're also going to add dedicated buttons for notifying SubTrackr that you no longer using the service and for removing your past data. We are also going to make the "Stop tracking" check box a "automatically pull data from [service]" checkbox.



The participant was unsure of which services listed on the main page were currently being tracked, and which ones were story legacy data.



We're going to gray out the icons that are no longer being tracked, and move them to the bottom of the list.