

Time Balance

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CSE 440 Assignment 3c: Usability Testing Check-In

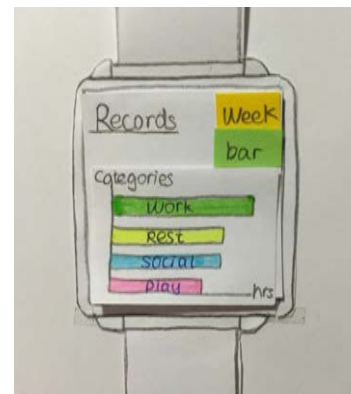
Heuristic Evaluations

Issue #1: Problems With Pie Chart Display [Severity 3]

Visibility of System Status, Consistency and Standards

Problem: The current default method of seeing your time balance is a pie chart. An imbalanced pie chart with small slivers is actually really difficult to read and to display. We currently have the category for each slice of pie written on the inside of the slice to save space on the screen (the chart can take up the entire screen without a separate key), but this would actually be impossible for slices that are too small.

Potential Solutions: We could make the “hours” display the default. This display just shows the number of hours spent in each category, which is much easier to display, but harder to naturally visually interpret. Another possibility is creating an entirely new format like a bar chart. With a horizontal bar chart, we could still use the entire screen and each bar would have a uniform size on which to write the category name. This would be less aesthetically pleasing, but it would probably be better at conveying information.

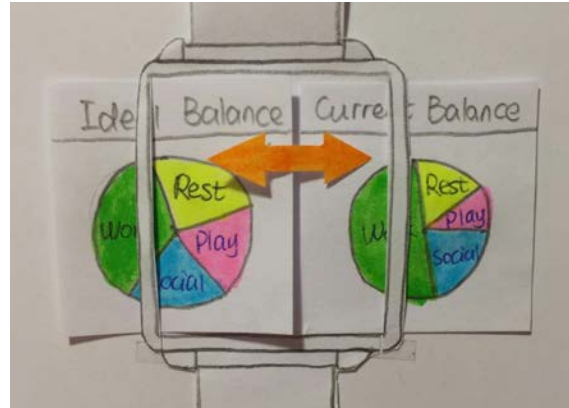


Issue #2: Ideal Balance on Its Own Screen [Severity 2]

Recognition Rather Than Recall, Flexibility and Efficiency of Use, User Control and Freedom

Problem: The current goal tracking method is to show the user’s ideal balance on its own separate screen. This is difficult to compare with the actual balance the user is achieving.

Potential Solutions: We could allow the ideal balance and other goals to be displayed alongside the report or even overlaid on top of it. The new problem this would create would be fitting both onto the tiny screen. We could just add a button to toggle between the two without going through the menu screen.



Issue #3: Cancel Activity Category Change [Severity 1]

User Control and Freedom, Error Prevention

Problem: Once you press the “change category” button for your current activity, you have to select a new category to continue. There is no way to cancel the change or even see what the category was before changing it.

Potential Solutions: We could just ignore it and expect users to use the home button as a back button because it returns to the home screen. This isn't actually as bad as it sounds because it saves screen real estate for an interaction that users won't often need. On the other hand, showing the current category and treating it as a sort of back button would add feedback and functionality without increasing the complexity that much. We could just add the category that is already selected to the list and give it an icon or highlighting to indicate that is already selected. This is probably the best solution because it doesn't change how the interface works, just what it can do.



Issue #4: Undoing Dismissed Notifications [Severity 2]

User Control and Freedom, Error Prevention

Problem: In our current model, only active notifications display on the notification screen. This makes it easy to only see active notifications and dismiss them, but it also makes it impossible to “undo” dismissing a notification.

Potential Solutions: We could leave all notifications on the screen and change the “dismiss” button to “re-enable” when the user dismisses a notification. Unfortunately, this means that dismissed notifications would stay around all day. It would also mean that we would have to

pick an arbitrary time to clear notifications like midnight or an hour after they are dismissed, but not while the user is looking at the notifications page. Another option would be to have an “undo” button appear on screen for a few seconds. This would mimic the functionality that users expect on computers and phones, but it would take up a lot more room on the small screen of the smartwatch and may be annoying with frequent usage.



Issue #5: Dismiss Notifications With Swipe [Severity 1]

Flexibility and Efficiency of Use, Aesthetic and Minimalist Design

Problem: Notifications (not alarms) are dismissed by pressing a button that takes up space for every notification. Users are used to swiping to dismiss notifications on their phones.

Potential Solutions: We could add swiping to dismiss notifications as a sort of non-advertized feature. Users could do it, but there would be no visual indication that they could. This would prevent additional visual clutter, but keep some users from discovering the feature (unless of course they thoroughly read the manual). We could also make swiping the only way to dismiss notifications, which would save vital screen real estate and make the targets larger, but it would also make the screen more confusing at first.

Issue #6: Snooze for Alarms [Severity 3]

User Control and Freedom, Error Prevention

Problem: Alarms can currently only be silenced by swiping them to the right. This makes it simple and fast to deal with alarms when they go off, but it does lack the snooze feature that users expect from wake-up alarms.

Potential Solutions: We could allow a different swipe or even a button to allow snoozing. However, this would make the simple act of turning off an alarm more difficult and error prone. Users could accidentally snooze an alarm and have it go off again later, or even worse accidentally disable it when they wanted to snooze it.



Issue #7: Adding Notifications [Severity 3]

User Control and Freedom, Visibility of System Status

Problem: There is currently no way to add new notifications to the schedule.

Potential Solutions: We could allow users to add new notifications to activities from the schedule screen. We could let them open a separate notification setup menu from the schedule by pressing and holding or double tapping an activity. We could also display an icon next to each activity on the schedule to show whether or not it has a notification attached. This would add a lot of functionality to the notification system.

Issue #8: Choice of Word “Report” [Severity 1]

Match Between System and the Real World, Flexibility and Efficiency of Use

Problem: Users aren't fond of the word “report” for viewing records of their past time balance. We chose the word because it was very clear what it meant, but the word sounds too harsh and mechanical.

Potential Solutions: Change to word. “Balance”. “Records”. “History”. These words are all much friendlier and users will learn what they mean quickly enough.

Issue #9: Lock Screen [Severity 4]

Error Prevention, Visibility of System Status, User Control and Freedom

Problem: We forgot to add a lock button.

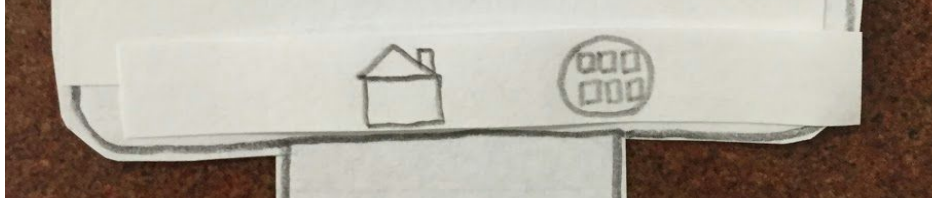
Potential Solutions: Add a lock button to the main menu, the home screen, or even at the bottom of every screen. Another solution will be tap the screen twice to lock the screen.

Issue #10: Choice of Button Icons [Severity 1]

Match Between System and the Real World, Help and Documentation

Problem: The “home” and “menu” icons are not readily understandable to all users. The idea of a home and menu screen are often combined for handheld devices, especially phones.

Potential Solutions: We could change the home icon, to an activity icon because the home screen displays the current activity. This would allow users to better associate it with its intended use, but this would also force us to come up with an easily understood “activity” icon which is a very abstract concept.



Usability Test

Our first Usability Test participant was an undergraduate student in Computer Science major in the University of Washington. We were under a time constraint and it was easier to find someone from our major. The participant has a busy schedule that we think she can represent our target users. The Usability Test was taken place in the HUB cafeteria because cafeteria can be a place where our uses take a break and check their schedules. We first explained our design and how paper prototyping works, then we asked her to do the following tests:

1. Check the records of current balance of time for this week.
2. Cancel the notification of lunch at 11 am.

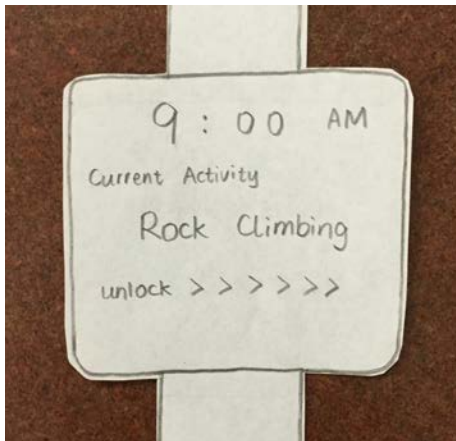
During the Usability Test, Ryan was the greeter, Chad was the facilitator, Alex was the computer and Jia was the observer.

Critical Incident

1. The screen on the Smartwatch is bigger than expected in real world. [Severity 2]
Match Between System and the Real World.

Problem: The size of the screen in our paper prototyping is bigger than in real world.

Potential solution: Shrink the size of Smartwatch and make it reasonable.



2. Needs necessary information for help and documentation in some cases. [Severity 3]
Help and Documentation, Error Prevention, Consistency and Standards.

Problem: Participant got confused about what each function in the menu does.

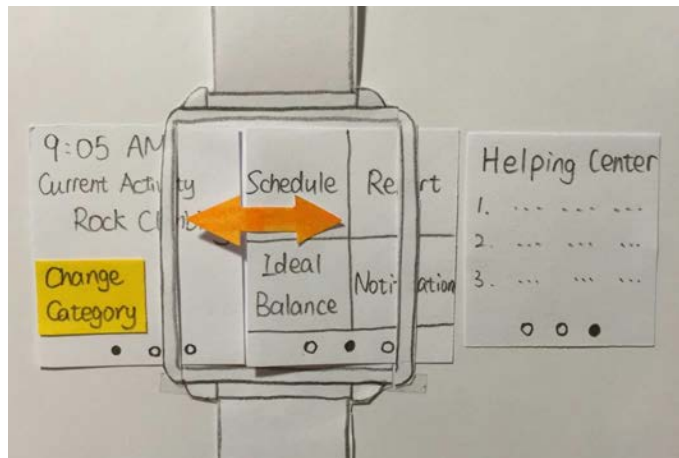
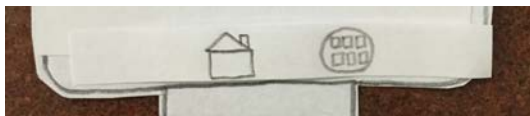
Potential solution: Add another page for Help and Documentations. Add some descriptions about functions in the menu in that page.



3. The Home and Menu buttons at the bottom of the screen are too tiny. [Severity 3]
 Match Between System and the Real World, Visibility of System Status.

Problem: The Home and Menu buttons are too tiny to touch.

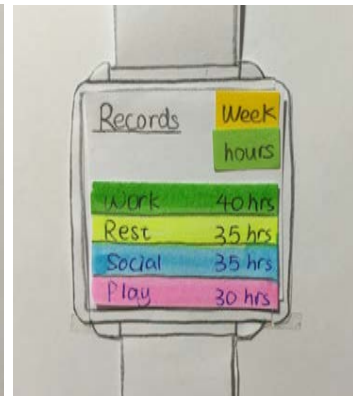
Potential solution: Remove the Home and Menu buttons at the bottom of the screen, instead, use swipe to switch between Home, Menu and helping center.



4. The drop-down lists are hard to operate on the Smartwatch. [Severity 3]
 Match Between System and the Real World, Visibility of System Status.

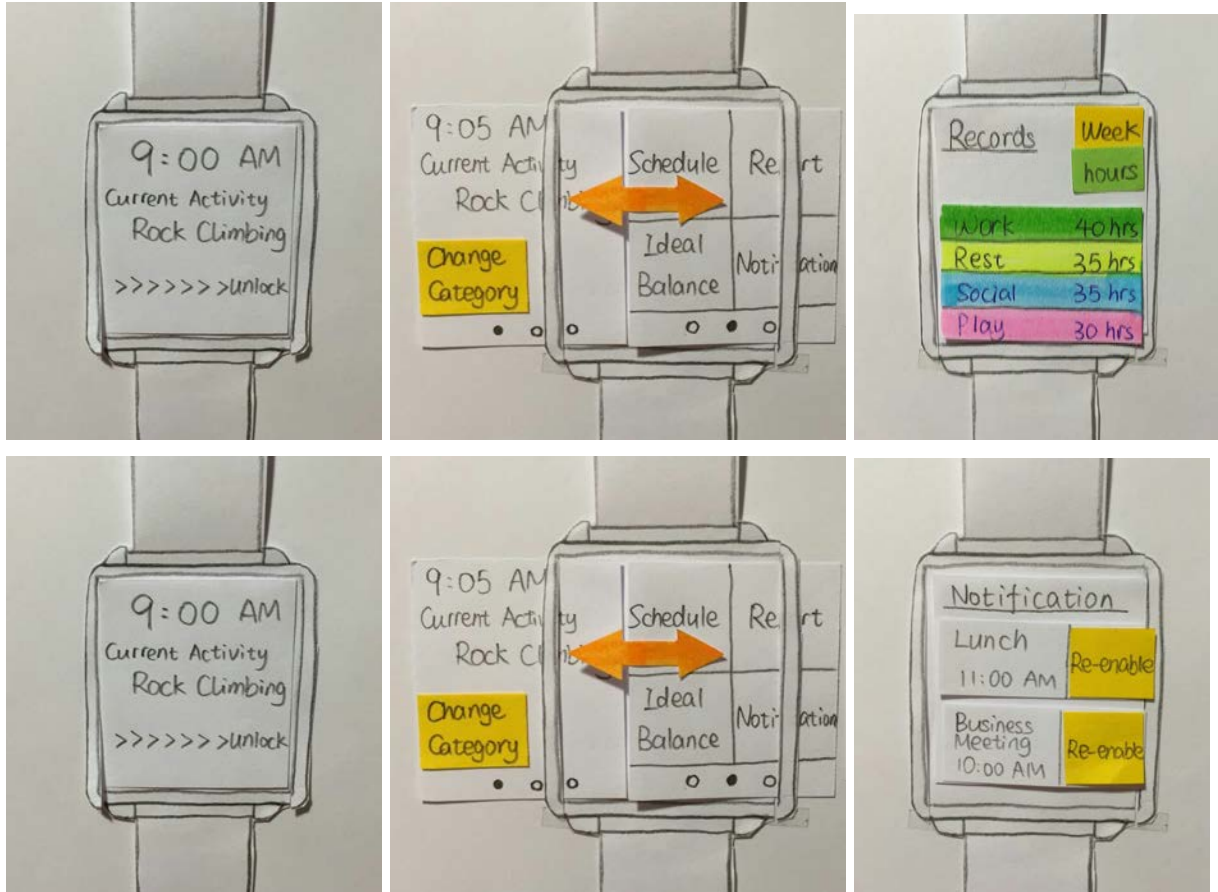
Problem: The drop-down lists are tiny and hard to operate when the list is long.

Potential solution: Instead of choosing from drop-down lists, the user can tap on the button to switch between different options.



Current paper prototype





Plan for the Remainder of Usability Tests

We want to focus on our target users who have very busy schedules. We are going to test on the visibility of Schedule and Ideal Balance function in our design. For example, we can ask the participant to check his or her Schedule and Ideal Balance on the Smartwatch. Each team member will do the same role for the remainder of Usability Tests.