Inter•act

Team

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Problem and Solution Overview

Most people are aware of their physical health, but they often forget to evaluate their mental, emotional and social health. We all inherently realize the benefits of socializing and developing friendships, but as the pace of our modern lives continues to skyrocket, it feels as if we rarely see our friends anymore; even when we do eventually meet up, the first sentences you hear are “it’s been so long” or “I can’t remember the last time we hung out”. With everyone so focused on their busy schedules, it’s too easy to miss out on great relationships and become unintentionally distant from some of our good friends.

We are designing a smartphone application that encourages people to be more aware of their social activity and helps them reach their social health goals. We do this by tracking every day social activities and providing meaningful and interactive visualizations around this data including who they spend time with, what activities they do most often etc. With this knowledge at hand, people will be able to actively shape their social life.

Design Research Goals and Participants

We conducted five contextual inquiries (three presented), focusing on people that are in their 20's, tech savvy, moderately busy, and semi organized. For our contextual inquiries, we asked participants to draw out their close social network on paper and schedule a hang out with a friend as they talked through their motivations for certain actions and their experiences scheduling hangouts with friends in the past.

Max is a 26 year old software developer at Amazon. Unlike many people, Max does not have a master calendar and remembers all of his events instead. Details of events, like place and time, are recorded in personal messages when plans are finalized. Max has a strong preference for meeting friends at night, especially on the weekend, and usually only sees one person at a time. Group events are saved for special events like birthdays and holiday parties. Getting cancelled on is the most frustrating and he immediately reschedules the meetup so he can eventually see his friends.

Brandon is a second-year community college student attending North Seattle where he is studying mechanical engineering. He works part time as a restaurant server. He tends to be laser focused on his goals, and thus, ends up spending less time socializing while attending school. He also tends to push back making plans to prioritize work but then ends up having no Friday night plans even though he really needs a mental break from all the stress. We observed the kinds of apps he had already installed while he was using his phone for the scheduling task. Essentially, phone applications are a big part of his social life and he uses them regularly to facilitate socializing.

Riley is a 28 year old UX designer working in insurance. She uses Google Calendar as her master schedule and Facebook messenger to communicate with friends. She works 9 to 5 during the week and plans all of her social events after work and occasionally on the weekend. For her, family is considered social time instead of an obligation. With the rest of her social time, Riley spends time with both her and her husband's friend groups and families. For those she doesn't see very often, she keeps a good relationship by texting and snapchatting them more as replacement interactions. Riley considers herself an introvert and doesn't want to fill all her free time with social events. Additionally, her social interactions have changed considerably since she no longer lives with roommates or near college campus. She already has extensive experience with self-tracking as she uses her Fitbit daily to track activity and work towards health goals.

For our contextual inquiries, we followed the master/apprentice approach to learn about their main motivation to see friends, actions taken to determine free time, choosing which friend(s) to contact, contacting them, any activities or locations they suggest, and how far in advance these plans are made. We also asked them about specific past experiences to discover and analyze their workflow making plans while they are also going through an instance of it in the moment.

Design Research Results and Themes

From our design research, we found that people already have preferred scheduling and communication methods, and are instead more interested in metrics related to their social activity levels. With this in mind, we explored ideas around personalization, reminders, and gamification as potential features to integrate in our design.

***Scheduling and Communication*:** Most people have a way to keep track of their plans through a master calendar and have preferred ways of communicating with individuals and groups. Calendar invites, Facebook events, and group messaging are most common for organizing larger groups of people while personal calendar events, messenger, and texting are widely used for 1:1 hangouts.

***Personal Insights*:** After talking to participants, we noticed that they would be most interested in seeing how much time they are spending with friends. People mostly know how frequently they spend time with each of their friends, but they were more interested in trends over time. Along with tracking hangouts, we have also decided to track what (getting dinner, playing a sport) and where the event was to provide richer insights. We think these stats could be interesting for customers to see relative to who they are spending time with. A common problem among the participants was last minute cancellation of plans. Collecting data when the customer cancels plans with a friend might help them identify if they are a source of their friend's frustrations.

Demographics and Personalization: Our contextual inquiries revealed many different people and personalities, as was expected. We noticed that certain aspects of someone's personality or environment hugely affect how they manage and participate in social activities. We plan to have an intro questionnaire that will help identify where the person is in each of these spectrums. Below are a few of the key differences we found which we will use these along with some others to personalize the design for that specific person.

- Single versus In a relationship: couples tend to hang out with each other's social circles
- Roommates versus Studio: friends in proximity plan more spontaneously
- Extroverts versus Introverts: some people just enjoy spending more time alone and don't want to schedule social activities for every open space in their calendar
- Quantity versus Quality: maximizing time with a few vs less time with lots of people

Reminders and Notifications: Identifying free time is usually very easy for people but acting on that information is harder. Most people feel that social plans are in the back of their minds but by the time they get to that free time, it's too late to make plans and it's easy enough to watch Netflix at home or go to the gym alone. On the other hand, no one likes apps that constantly nag you about making better choices constantly, so we will have to strike a good balance.

Gamification: Two of our participants mentioned that it would be fun to have our social tracking be gamified. Since our design focuses on social interactions as beneficial for personal health, it might be an interesting idea to fit those real-life rewards like endorphins into badges or other in-house designed objects. This idea certainly needs more exploration as we delve deeper.

Task Analysis Questions

1. Who is going to use the design?

Our target customer is in their 20's and has a demanding schedule; they want to make more time for friends and prioritize social relationships, but need help monitoring their activity and tracking their progress. This person is likely a tech savvy, full-time employee or student, single, and semi-organized. Additionally, anyone who is interested in their personal informatics surrounding socializing and monitoring how often they are seeing friends would find the design useful.

2. What tasks do they now perform?

Most people have a personal physical/digital calendar they use to track when and where they are meeting someone. Currently, they block out time for work and add regularly occurring activities, which leaves their calendar pretty full. Then, they reach out to people to initiate hang outs as necessary to fill in their free time as much as they need.

3. What tasks are desired?

The aim of this design is to track the person's hangouts and encourage strengthening social relationships. Desired tasks include tracking meetings with friends, interacting with data and visualizations about social activity, and changing behavior as needed based on past trends and goals for the future. Multiple visualizations will highlight different aspects of the social interaction, who, what, when, and where. Specifically, we have mapped out four desired tasks:

1. *Tracking social activity over time*
2. *Viewing personal social history and metrics*
3. *Understanding health benefits of spending time with friends*
4. *Act on 'It's time to socialize!' reminders*

4. How are the tasks learned?

Tasks are mostly learned on the go since the design is made up of simple and intuitive tasks. The person has likely learned some of the tasks before, like adding a location where an activity took place, and some which are new, like interacting with our visualizations. This will be made much simpler to understand with an intro questionnaire that will 1. help us tailor the design for them and 2. help highlight the themes of personal informatics and socialization for them. As with any tracking app, the person will recognize and understand the insights being provided over time.

5. Where are the tasks performed?

The two main tasks, recording social events and interacting with data, can be performed anywhere. The most likely situations would be at home or on their way to their next destination right after a social call. This is when it would be easiest for the person to remember all the people present and the amount of time, which are the two most important pieces of data. Just interacting with the tracking data can happen anywhere people have a few minutes to spare.

6. What is the relationship between the person and data?

The person will be given visual feedback about the amount of time they are spending with friends and who that is. All of the data will be available on their mobile device and will be stored in cloud, accessible anytime. Given that this is a self contained app, the data we collect is private, only viewable by that person and exclusively centered around their activity. Lastly, we will be asking for permission to connect with people's Facebook accounts, meaning we will have access to information they uploaded before they started using our app.

7. What other tools does the person have?

The other tools the person likely uses to socialize are in the realm of scheduling and communication. The most common are Google calendar, iCalendar, Doodle, when2meet, Facebook messenger, Snapchat, and text messaging.

8. How do people communicate with each other?

This design is centered around a single customer and the goal is to help them understand their relationships to other people in the context of when they spend time together. And as we learned in our research, there are plenty of existing avenues for communication. Because of this, we will not support communication in our design.

9. How often are the tasks performed?

We will aim to create seamless data collection process because the entering a hangout task will occur most frequently. Obviously, tasks will be executed as social interactions occur and therefore the frequency of data collection will be determined by the person's social involvement; we anticipate this will be a few times a week for most customers. Understanding health benefits will happen over time as the design gives them more information and feedback as they track activities.

10. What are the time constraints on the tasks?

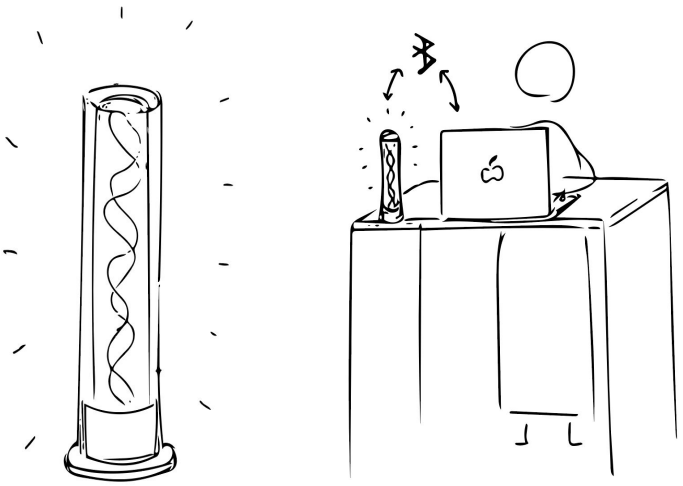
For manual entering of hangouts, the task should be completed the day of the event. Because hangouts will be frequent and need to be recorded soon afterward, this task will need to be fast, intuitive, & fun. For interacting with personal insights, there is no time constraint because you can look at data starting the day you start using the design. Acting on or dismissing reminders happens pretty instantaneously, but following through to set up a hangout might take longer.

11. What happens when things go wrong?

We will have edit functionality for data collected by the customer, just in case they enter something incorrectly. There is always a possibility that the data we are collecting gets corrupted or deleted and is no longer accessible to the person. In this case, we would apologize and restart the tracking as soon as possible. Because we are considering using background location tracking in our design, it might be constrained to battery power and just not available at certain times; this will need some testing along with robust default fallback options.

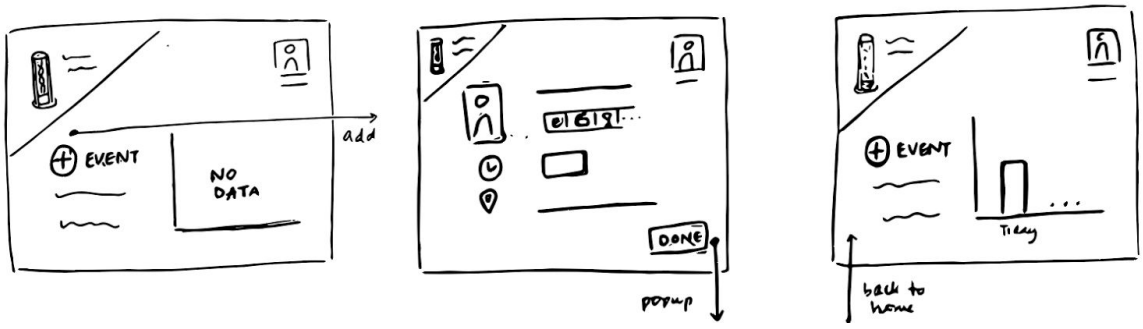
Proposed Design Sketches - "3x4"

Design 1: Ambient LED display



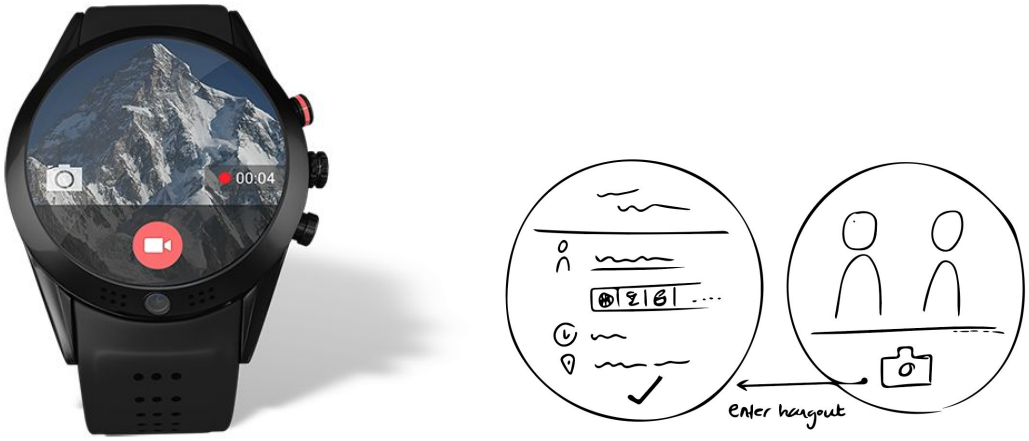
The smart LED sits on a desk, and connects via Bluetooth.

Our first design is an ambient LED display that sits on a person's desk and displays social health over time using color to indicate the level of social activity; it will double as a light source and change color based on your past week's activity i.e. starting out white and transitioning towards green or orange as you track your progress or lack thereof. It connects to a companion desktop app using bluetooth, which is the data source for the light and the main entry point for the person to record social events. The reminders are facilitated by lights colors and a few blinks, which will prompt the user to make social plans. Tracking social activity happens on the app and is incentivized by positive feedback from the display. A situated aspect of the display helps the person be more consistent with their tracking over time, allowing us to give the customer richer social metrics and history that they can interact with to draw conclusions from.



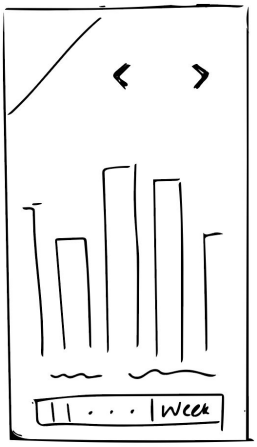
Companion desktop app screens, going from 'home' to 'add event' to health benefit popup back to 'home' with new data featured.

Design 2: Smartwatch + phone



A smartwatch with a 360° camera, alongside screens for entering a new hangout with a picture.

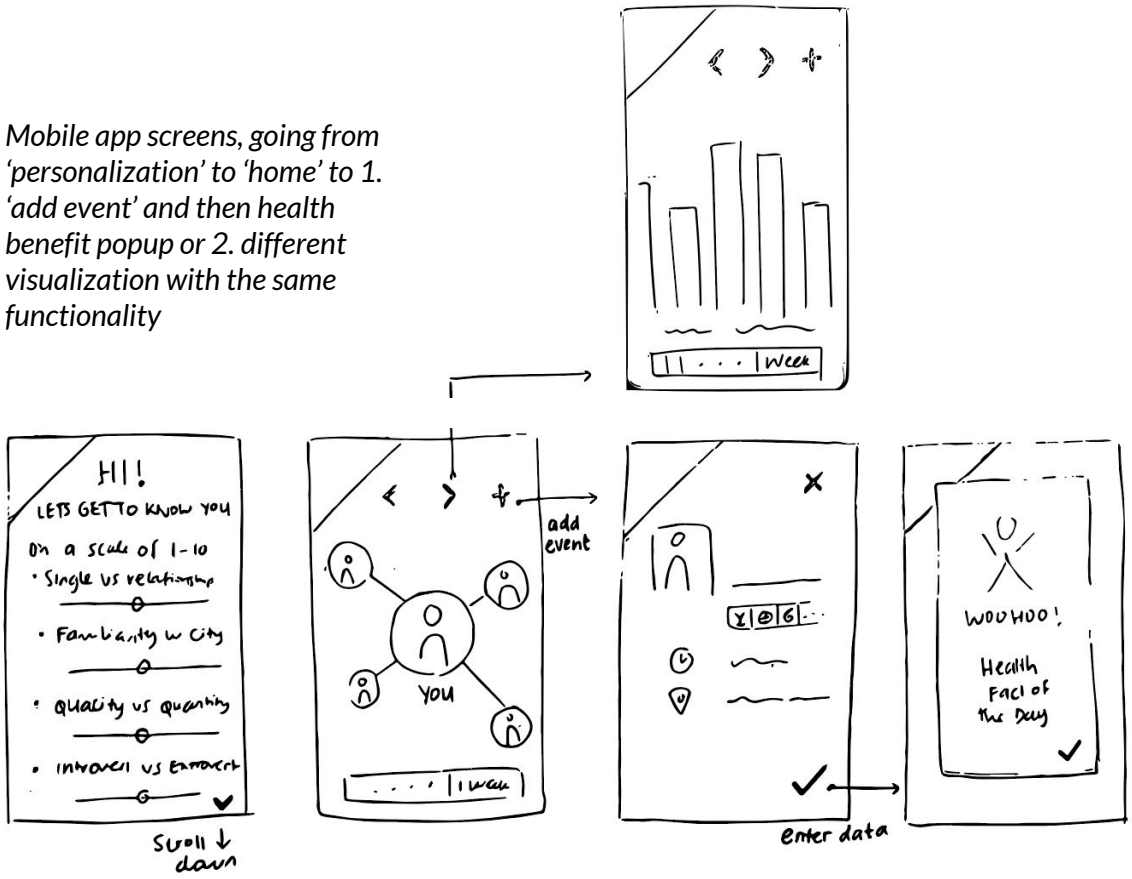
Our second design is a smartwatch app that uses the watch's camera, background location tracking, and date time to record the customer's social activity. This leaves a two touch data entry interaction to select the type of activity and log the hangout. The smartwatch provides instant access and is great for reminders that vibrate or chime throughout the week; ideally, this will be a good avenue to remind the person without annoying them. Since many smartwatches store the person's contacts and recent messages, it will easy for a reminder to transition to the messaging app for setting up a hangout. Additionally, it might be easy to use the voice personal assistant to contact someone even more easily. It's also great because it allows us to store pictures from hangouts as another part of the overall collection. The data from the watch will be stored in the cloud, where our smartphone app can retrieve the information and show social history and trends. These visualizations of personal metrics will be interactive which takes advantage of the larger screen space; the smartwatch makes data entry easy and the mobile device makes data interaction easy, so we're using the best of both forms.



A mobile app screen with full screen metrics or visualizations, switch between them using the arrows.

Design 3: Smartphone application

Mobile app screens, going from 'personalization' to 'home' to 1. 'add event' and then health benefit popup or 2. different visualization with the same functionality



Our third design is a stand alone smartphone app. This app is intended to be self-contained and used for personal tracking only, rather than for scheduling or networking/communicating with friends. The focus will be on tailoring the experience for the customer to help personalize their visualizations and notifications. To help with this, we want the user to fill in an intro questionnaire enabling us to provide a more tailored experience. As mentioned before, the customer can interact with data over time and interact with their social history to draw conclusions. We will still be relying on the customer inputting data about their social activity to provide these visualizations. The main things we will be gathering for each activity are people they saw, category of interaction, and amount of time spent together. Health benefit facts about spending time with friends will pop up after entering a new activity to help the person understand what their social activity means and reinforce its positive effects. We will include some level of social gamification here, where the customer gets rewards or badges for behaviors that positively impact their health.

Design Choice

The design we have chosen to pursue is the stand alone mobile application shown in **Design 3**. Our three designs range from a situated ambient display to a mobile app to a smartwatch app, and the differences in these three forms correlate to differences in time and access. While an ambient display is likely something you see at the end of each day, a smartwatch is always on you. We chose the smartphone design because it strikes this Goldilocks balance of access time in between the two extremes of situated display and smartwatch. A phone is very much in a middle time scale: not always present but accessible when you want it to be. There's also variance in screen size, which relates to how interactive and informative the design is for the customer. The two main tasks we will focus on in this design are tracking social activity and viewing personal social history and metrics over time. Throughout our design research, we observed two big trends that helped solidify our understanding of our target audience: one was an aversion to having just another social networking app or another scheduling app, and the second was a desire for a significant rate of return on actually tracking social activity. Because of these findings, we wanted to move away from the social networking, communicating, and scheduling space. Instead, we want to design around the theme of self reflection because this space was most interesting to participants we spoke with. Addressing the high bar of requirements for actually tracking will obviously be one of our challenges as we pursue this design, and hopefully we can create something inviting and engaging enough to encourage consistent tracking.

Written Scenarios - "1x2"

Scenario 1

Erica, a 24 year old first grade teacher living in her studio apartment in San Jose, has filled her Friday evening with plans with friends. Two of her friends recently moved away, so she has been making a concerted effort to see newer friends, Dan and Leo, more often. Erica has been using Inter·act to help her with this transition and track her progress developing new friendships. Late in the afternoon on Friday, Erica heads over to her coffee date with Dan, a fellow teacher from her school. She then heads over to a birthday party for Leo, her previous neighbor. At the party, they all take a group picture on Erica's phone. At the end of the night, Erica gets a Lyft back home and on her way opens Inter·act to record her social activities for the day; first, she records the coffee date from earlier that day, and then the birthday party. The picture she took there helps her remember all the people she got to hang out and catch up with. It only takes a couple taps to put these in her phone so she can find her keys before arriving home ten minutes later.

Scenario 2

Alex is a 29 year old lawyer in the entertainment industry and he has just sat down to write his 2016 year in review for his blog. As he writes about his job highlights from the year, he struggles to come up with his social life standouts since it all just seems like a blur of fun fit into his usually busy schedule. Luckily, Alex has been using Inter·act to keep track of the people he has made an effort to seeing often this year. He pulls out his phone and his Inter·act homescreen shows a visualization of how much time he has spent hanging out with friends each month. Alex then switches visualizations, using the arrows, to see who he was spending the most time with recently; then he goes to the map visualization to explore and reminisce about where his social activities took place over the year. After observing his recent social trends and some guided reflection from the app, Alex easily writes about this favorite social activities of the year, including a hiking trip with his best friend and a few Sunday brunches with his old roommate.

Storyboards

Storyboard 1: Tracking social activity over time

Storyboard 2: Viewing personal social history and metrics