## The Problem

Have you ever received a mobile instant message at a bad time? Do you feel a pressure to respond quickly? Or maybe you've held off sending a message because you didn't want to disturb the recipient.

These problems are all caused by poor availability awareness: nobody knows what the other is doing.

There are existing designs to address the issue but they aren't working. 'Last online' does not mean the same as 'last available' and just because someone has read your message, doesn't mean they've got the time to respond. The problem is that, among different circles of users, conventions have arisen. For some people, being 'left on read' is to be shunned. These issues of mismatching expectations (youtu.be/L0WeQJW-H3Y) have existed for previous technologies as well, such as landline phones.

Mobile instant messaging is a misleading name. Instant Messaging Apps are in the grey area between synchronous and asynchronous. They can be immediate and conversational with rapid-fire responses, like a phone call, or they can be ponderous and slow-moving, like emails. Sometimes, it isn't clear through a message whether someone wants to start a conversation or is

requesting information. There are none of the usual social cues. (youtu.be/Qg8PIK74KO4).

This project attempted to address the issues of availability awareness and the ambiguity of the async/synchronous nature of mobile instant messaging.

User interviews were conducted with four participants. They lasted approximately one hour each and went into great detail about users behaviours and attitudes to all of the instant messaging they do in their day-to-day lives.

For some, messaging in a professional setting required a chat history to refer back to, whereas for others, the lack of history meant the conversation didn't have to be taken so seriously because any faux pas could be forgotten without a record.

Also, for some, a lack of message previews (for the purpose of avoiding read receipts) meant the conversation had to be more natural and this was a positive result made use of by flirting on Snapchat, where an off-the-cuff response was more insightful for understanding personality.

On the other hand, since read receipts can be used as a signifier for availability, people used the message preview to keep themselves in the loop without the pressure to start engaging in a conversation.

Early iterations of the prototype proved difficult to manage these various and contradictory requirements. However, the final result solved this by removing the chat element entirely, and just focusing on the availability of users, so the purpose of the app was made clear. Overall, the user research showed just how rich and diverse the uses are to which mobile instant messaging is put.

## User Research

## **Prior Art**

There has been a lot of work done in the space of availability awareness. However, a lot of it focused on using the phone as a means of automatically detecting the user's context, then inferring their availability and broadcasting it to their contacts.

There are various issues with this approach, some of which are addressed by the main inspiration for this project: MyButler[1]. The main features of that design were sender-controlled notifications and reactive, private statuses.

The researchers had pairs of people share statuses only with each other and these statuses where only available then their counterpart sent them a message (so, to see someone's status, you have to send them a message).

After seeing this status, users could decide not to notify the recipient, so the message would only appear when they opened the app.

However, people ended up using the status as another channel for communication, as if it was the text messages themselves. I

think that diluted the purpose of the statuses a bit, so

my design doesn't include text statuses. 2:45 Me Myself Overall, MyButler showed that people are willing and able to engage with other approaches that Bob Odenkirk communicate their availability more directly. [1] Cho, H., Oh, J., Kim, J., & Lee, S.-J. (2020). I Share, You Care: Private Status Sharing and Sender-Controlled Notifications in Mobile Instant Messaging. Proceedings of the ACM on Human-Computer Interaction, 4(CSCW1), 034:1-034:25. https://doi.org/10.1145/3392839 Frank Woodley May Beacom was Semi-Busy 5 Ask May Beacom "Is now good: Tap 'Yes' to ask May Beacom to Send May Beacom a notification: start a conversation or 'No' to cancel. Normal My Status Enter a message (optional) Silent Don't Notify Let May Beacom preview the May Beacom has replied: Free Yes OK  $\bigcirc$ No The "Is Now Good" Process: Above: Sending a query No

Below: Receiving a query

(This dialog box shows as a native notification on

Is Now Good? - Frank Woodley

How is the family?

Reply to Frank Woodley No Status] Semi-Busy Free

The final app allows users to set a public, reactive status (public, to avoid issues of managing statuses for more than one contact), ask their contacts if now is a good time to talk (optionally including a message) and also reply to a query if now is a good time to talk. Have a look at a demonstration (https://youtu.be/zmpiVAhk1TI)

## The Result