

POVs and
Experience

Prototypes

Esther Goldstein, Ron Tep, and Rachel
Jorgensen

Team 4:



Esther Goldstein

1st year MS in CS



Ronald Tep

Senior in CS



Rachel Jorgensen

Senior in SymSys

Problem Domain

How can we make voice interaction more accessible for people in their day-to-day lives?

Initial POV

We met Allen, a police officer in SFPD.

We were amazed to realize that his police department often can't find a translator for weeks, even when on important cases.

It would be game-changing to reduce the response time for getting translations by using voice interaction.

Additional
Needfinding
Results

We Met...

- ▣ Hunter, a business operations employee for a solar company
- ▣ Has two Alexas and uses Siri
- ▣ Experiments with commands but gets frustrated if they're not intuitive





I bought a smart fan and thought I could say "Alexa, turn on fan," but apparently it was called Dyson. Who knew?

- Hunter

We Met...

- ▣ Edwin, a Registered Nurse at Sequoia Hospital
- ▣ Uses Voicera at work to contact his team
- ▣ Gives daily reports to transcriptionists



We Met...

- ▣ Therice, a PhD student in Electrical Engineering
- ▣ Doesn't feel the need to use VI
- ▣ Too many clicks to create an event in Google Calendar



We Met...

- ❑ Caroline, a shopkeeper at Sweaty Betty
- ❑ Has to write down her sales goal for the day and manually calculate remainder
- ❑ Thinks voice assistants are for busy people who need it to keep up with their workload





Revised POVs

#1

We met Hunter, a business operations employee at a solar company.

We were amazed to realize that some voice commands are not intuitive.

It would be game-changing to allow users to be more flexible by defining their own commands that will map to existing VI commands.

How Might We...

Make talking to VI software
more like talking to a real
person?

Possible Solution:

Provide a means to make up
your own commands when
interacting with voice
assistants.

#2

We met Naina, an international first-year Master of Laws student.

We were amazed to realize how intimidating and obscure the American healthcare system can be.

It would be game-changing to provide a means to more easily understand this complicated system.

How Might We...

Present healthcare or health insurance information in a more digestible way?

Possible Solution

Create a VI assistant app to answer questions about healthcare and present information in an easily digestible way.

#3

We met Caroline, a storekeeper at Sweaty Betty.

We were amazed to realize that most of her job involves boring, menial tasks.

It would be game-changing to reduce the boredom in regards to taking inventory and waiting for customers to arrive in retail worker jobs

How Might We...

Bridge the gap between writing
down inventory and typing it
into a computer?

Possible Solution

Create a VI assistant that can help take inventory and reduce the time to enter items into an inventory system.

Experience
Prototypes

Prototype 1

Mobile App:

- View/edit dd smart devices to device list
- Add/edit custom commands that map to existing ones
- Share device list with visitors

Device List

Name	Location
<input checked="" type="checkbox"/> Echo	Living Room
<input checked="" type="checkbox"/> Guest Room Lights	Guest Room

Edit Echo

Name:

Location:

Device Type:

Commands:

"Bob, play some songs"

Share Device List

How do you want to share?

Text Email

Enter Phone Number:

Devices to share:

- Echo
- Guest Room Lights

Commands

<input checked="" type="checkbox"/> <input type="checkbox"/>	"Bob, play some songs"
<input checked="" type="checkbox"/> <input type="checkbox"/>	"Google, turn on living room fan"
<input checked="" type="checkbox"/> <input type="checkbox"/>	"Google, turn on these lights in the bedroom"

Edit Command

Your Command:

Existing Command:

Device:

Arjun at Tressider:

- Liked small set of features
- Not sure how to implement mapping
- Possibly limited user base



Assumption:

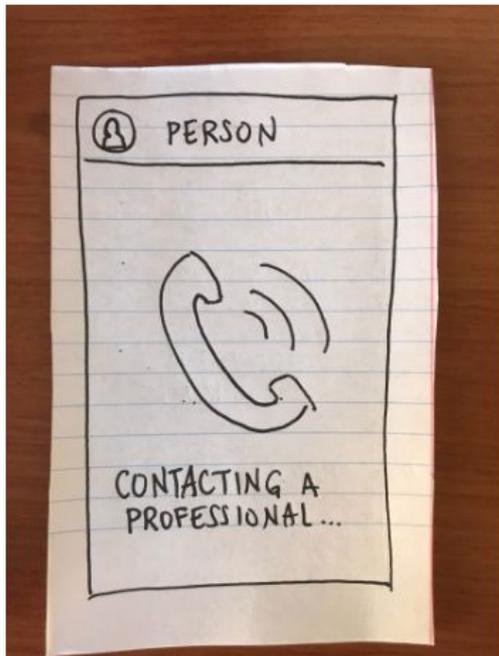
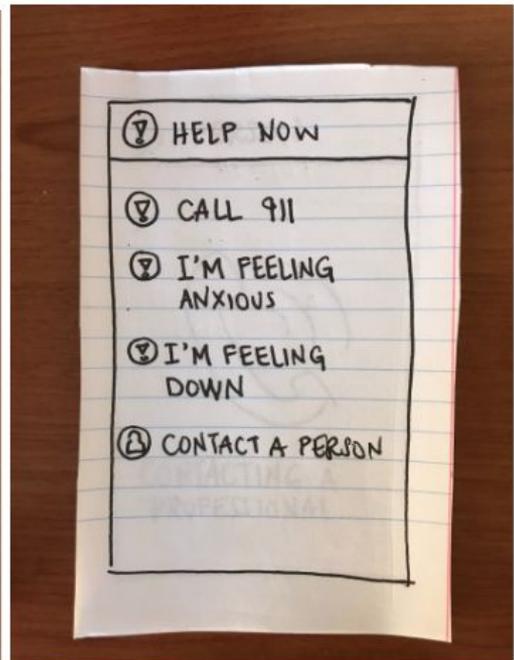
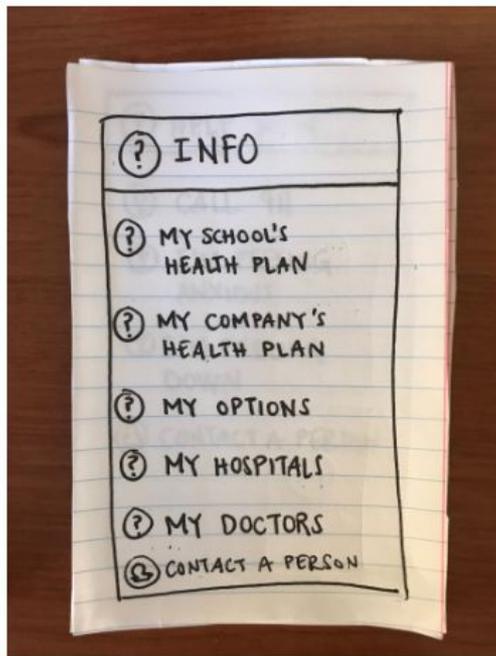
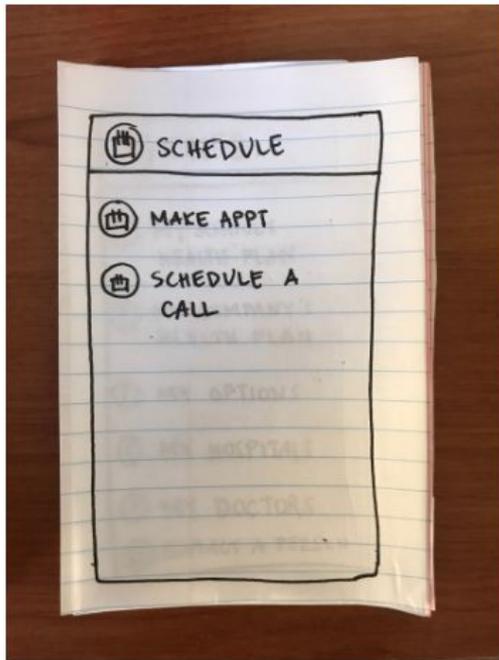
- Own smart devices and/or voice assistants
- Want to be flexible in how they interact with them

However...

- Not everyone owns devices or cares to be flexible
- Need users that want **control**

Prototype 2

- Each screen is a voice assistant screen
- Search for answers regarding healthcare
- Schedule a doctor's appointment
- Report simple information on school or company's health plan



Jackson at Tressider:

- Who gets contacted in an emergency?
- Need to make sure app offers a unique benefit



Assumption:

- Want information about healthcare just by asking verbal questions

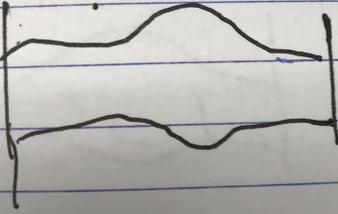
...Confirmed!

- Agreed healthcare information can be confusing
- Helpful to speak to app and receive guidance

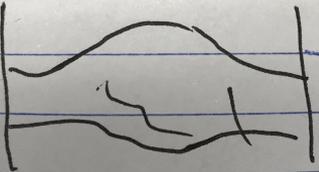
Prototype 3

- Remove the need to switch between a notepad and online inventory software
- Prompts user for item name and quantity
- Presents spreadsheet containing values

"State the item name"



"State the quantity"



Name	Number
A	1
B	3
C	2
D	5

Shannon at Caltrain station:

- Wants to ensure there you can edit the entries
- Prefers auditory interactions but likes option to visually interact or use touch

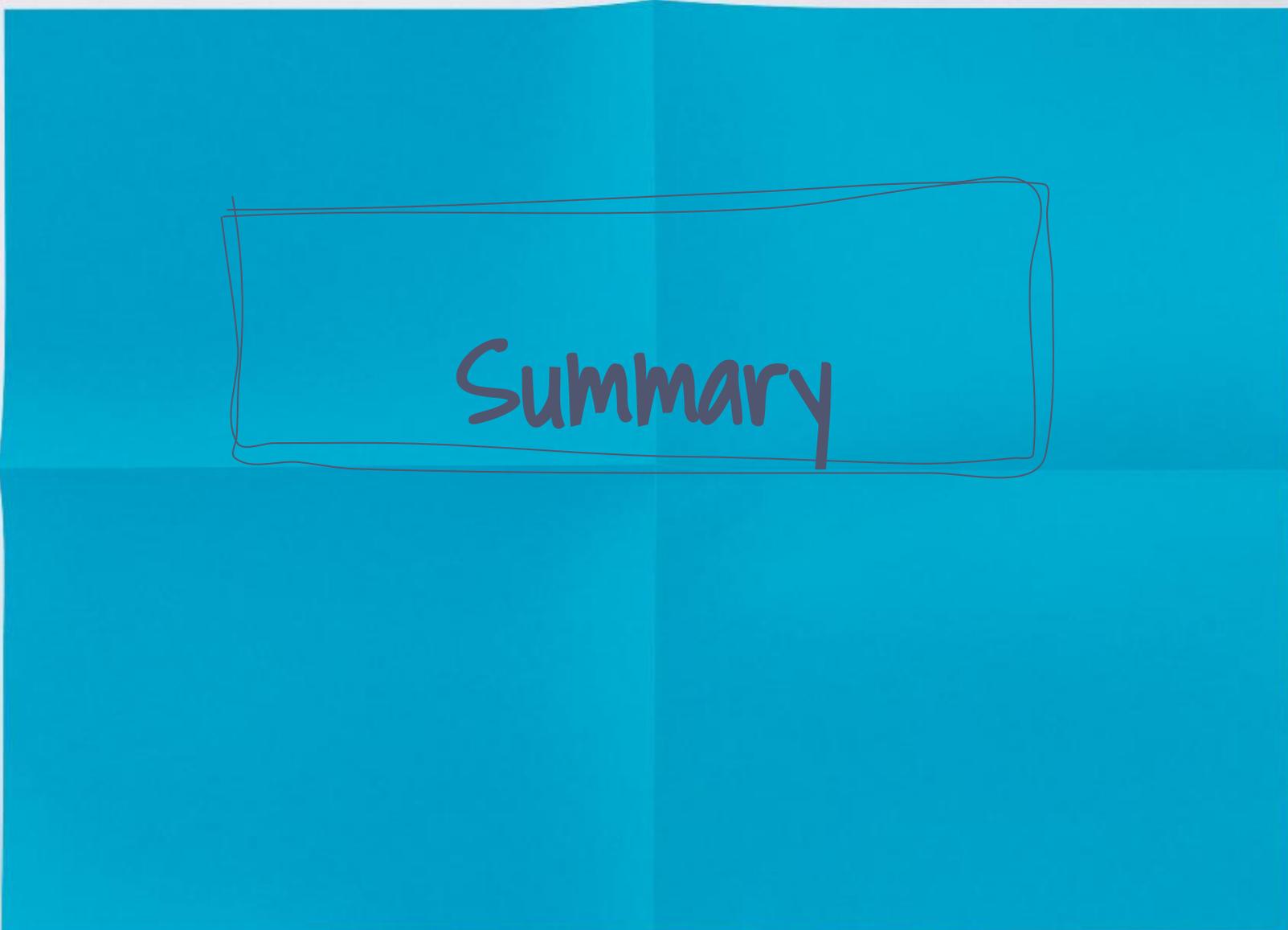


Assumption:

- Retail workers want a way to reduce the effort of writing and typing inventory information each day

...Questioned?

- Concerned with error rate of app's translation
- Inventory key in profit; little room for error



Summary

Winner: flexible voice commands

- Arjun was interested in the future prospects of the app, even though he doesn't use smart devices.
- *Goal:* Transform interaction with voice assistants into a more pleasurable experience
- *How?* Interact with their devices in desired manner, and keep track of all devices

Questions?

Credits

Special thanks to all the people who made and released these awesome resources for free:

- ▣ Busy Icons by Olly Holovchenko
- ▣ Presentation template by SlidesCarnival
- ▣ Photographs by Unsplash
- ▣ Backgrounds by Pixeden