

Jasper

Intelligent Wardrobe Assistant

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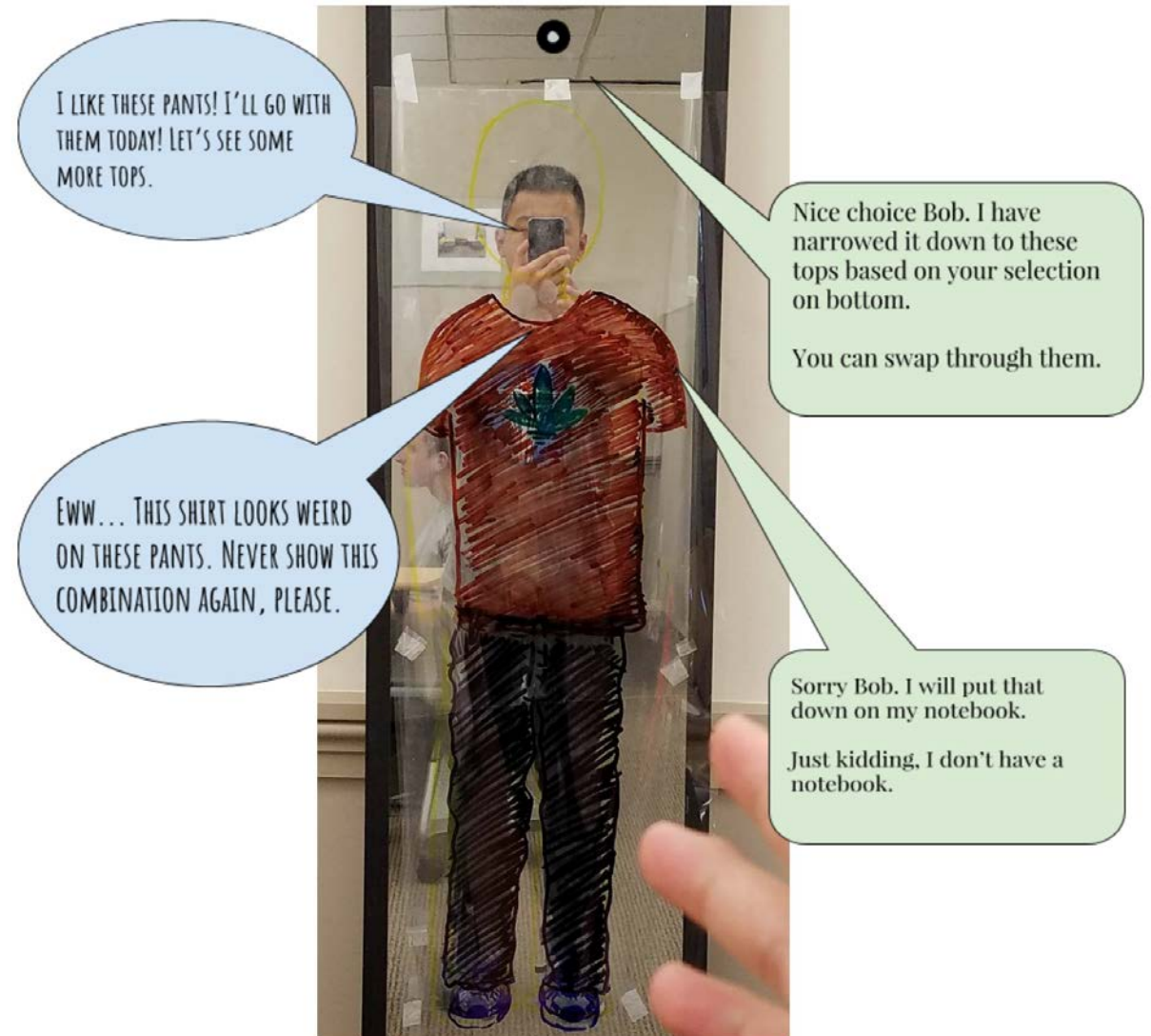
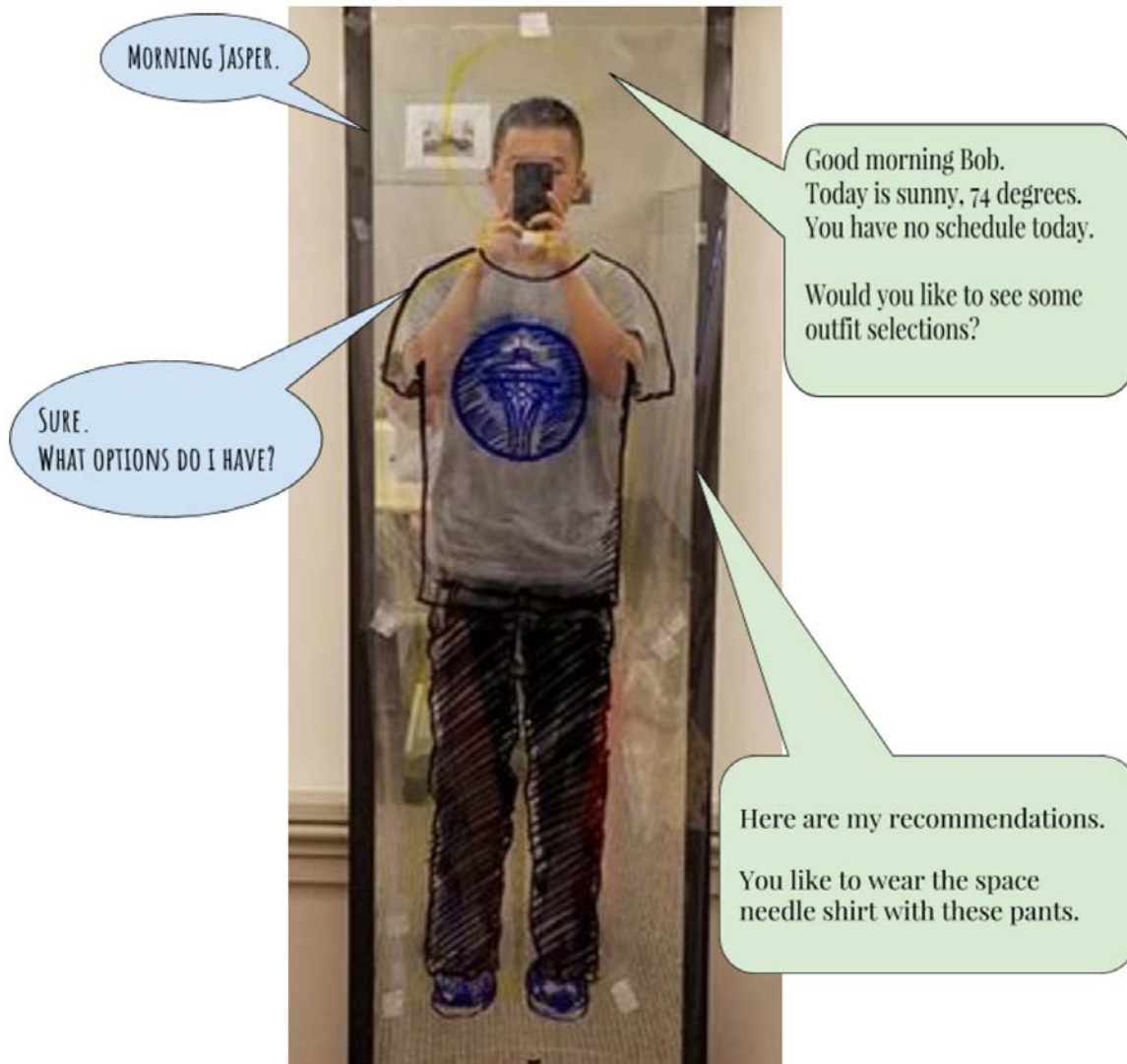


Problem Space

- Outfits are a key component of interpersonal assessments
- Outfit selection can be time-consuming and difficult
- Large wardrobes can result in individuals not taking advantage of their attire
- Individuals do not harness the full potential of their clothing
- A disorganized wardrobe can result in items not being worn—how can individuals properly manage their wardrobe?



Initial Paper Prototype



Initial Paper Prototype

JASPER! I NEED HELP FINDING MY BLACK T-SHIRT!

I have found five T-Shirts match your description.
Which one do you want, Bob?

I CAN'T SEE YOU NOW! I'M BUSY IN MY WARDROBE!
WHAT ARE THEY?

Sure. No. 1 has red stripes at the bottom left corner. No.2 has a little pocket and you worn it last friday. No.3...

YES! NO. 2!
I WANT TO FIND NO. 2!

Which one?

It should be beeping right now.

BEE BEE BEE BEE!

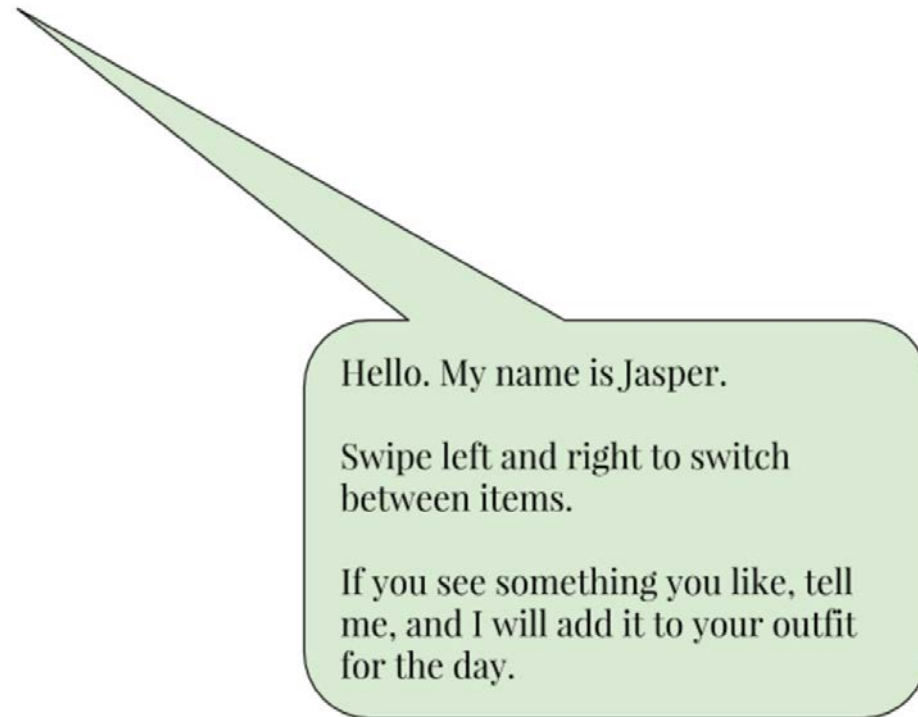
Testing Process: Heuristic Evaluation

- **User Control and Freedom:** Need more intuition on how to use a mirror interface
 - Is it a touch screen?
 - What are the voice commands?
 - How should I switch between items?
- **Visibility of System Status:** Need an icon or progress bar to indicate which item is being picked for now.
- **User control and Freedom:** Need to enable user customized filter on outfit selections

Testing Process: Heuristic Evaluation

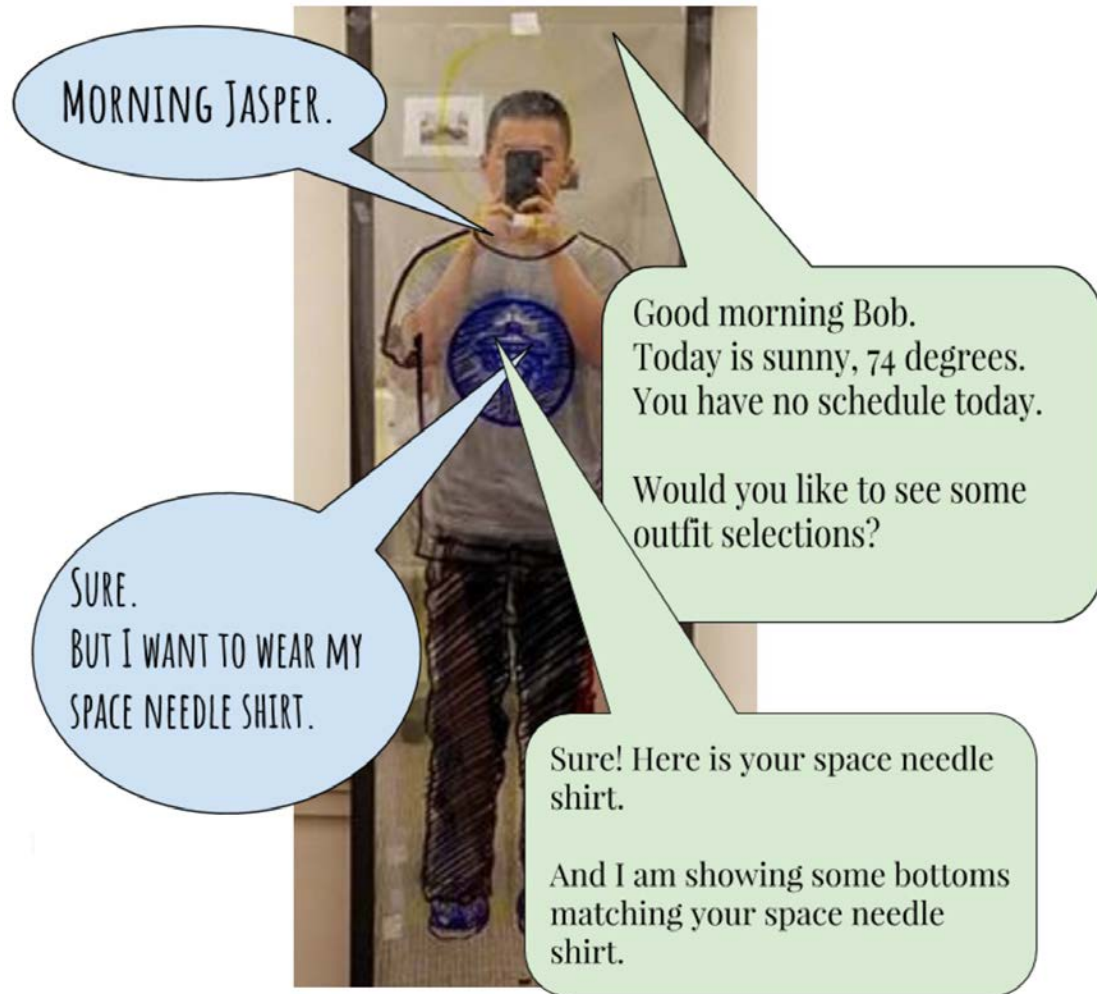
– Step 1: Refinements after Heuristic Evaluation

- Jasper will give a brief tutorial for first time users.



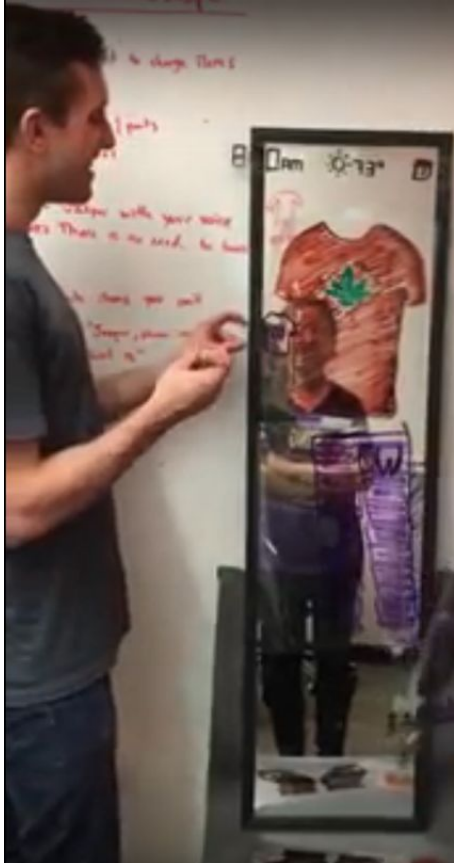
Testing Process: Heuristic Evaluation

– Step 1: Refinements after Heuristic Evaluation



- Allow users to input voice command on following features:
 - Access additional information
 - Filter search results and outfit recommendations

Testing Process: Usability Test 1



- **Aesthetic and minimalist design:** The information bar on top of the mirror is confusing and not necessary when dressing.
- **Consistency and standards:** Using real human improvised voice interaction is confusing and gives out too many hints.

Testing Process: Usability Test 1

– Step 2: Refinements after Usability Test 1



Speech

- Ability to remove Time/Calendar/Weather display with gestures.
- Have the scripts predefined and makeup responses according to the flow chart as well as some special guidelines.

Testing Process: Usability Test 2 & 3

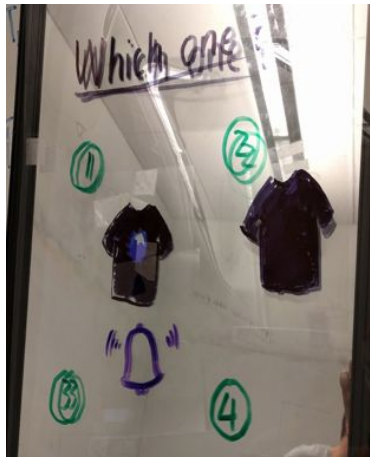
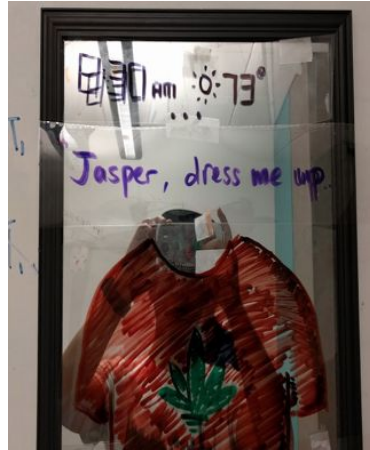


- **Help and Documentation:** He did not fully understand the coverage of Jasper's functionalities.
- **Recognition rather than recall:** He could not remember the commands and gestures through out the process.
- **Consistency and standards:** He did not realize that the default section was already based on selection made already.



Testing Process: Usability Test 2 & 3

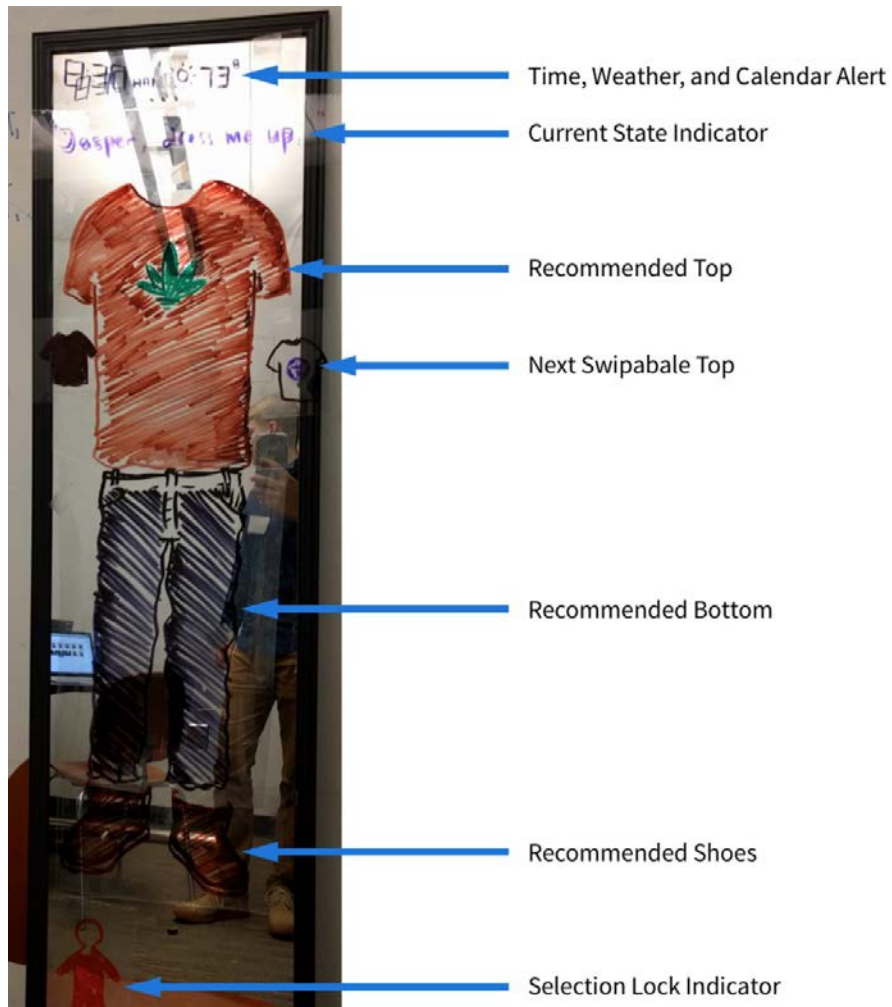
– Step 3: Refinements after Usability Test 2 & 3



- Jasper will display and visualize user's voice input.
- Jasper will offer to help if there is no user input for a period of time.
- Jasper will specifically tell the user that the following recommendations are based on selections already made.

Final Paper Prototype

Task 1 Outfit Selection and Visualization

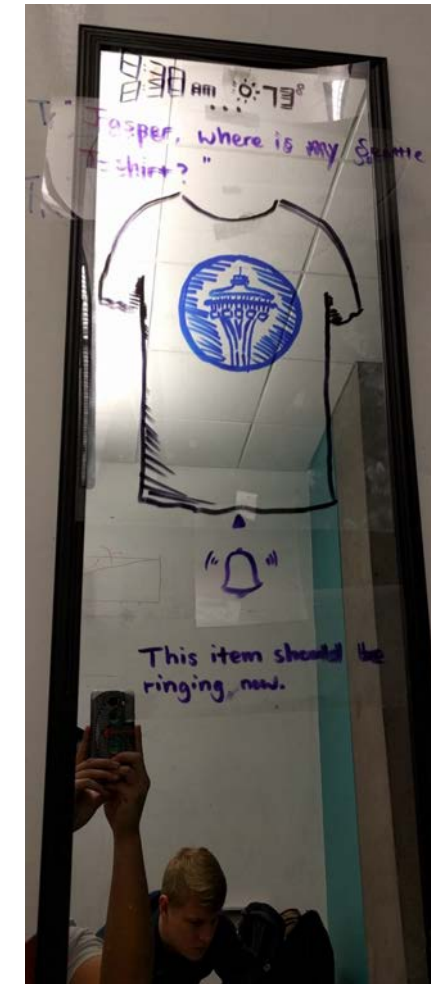


3.1.2017

Task 2 Item Location



CSE 440: Jasper



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Digital Mockup



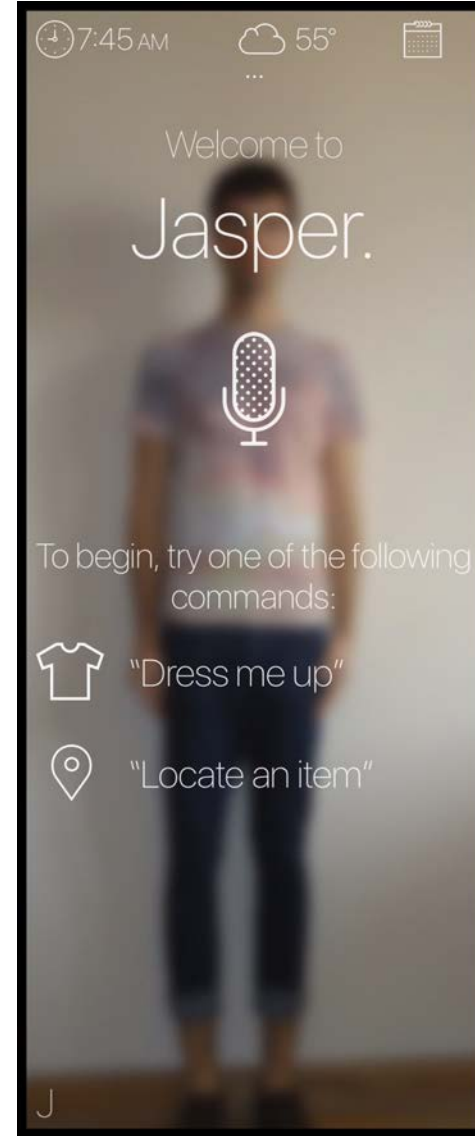
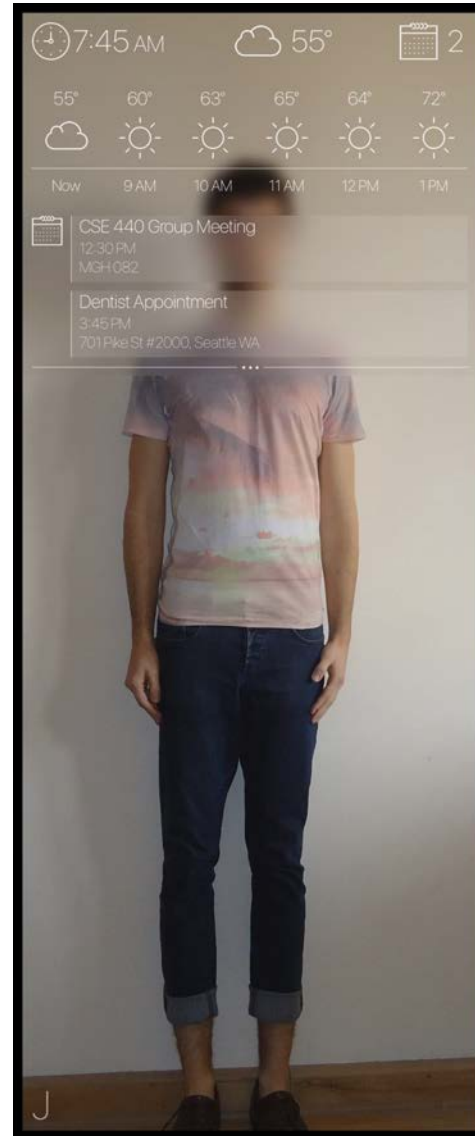
Digital Mockup



Digital Mockup



Digital Mockup



In Summary...

- Iterative design helped us make subtle improvements after each round of feedback
- Testing with consistency takes practice
- User confusion during testing leads to major design improvements
- Consider **all** feedback

