Making Graceful Aging Virtually Real

Amanda Wu | Bobby Zheng | Elaine Kim | Ryan Liu

Advised By: Dr. AnnaLee Saxenian
Many senior centers use Zoom to keep seniors socially engaged.
Unfortunately,
Seniors still face significant challenges when using Zoom
How can we help seniors . . .

Feel less intimidated and more confident when using online video communication services, such as Zoom?
Generative Research
55+ yo seniors
Mostly non-native speakers
Free pre-configured iPads
Weekly Zoom sessions
Limited experience with digital devices
What’s keeping seniors from using more of Zoom?

<table>
<thead>
<tr>
<th>Issues</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Barriers</td>
<td>Familiar physical affordances</td>
</tr>
<tr>
<td>Practical Barriers</td>
<td>Senior-friendly UX design</td>
</tr>
</tbody>
</table>
Proposed Solution
Prototyping
Design Journey

Ideation

Sketches

Digital Prototype

Test idea with number keyboard
3D Printing

Methods

- 3D Design Tool: Fusion 360
- 2 rounds of printing

Design Goals

- Keep 5 core functionalities
- Large buttons
- Clear visual cues
- Size that fits easily into one hand
Wireless Connection

Device Side
- Arduino BLE Series
- Bluetooth Keyboard

Tablet Side
- iOS Accessibility Features
Wireless Connection

Device Side
- Arduino BLE Series
- Bluetooth Keyboard

Tablet Side
- iOS Accessibility Features
User Interview
User Interview  (Wizard-Of-Oz Methodology)

- Low-Fidelity Prototype
- Test preliminary designs
- Context gathering
- “Leave” meeting
User Interview

Usability Testing

- High-Fidelity Prototype
- Debias learning effect
- Willingness to use Zoom
- Learning Experiences
Key Insights

1. Consistent, physical feedback leads to confidence

2. Familiar tangible affordance reduces mental workload
Final Impact

“Once I realize I can’t break this device I started to explore and learn more.”

-- Quote from interviewee
Our Ask

1. Proactive Accessible Design
2. Familiar tangible affordance reduces mental workload
Q & A
Appendix