Key: participant info | setting | task | assistive tech | strategy | ideas | technology | desires

ID	Scenario	Existing Solution	Desired Solution
P1 programmer researcher some vision	Down the road where P1 live is a paved trail through the forest for walking and running. The trail has periodic obstacles. *"There are some gates so that vehicles cannot come to the trail."* outdoor known obstacles unique environment running white cane accuracy sensitive	P1 used the marker feature in Soundscape. First, P1 walked along the trail and set a marker whenever an obstacle is reached. Then, P1 ran along the trail and had Soundscape alert them when an obstacle is coming so they could slow down and walk. soundscape location beacons hacking mark obstacles repeat path	P1 hopes to customize the alert threshold for each marker in Soundscape. *"It would be nice if I could set soundscape alert to me 30 feet before the marker."* It would also be nice to use a Siri command to be able to set markers, instead of having to manually set a marker from within the app. additional settings re-design controls voice commands efficiency
P3 programmer student fully blind	Sort their clothes by type, color, etc. *"I tend to sort my clothes into three different piles: indoor, casual, and outdoor."* home organize subjective private occurs regularly	Video call a family member to get help. video call independence	An AI system to help differentiate between a bunch of different clothes (e.g. sort based on color or type): *"I think it's possible for AI to be able to differentiate between a bunch of different clothes if you're training for a little bit."* Someone could first display the clothes to the system, and then can add their own labels to the item. Later, they could scan an item, and the system could output the label associated with it. new mobile app custom object labels teachable object recognizers
P10 fully blind	Use an electric piano. It has a digital screen, and many buttons that have multiple icons. The buttons do different things depending on if they are pushed once or twice. use appliance learn new interface multi-step	Play with the keyboard and try to remember with trial and error and notes on their phone. Seeing AI can read some text on the screen, but it can't tell you which setting is selected. trial and error notes Seeing AI	The keyboard could make different sounds when different buttons are clicked. If Seeing AI could add a channel that recognize highlighted text, that could be a solution. recognize formatted text audio hardware
P11 fully blind student	Using an elevator with strangers, it's not easy to know what floor the door is opening on. indoor hotel indoor navigation time sensitive independence	First used Seeing AI, but failed to find the floor number. Then they switched to Be My Eyes to ask the volunteers to search for the numbers and read the numbers on the door. switching Seeing AI Be My Eyes multi-step	An indoor GPS system that could tell what floor of a building you're on for easier elevator use. Or, an app specifically for use in elevators, to *"announce the floor numbers or detect what floor you are on when there is not the vocal synthesizes there on the elevator."* new mobile app audio
P11 fully blind student	Do an at-home Covid test. Had trouble reading instruction manual and seeing the results. reading private accuracy sensitive independence	Would not use Be My Eyes, because it is health data and too sensitive to share. Asked friend or families for help instead. friends and family privacy	The test kit could have audio that beeps differently to show results. There could also be a QR code on the package directing the user to an online instruction manual. audio hardware QR code
P12 fully blind	Find a specific room in a hotel. First need to get into the elevator, then find the room. The people at the front desk were reluctant to help. indoor hotel indoor navigation multi-step independence	Used AIRA, but it's difficult to listen to communicate via phone while trying to walk or manage other things around them. The environment can be loud and distracting. Using AIRA would lower their own navigation skills. Also, they would lose signal and be disconnected with agents when in the elevator. connection issue Aira focus	An ideal system would combine BlindSquare and AIRA and would use voice announcement or audio notification. The system would announce information like "the elevator is on the right," keeping quiet for rest of the time. Buildings can also have new infrastructure that cooperates with BlindSquare to provide more information like floor plans. new mobile app audio filtered output