

User Testing Plan

Testing Goals

Functional

- Determine if the user could move themselves around the environment
- Determine if the user could properly interact with grabbable objects and buttons
- Determine if the user could identify and complete all required tasks in each room
- Determine if the user could execute desired actions on the spider creation interface
- Determine if the user felt that the spiders' appearance and behaviour were realistic
- Determine if the user felt that the text, audio, and video elements were easily perceivable

Non-Functional

- Determine if the user became nauseated by the joystick movement system
- Determine if the user felt that the interactable objects' affordances, signifiers, and button mapping were intuitive

Format and Setting

- Supervised but undirected playthrough of the application
 - Beyond the steps involved in actually launching the instructions were provided to any of the test users before their play session began.
 - Questions pertaining to the interface and button mapping were answered, but questions pertaining to the content were not answered.
 - A questionnaire was administered to each user upon completion of their play session.

User Tasks

1. Familiarize themselves with the virtual space and Oculus Touch controls in Room 0

- In Phase 2 of the testing session, Room 0 was fully implemented, so the tasks of hearing all verbal instructions from the therapist character and watching the video on diaphragmatic breathing were added to those listed above.

2. Pick up and read every poster on the bulletin board in Room 1
3. Pick up the remote and use it to turn on the TV in Room 2, and then watch the spider film
4. Pick up and examine the clay spider figurines in Room 3 (viewing the educational content is optional)
5. Pick up and examine the jar with the live spider in Room 4, and create and observe live spiders in the enclosed terrarium via a spider creation interface
6. Create and observe live spiders in the three self-contained free roam areas (Room 5s) via separate spider creation interfaces

User Feedback Mechanism

1. All comments, questions, and complaints *during* the users' play sessions were recorded in their raw form and later posted in the Team Edentata Discord server for analysis.
2. At the end of each play session, users were encouraged to fill out the User Feedback Form in case they had any additional comments or wanted to expand on their thoughts. We only received three responses in this format – they can be viewed in our document repository.

Testing Results

- Closed alpha testing session (January 31-February 14)
 - User #1: Liked aesthetic; saw it as “deceiving / realistic.” Felt that lack of instructions, especially in Rooms 4-5, were the application's biggest weakness. Found the remote in Room 2 extremely difficult to use, and felt that using a controller button to push the virtual buttons in the environment was unintuitive. Experienced frame drops in the Room 5 laundry room, a bug with the Remove All Spiders button, and unusual wolf spider animations.
 - User #2: Experienced glitches with tarantulas floating in the terrarium and leaving the Room 5 bedroom, which they should not be allowed to do. Felt that the

coloured spiders in the bathroom did not look realistic. Expressed anxiety about spiders being in the rooms, which we interpreted as a positive result. Found the panel to be confusing at first, and experienced difficulty interacting with the virtual buttons. Questioned when the application was “over” since there was no termination condition in Room 5.

- User #3: Quickly became frustrated at the lack of instructions or indicators in Room 1. Was confused as to why the door to Room 2 would not open at first. Did not know if they needed to grab the posters in Room 1, or merely look at them. Explained that pre-existing psychiatric conditions, such as anxiety or stress, would not comply well with a confusing or overwhelming interface, and advised that we prioritize usability and information display going forward.
- User #4: Expressed the same usability concerns as User #3, but was impressed by the realism of the content. Recommended that the doors be given weight and inertia in order to make their physics seem more natural. Suggested that a dial, rather than buttons, be used for the intensity module in the spider creation interface. This was something that we considered, but ultimately decided against, as there are only four discrete measurements for intensity. Recommended that the diversity and intensity states from previous spider creation interfaces be applied to new ones in order for users to expect consistent interactions. Experienced a few inverted textures in Room 2, and frame drops in Room 5.
- User #5: Immediately tried to open the door to Room 2, but was unable to because the posters had not been interacted with - they did not know that this was a requirement due to the lack of an instruction module. Had a very difficult time interacting with the door leading into Room 2, even after learning what the door-unlocking interactables in Room 1 were. Ultimately gave up after interacting with every possible object in Room 1.
- Closed beta testing session (March 21-28)