

Session 1

Tester Name: Nhi Phuong & Heramb Sawant

User Info

User Name: Dr. Babyn

User Age: 60+

User Gender: Male

Initial Questions

Have you used Virtual reality before and if so, how much?

No

Do you like roller coasters? Why?

Okay with them.

Have you any experience in computer science?

Some

How is your current health? Cold? Flu? etc

Healthy

How is your eyesight?

Needs glasses, no contacts

Notes During Testing:

- No space between images in the Display
- Closer to the user, half the distance
- A little bit of tilt, not too much
- Mini tray under the left/right buttons
- Console in front should be where the image is
- Views the Display as what he would like to adjust
- Would like to be able to scroll through the images quickly, by button on the controller
- For those who are used to monitors, simulating monitors is the way to go, but there may value for copies because you can move things around
- If there is snapping, prefer with no space in between
- Likes that he can have more than just two monitors
- A way for people to write APIs or additions to our basic code, such as particular features
- A camera to see what is happening in the physical space
- May need to measure components on the images, annotate

Additional Questions:

1. Currently we can make the copy infinitely big, how large is the largest that you think that we will have to make an image?

Set a standard range, and let the user set a range

2. How is the room and lighting?

Room and lighting is fine

3. Does the resolution look high enough?

Good enough for clarity of the images, should do tests for quality assurance but certainly for review it would be good enough

4. What are some features that you 100% need in order to do a report from start to finish in our environment

- Voice recognition (sync oculus voice with other software)
- Radiology information system stores reports and a way to sign off

5. What are some features that you might like to have in our environment?

Different options for different types of images (brightness, etc.)

6. Now that you have had a chance to use our system, is there anything that feels restricting? Anything that you feel like cannot be done in Virtual reality?

May need better ways to jump between images, and patients

7. Are there any strengths and features of the system that you really like and feel like they could make your work simpler?

- Have a grid to put images on
- Tutorial for setup for new users

Additional comments post experience:

- Not sick at all
- Maybe not resize but zooming in a specific spot
- Looking to totally replace the monitor
- Most software will create the images in the standard size

Session 2

Tester Name: Nhi (Notetaker), Heramb, Janelle, Brianne, Mack, Kyle

User Info

User Name: Dr. Montgomery

User Age: 41

User Gender: Male

Initial Questions

Have you used virtual reality before and if so, how much?

No

Do you like roller coasters? Why?

Yes

Have you any experience in computer science?

No

How is your current health? Cold? Flu? etc

Pretty Good

How is your eyesight?

Good

Notes During Testing:

- Would like resize with the hands
- Likes the interactions with the hands
- Grid?
 - Likes the free space for copies
 - Not grid necessarily but maybe select a couple images and make them the same size
- Would like a reset button
- Likes that you can stand while using this application
- Would like a setting where images that are linked will open together in a certain position
- Having a clock and timer for break
- Thinks the button interaction is fine

Additional Questions:

1. Currently we can make the copy infinitely big, how large is the largest that you think that we will have to make an image?

Depends on resolution of the images

2. How is the room and lighting?

- Perfect for lighting and sizing

3. Does the resolution look high enough?

Some (samples), are a little blurry

4. What are some features that you 100% need in order to do a report from start to finish in our environment

- Voice dictation is used as majority
- Test window to see what you are dictating and patient data

5. What are some features that you might like to have in our environment?

- Would like multiple changes happening at once

6. Now that you have had a chance to use our system, is there anything that feels restricting? Anything that you feel like cannot be done in Virtual reality?

- Being able to set each hand to do a specific adjustment

7. Are there any strengths and features of the system that you really like and feel like they could make your work simpler?

- Likes how interactive it is and being able to grab and place images anywhere

Additional comments post experience:

- Does not feel sick at all
- Likes it
- Could see using it for work with breaks because it gets a little warm
- Most room colors should be medium color so it's not darker or brighter than the images

Session 3

Tester Name: Mackenzie, Janelle, Kyle, Brianne, Heramb

User Info

User Name: Dr. Burbridge

User Age: 58

User Gender: Male

Initial Questions

Have you used virtual reality before and if so, how much?

- no

Do you like roller coasters? Why?

- No, makes him feel dizzy

Have you any experience in computer science?

- No

How is your current health? Cold? Flu? etc

- Good

How is your eyesight?

- Needs glasses with low lighting and closer objects

Notes During Testing:

- Inexperienced with gaming and game controllers
- Needed help with gestures
- Control panel was too low when program started
- When radiologists use zoom they only zoom into a specific area
- Current picture is pixelated (dicom images don't pixelate like jpgs)
- Needed to be reminded how to interact with the system (ex: point to create copy from tray)
- When looking at a patient's new picture they radiologists system can bring up previous pictures automatically
- Would like to have a grid where images are displayed
- Tray needs to be more insight (doesn't want to move head)
- Wants minimal movement and interaction to perform tasks
- Need to worry about surrounding and injuries
- A lot of movement may cause soreness in arms in the long term
- Scrolling through stacked images is a huge part of their job

Additional Questions:

1. Currently we can make the copy infinitely big, how large is the largest that you think that we will have to make an image?

- Stop resize when images don't look as clear, also keep the image small enough to understand the context of the image. Shouldn't have to move head to see whole image as radiologists are used to just moving eyes.

2. How is the room and lighting?

- Lighting is good and does not need to change
- Not distracting

3. Does the resolution look high enough?

- Images look pixelated especially when enlarged

4. What are some features that you 100% need in order to do a report from start to finish in our environment

- Comparison from old images and their reports from previous studies
- Dictation interface, would like a visual representation of what is being dictated. Their dictation has many features including voice recognition that would be nice to have
- Needs description of images and context of injury
- Their system is integrated with a lot of different applications
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5. What are some features that you might like to have in our environment?

- Images in their system has a pull down menu which can add scale and measurements to their images
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6. Now that you have had a chance to use our system, is there anything that feels restricting? Anything that you feel like cannot be done in Virtual reality?

- Interface is smooth
- Needs help with gestures
- Most of the interactions felt intuitive

7. Are there any strengths and features of the system that you really like and feel like they could make your work simpler?

- Are not restricted with physical monitors

- Would like a way to snap images to a grid in a non random way. For example when you snap a case onto the grid, images of this history of the patient fills the grid of image
- Would like some sort of customization with the grid
- When 3d scans are implemented he would like the freedom to move it with gestures

Additional comments post-experience:

- Doesn't feel any different after tests
- Someone younger may adopt VR more easily