

IMMERSION IN VR

One of the major learnings from developers using room scale and/or tetherless VR was just how quickly users were immersed.

BEHAVIOR

- When immersed people try to go thru VR doors, which may be a “wall” in real life. Fade to black was not sufficient enough [Escape Tomb]
- People are unpredictable in VR, important to run lots of people thru the experience. [Escape Tomb]
- Be mindful of immersion, people will not remember what room they were in. Make sure boundaries are clear
- People normally don’t want to walk thru stuff.
- People come in with preconceived notions from life and we have to support them (JobSim)
- You cannot half way do things. If you implement a reaction for someone touching a creature, they will want to throw things at it, etc.

INTERACTION

- Avoid ceiling height interaction
- Avoid interactions behind the user
- “Just turn off the hands when the user grabs an object (...). No one really notices it in VR, I did some research, about 90% of people never noticed that their hand disappeared, the brain is just filling up the gaps.”
- Make sure that you don’t set up a situation in which the user must lean, in any circumstances.
- Discourage continuous 360 rotation.
- Make sure things don’t go thru people’s face. (TheBlu)
- Avoiding UI if possible, if not use Environmental UI, build into the fiction of the world
- Needs to be clear understanding on what is interactable and what isn’t. What is in that inner circle, vs outer circle.
- Traversal should be built into the fiction of the world
- Use haptics to get people to look at controller
- Remove interface between the game and the player
- Avoid shallow interaction
- Give clear cues to possible interactions
- Overlearned interactions can cause conflicts (falling thru vr tables, etc)
- Avoid Proprioceptive disconnect

DESIGN AND SCALE

- Arrange your space to encourage movement (...) and make the experience more fun.
- People can sense if they are slightly too tall or short.
- In VR anything that is incorrect is obviously incorrect.
- “People understand scale very well so you have to have scales in VR perfectly correct. Your brain is so good at determining if things are off when it comes to scale. They did a study, they took a Coke can and they scale it up down ten percent and humans were able to say "yes, that is completely incorrect something is wrong". So you have to make sure right after starting designing things that you design things to scale.”
- Feel and intuitiveness drives almost every user experience decision.
- Low opacity skyboxes with weak horizons helps people feel like they are in a world that is flat as opposed to just an infinite land of nothing (TiltBrush)
- Abstraction is better than faulty details

MECHANICS

- Simplify, users can put headset on and just “know what to do”. [Escape Tomb, Virtual Code Battle]
- Collaborative Games are powerful [Virtual Code Battle]
- Competition keeps people engaged [Virtual Code Battle]
- Spatial Audio is key [Horror VR]
- Best locomotion is walking around if possible
- Avoid the uncanny valley of visuals and behavior

THEMES

- Horror is hit or miss, big reactions to no reactions [Haunted VR]
- Make believe world, lets you “make things up”.
- Create a magical place rather than realism

TEACHING/LEARNING

- Instructions are very important (they used audio) – explorer buddy “behind door” [Escape Tomb]
- Control user expectations
- Easy on boarding moment to establish where they are, where they can look around

DRIVING FOCUS/ATTENTION

- **Shaking props was enough to get people to focus, and begin to interact with them [Escape Tomb]**
- **Important to know about the users' attention**
- **Reflexive and Voluntary Orientating of Visual Attention**