



The Wild West of VR

Lessons learned with Aaaaaculus!

Alex Schwartz
Devin Reimer



Owlchemy
Labs

Introduction



Alex Schwartz

- **Chief Scientist**

- **Founder**

- **CEO**

- **Janitor**

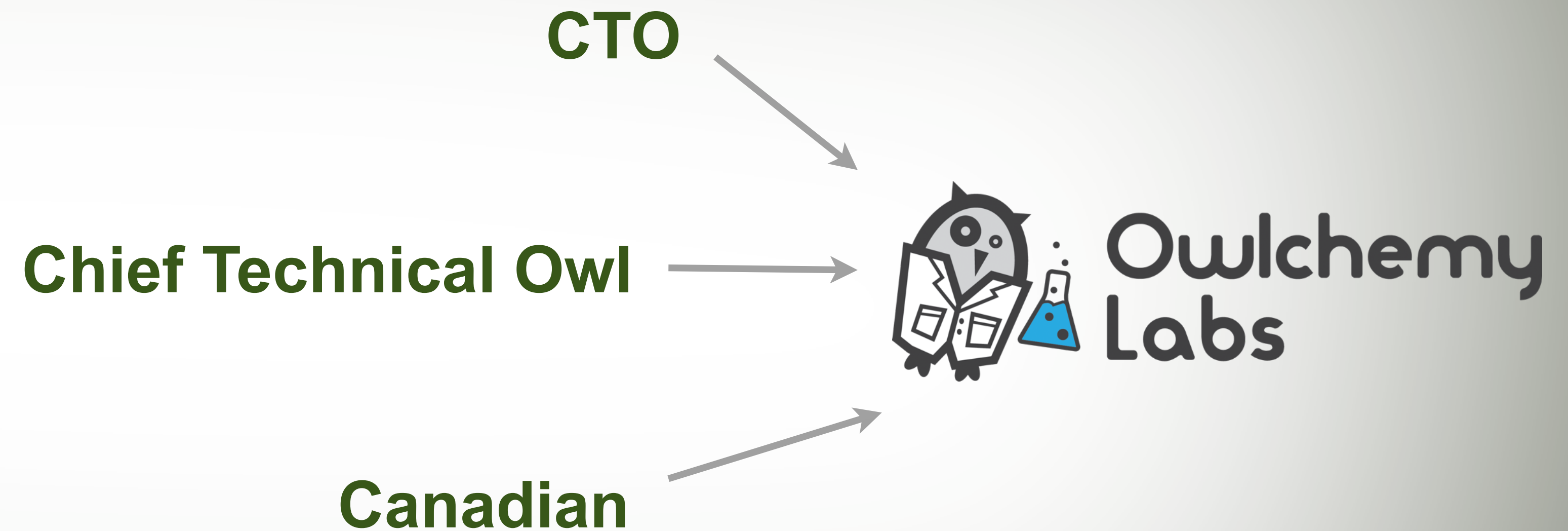


**Owlchemy
Labs**

Introduction



Devin Reimer



The Labs

(Actual Photograph)

STEAM
DEV
DAYS



Owlchemy Labs

Snuggle Truck

2010



 **Keep those animals
in the truck!**



9



00:08:93





SNUGGLE TRUCK

FACT SHEET





V 418



DISCOURSE





JUMP

SETUP

AAAAA!
...FOR THE AWESOME!

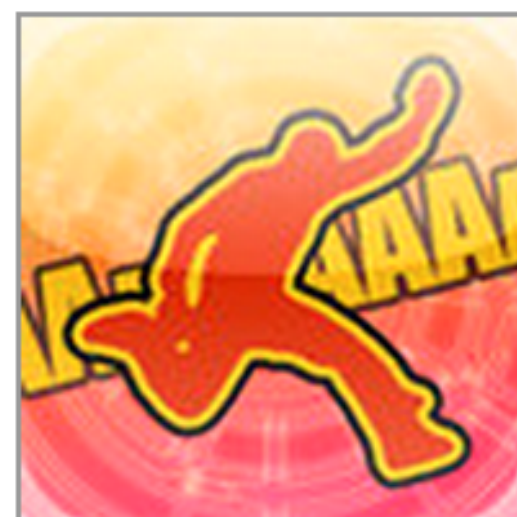
FLEE

HUGS: 9

KISSES: 1

SPEED

PROXY



90
out of 100

Metascore

Universal acclaim
based on [12 Critics](#)

[What's this?](#)



AaaaaAaaaaAAaaaAAAAaAAAAA!!!

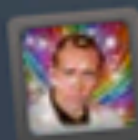
~~A Reckless Disregard for Gravity~~
For the Awesome!

- **Original (created by Dejobaan)**
 - IGF nominee
 - PC-only
- **Semi-Sequel (collab between Owlchemy + Dejobaan)**
 - Mac, iOS, Android, Linux
 - To Unity!
 - New levels and mechanics

Whoa!

This game needs to be in VR!

(Oh, and the fans wanted it)



Rainbow Cage ▾ Apr 5, 2013 @ 3:33am

Oculus Rift + Aaaaaa: for the awesome = awesome?

i think this would be pritty sweet to see if it was supported for the oculus rift. but i can also see a lot of people haveing heart attacks just trying to make there first jump.



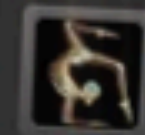
Xylus ▾ Apr 9, 2013 @ 6:01am

I would buy a Rift just for this game.



[DFB] HeXcoda ▾ Jun 16, 2013 @ 3:54pm

This game will truly be a vomit comet if it gets Rift support. That will be both beautiful and terrifying. #3



Days ▾ 5 hours ago

Barfing never felt so good.

**ROCK, PAPER
SHOTGUN**
PC GAMING SINCE 1873

Thread: **Games you wish to play with Oculus Rift**

07-02-2013, 10:33 AM

TomxJ ▾

Network Hub

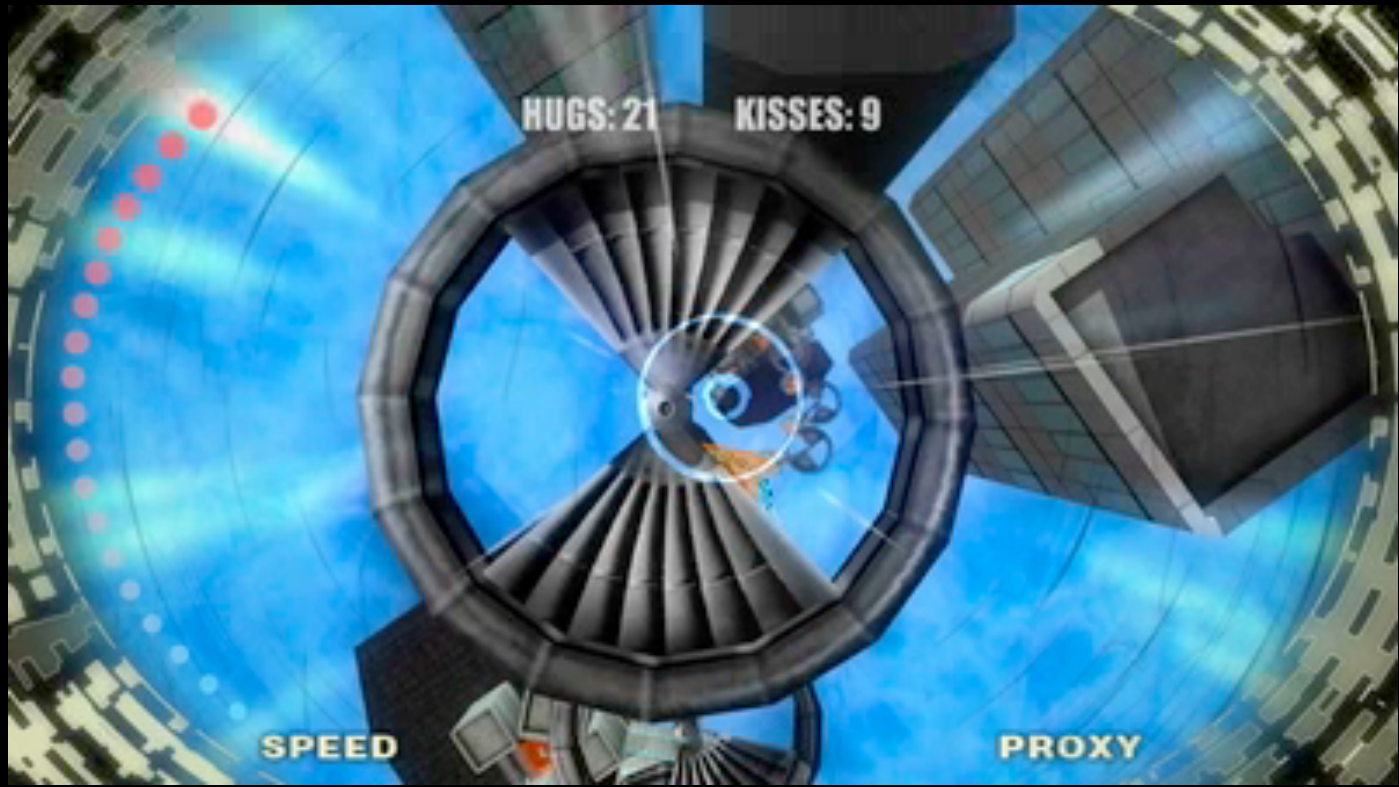
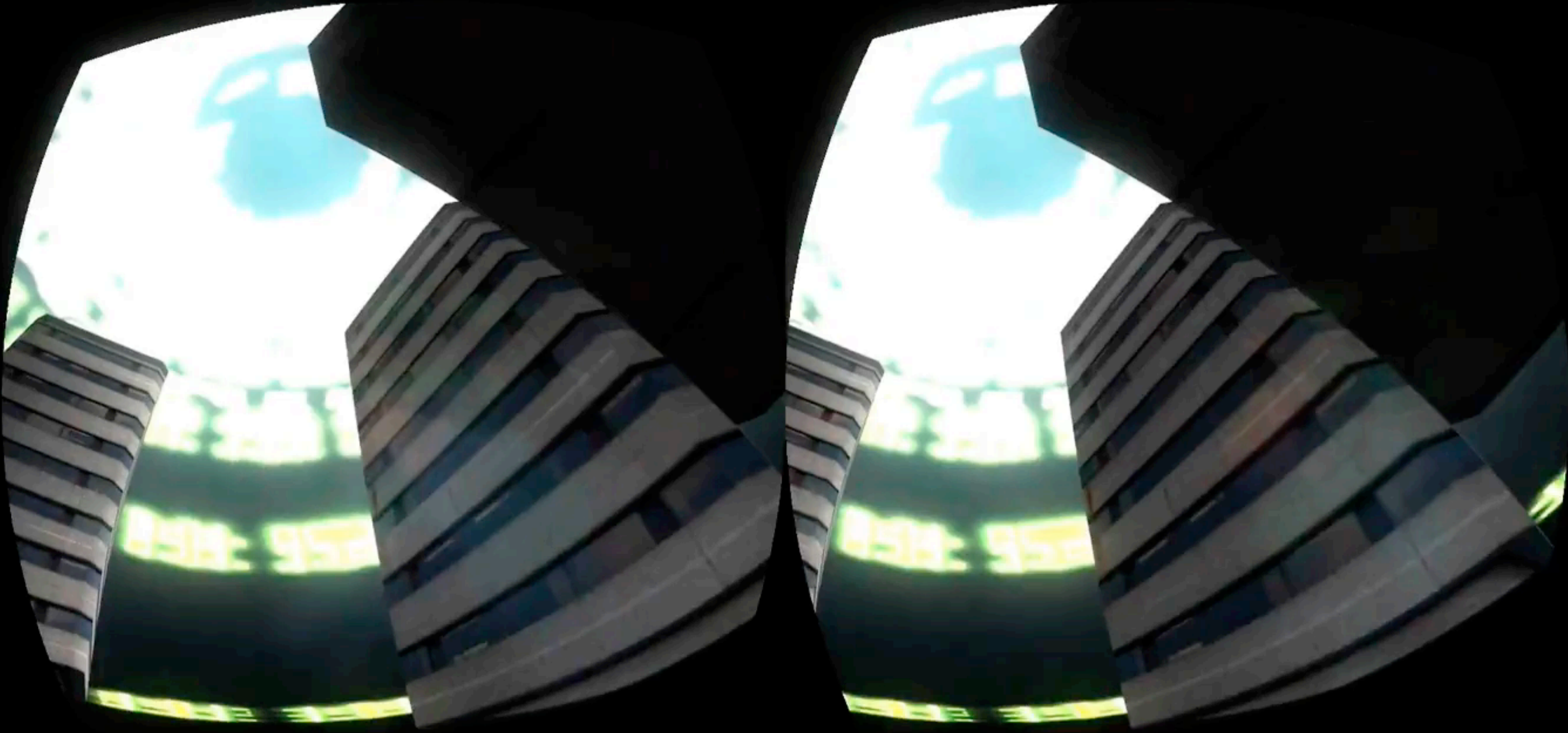
Join Date: Nov 2011

Posts: 141

- Slave of God
- Souvenir
- AAAAAAAH! A reckless disregard for gravity
- Mirrors edge
- Portal 2

KOTAKU

games like *Mirror's Edge*, *Skyrim*, *Half-Life 2*, *Portal 2*, are working with the VR goggles... As is falling death simulator AaaaaAAaaaAAAAaAAAAaAAAAA!!!, in case you're feeling especially brave.



- **Announced**
 - July 11th, 2013
- **Steam**
 - August 13, 2013
- **Top downloaded game on Oculus Share**



Working build
2 ppl, 1 day

Feeling good
2 ppl, 1 month





THE WILD WEST OF VR

The rules haven't been written

Helpful to look back to an earlier time...

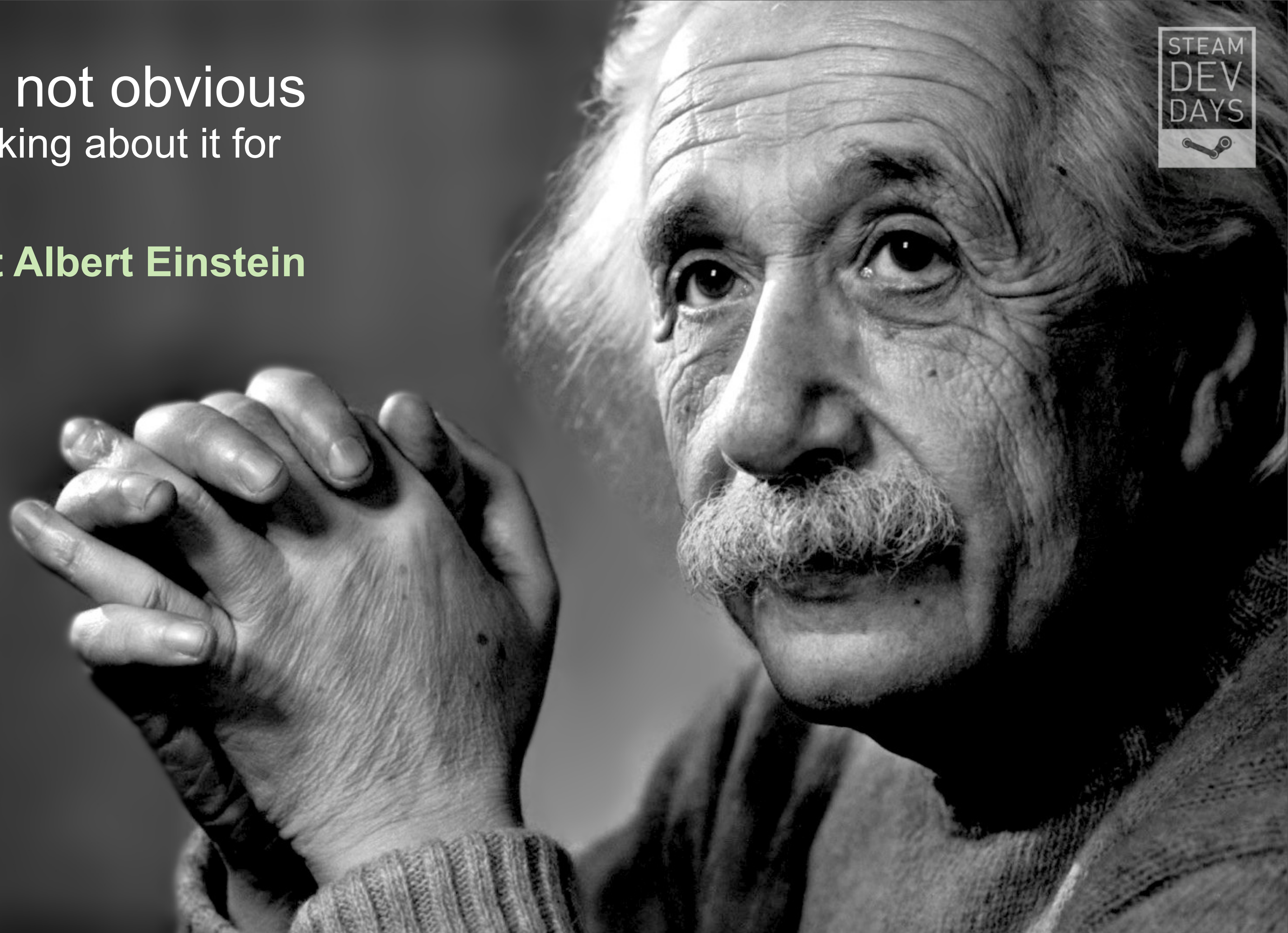
The last time the rules were unwritten



Slide to Unlock (2007)

“Obvious” is not obvious
when you’re thinking about it for
the first time.

- Not Albert Einstein



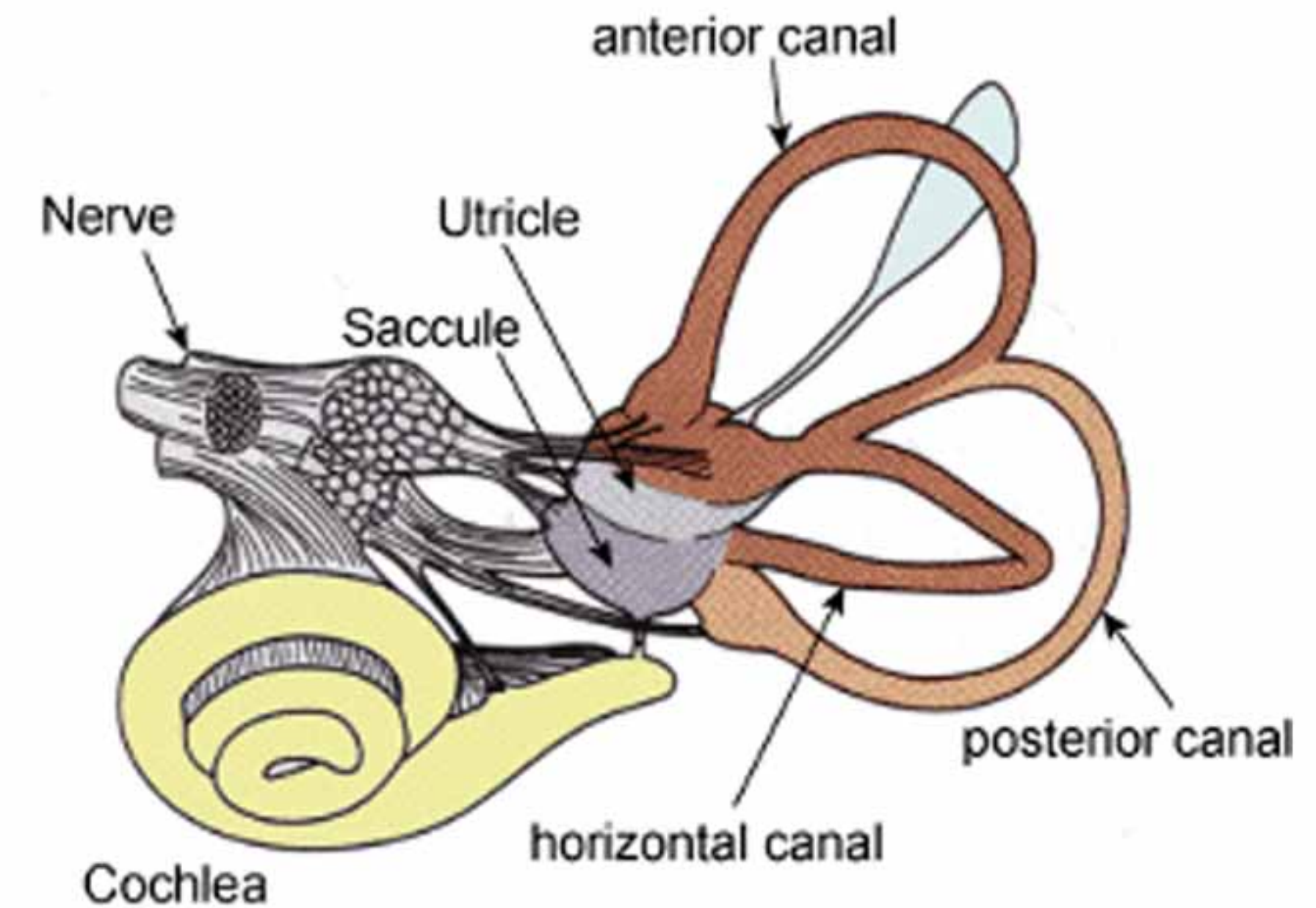
What we learned so far

What wasn't obvious?



VR Motion Sickness

“Disagreement between visually perceived movement and the vestibular system's sense of movement.”



VR Motion Sickness - WHY?!

Evolutionary purpose:
Notify you of hallucinogenic

Those who feel it strongly
Better evolved



VR Motion Sickness - WHY?!



**Actual
Motion**



**Perceived
Stationary**



**Perceived
Motion**



**Actual
Stationary**



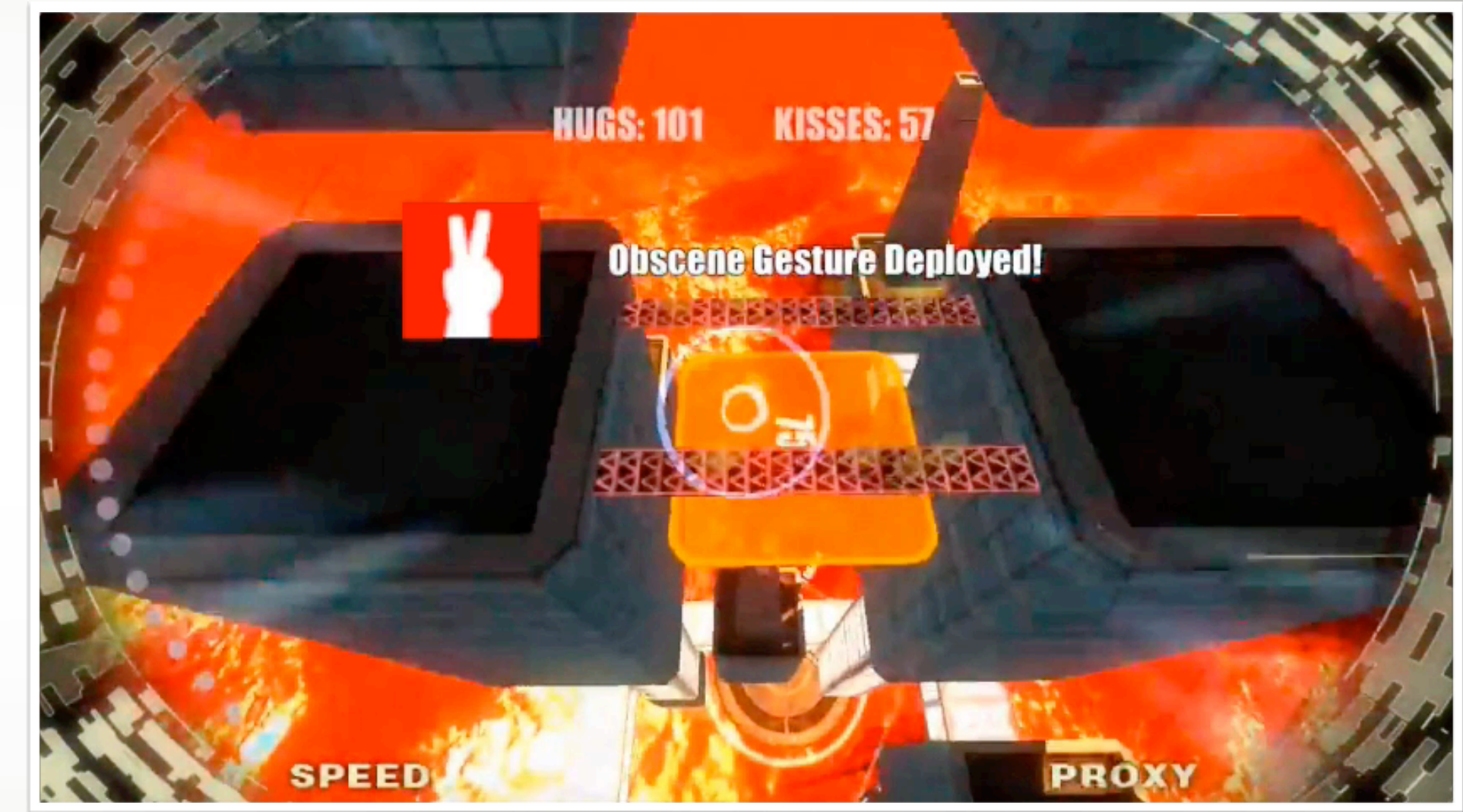
VR Motion Sickness - Results

“Diving off buildings in VR is surprisingly pleasant and not nausea inducing!”



The camera angle is sacred

- Moving cam when user hasn't requested :(
- Cam tumble at the end of round
- Smacking buildings
- Shake when deploying parachute



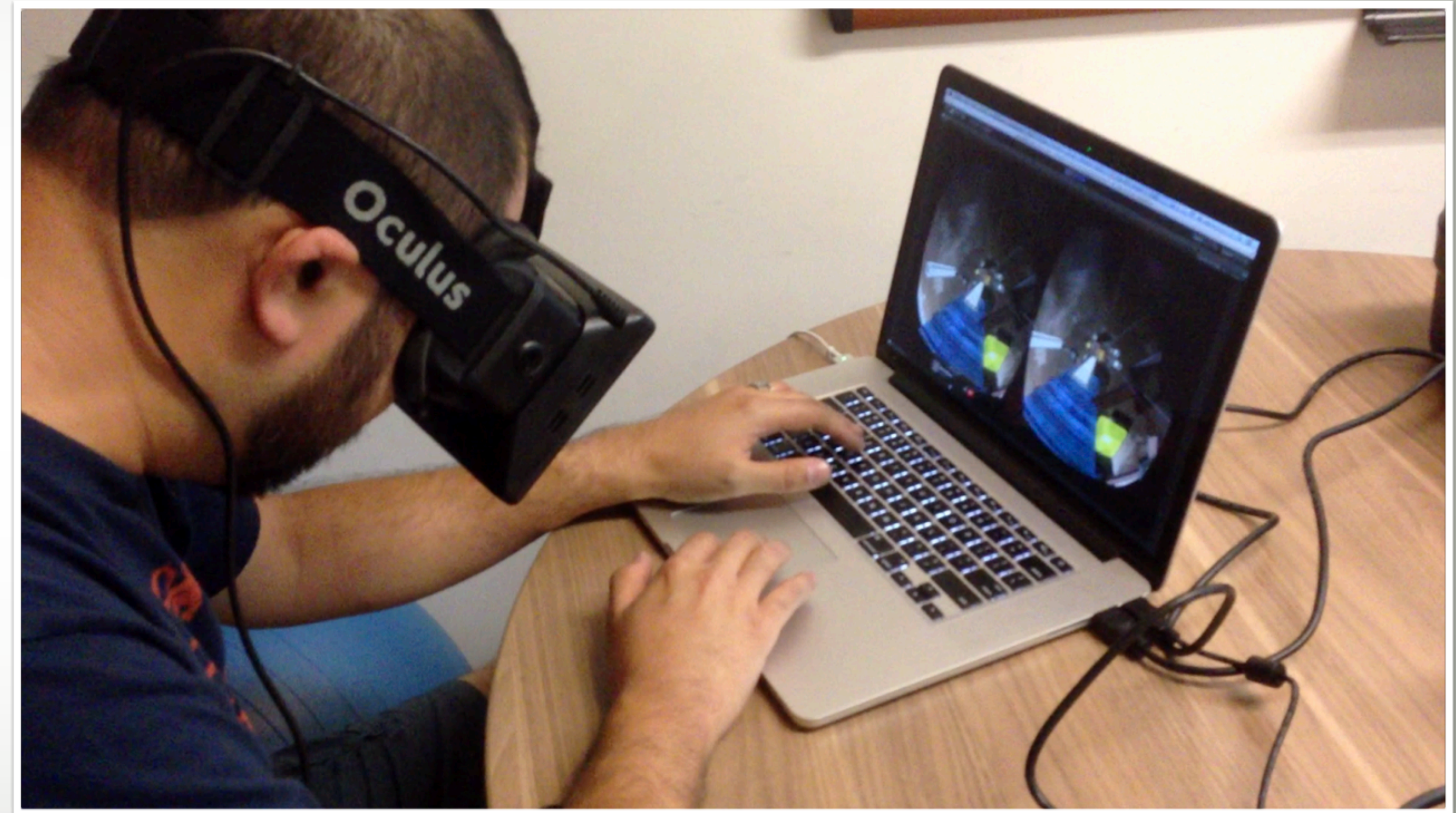
The problem with a game about falling

- Standing on a roof vs falling
- Looking straight down
- Neck pain!



The brain can be tricked!

- You don't have to look straight down to feel like you're looking straight down



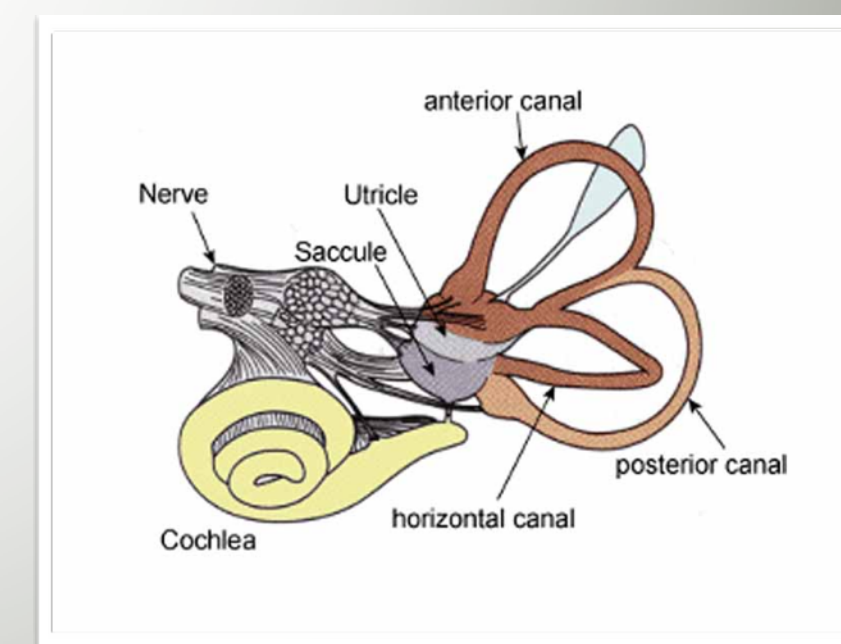
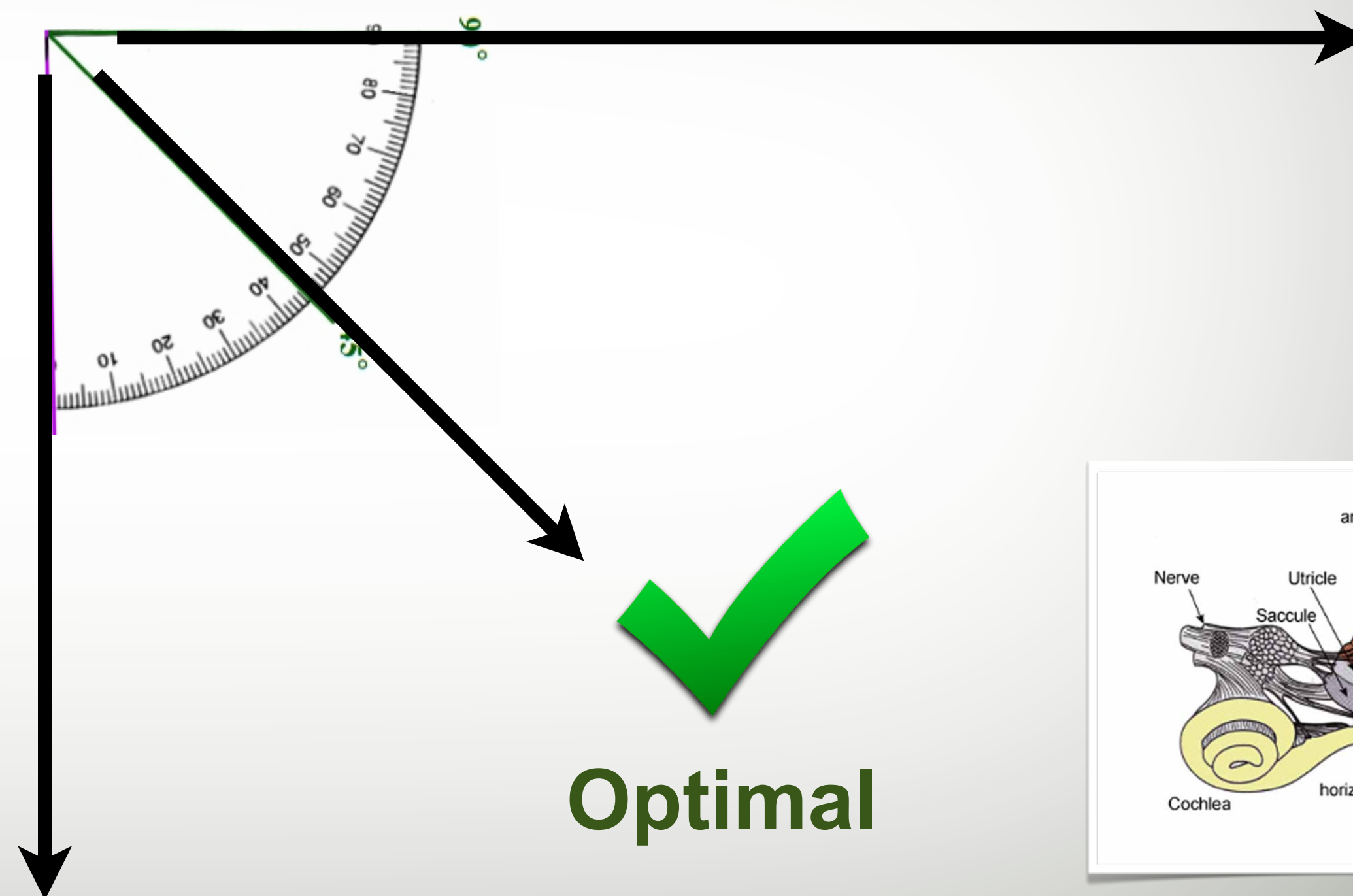
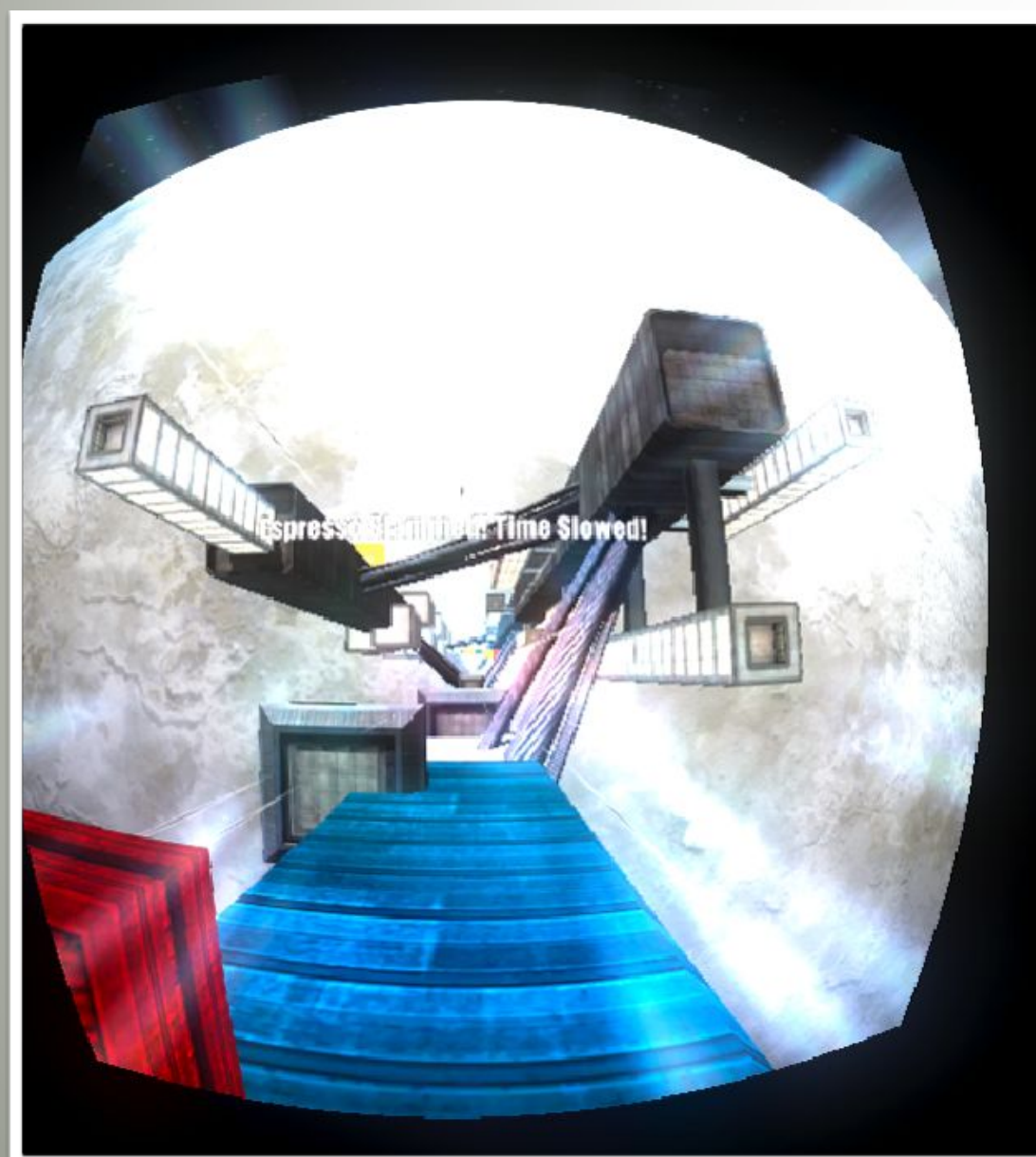
The brain can be tricked!



Superman



Neck-ruining

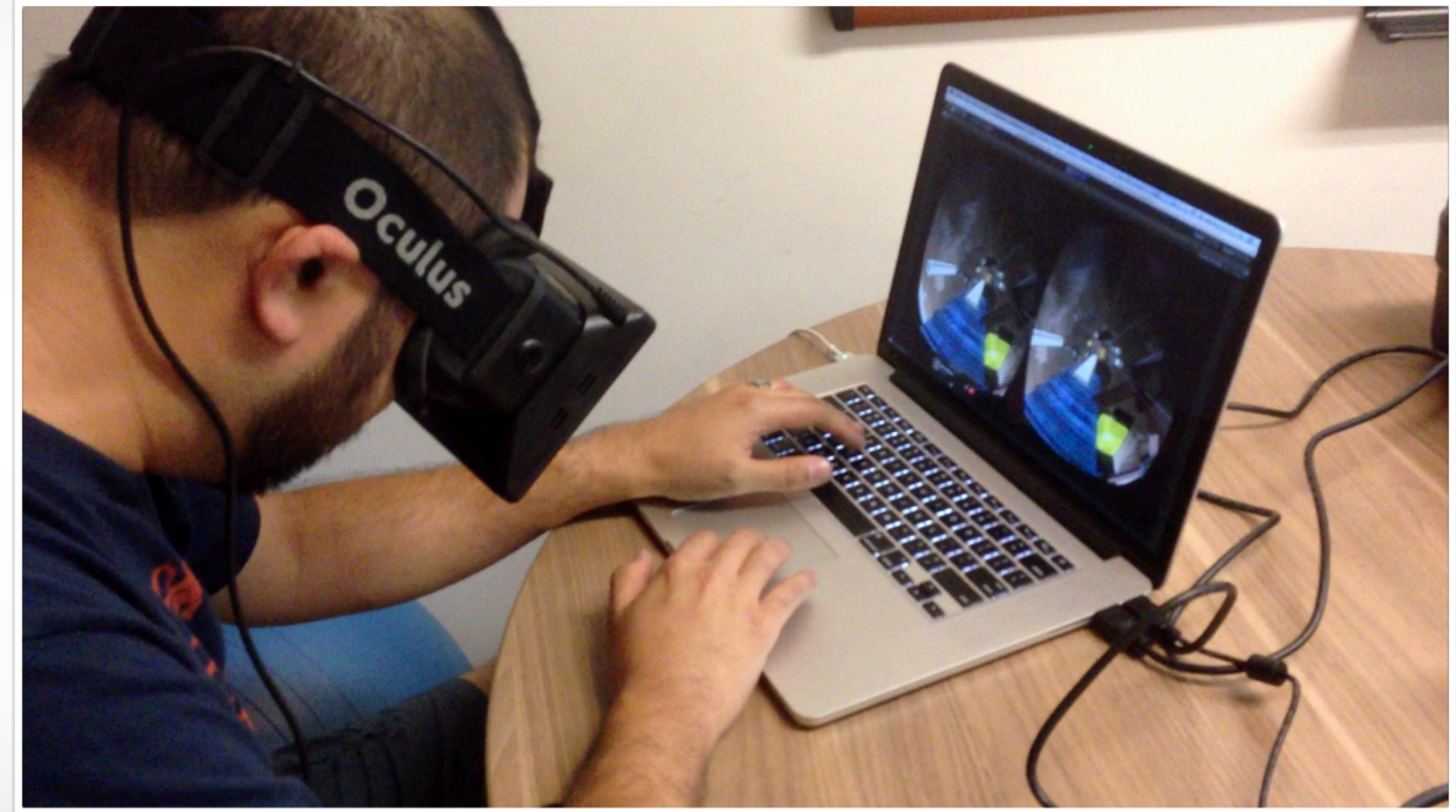


VR Legs

Dean DeJong: “VR Legs”
Tolerance over time

dev
Watch for ^ fallacy

“My game isn’t that hard
now that I’ve spent 7
months testing it!”



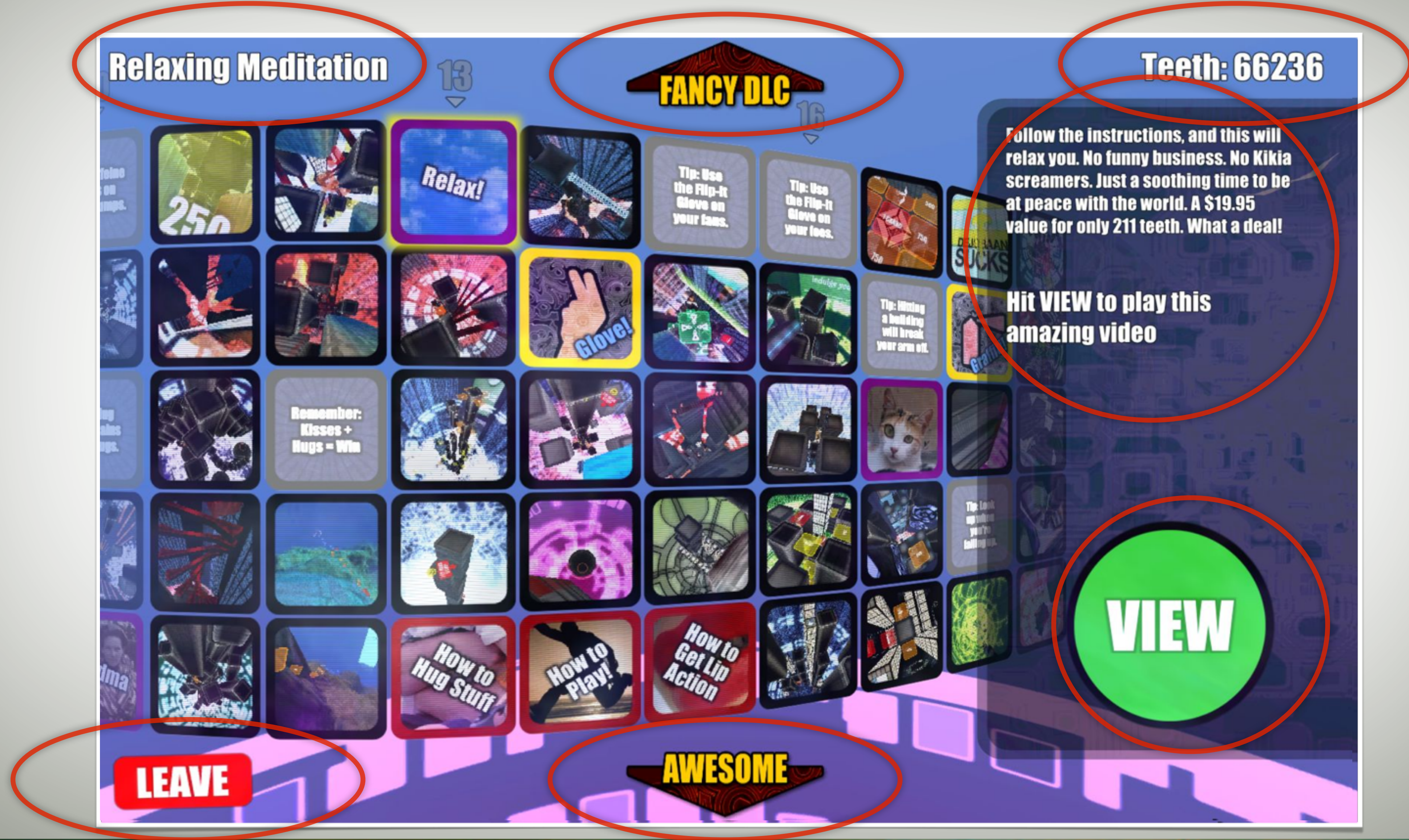
User Interface - Menu



User Interface - Menu



User Interface - Menu



User Interface - Menu

STEAM
DEV
DAYS



Menus are hard.

Centered render texture

(Aaaaaculus!, TF2, etc)

Good for porting, not so great
from the ground up

What makes a good VR menu?

(Rift Racer)

3d spatially arranged menu



User Interface - HUD



User Interface - HUD



DESTROY ALL HUD!!!

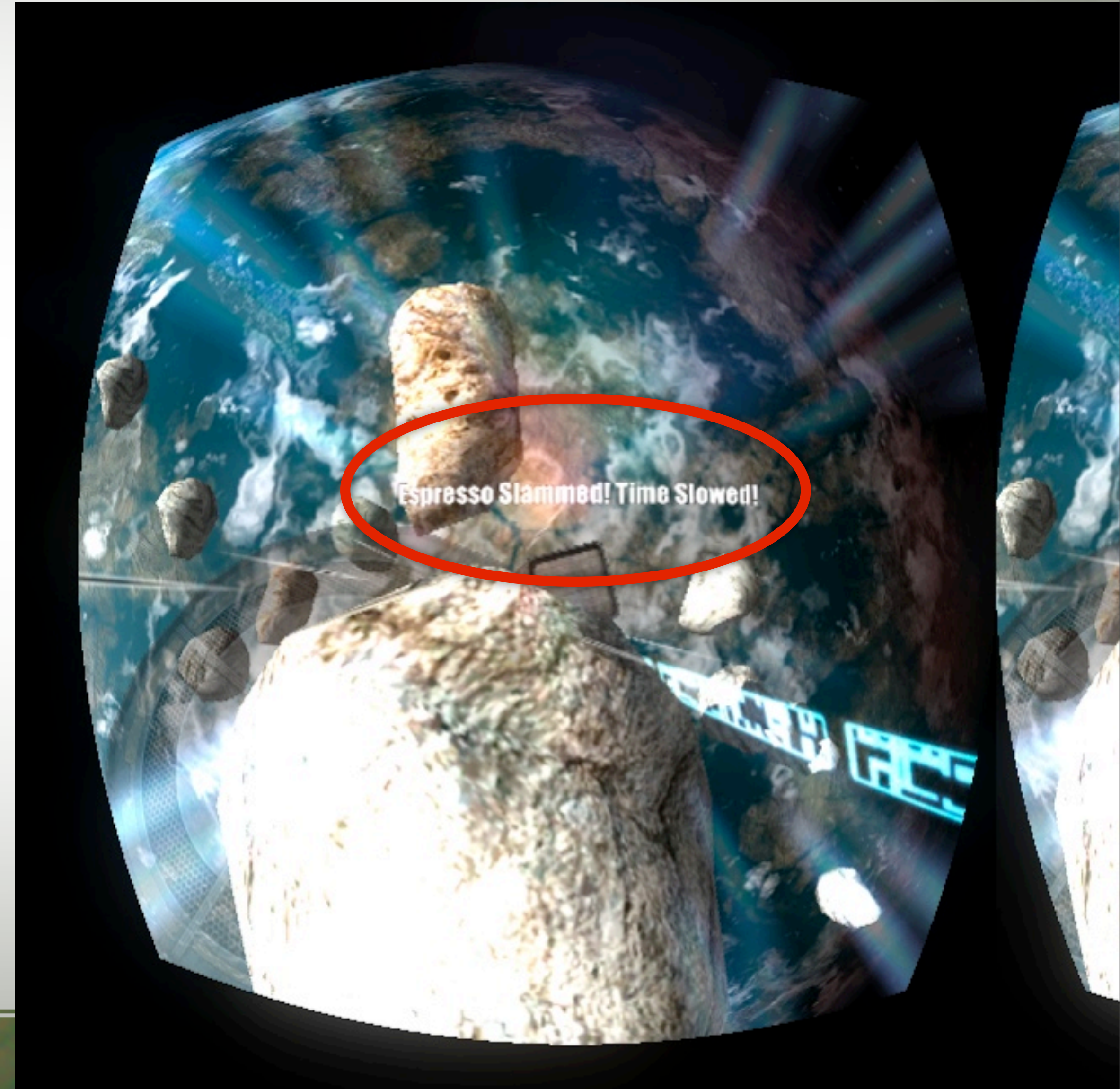
Notification messages

Front and center!

Rely on audio feedback

Bird strike

Hugs and Kisses



Contextual UI is always better

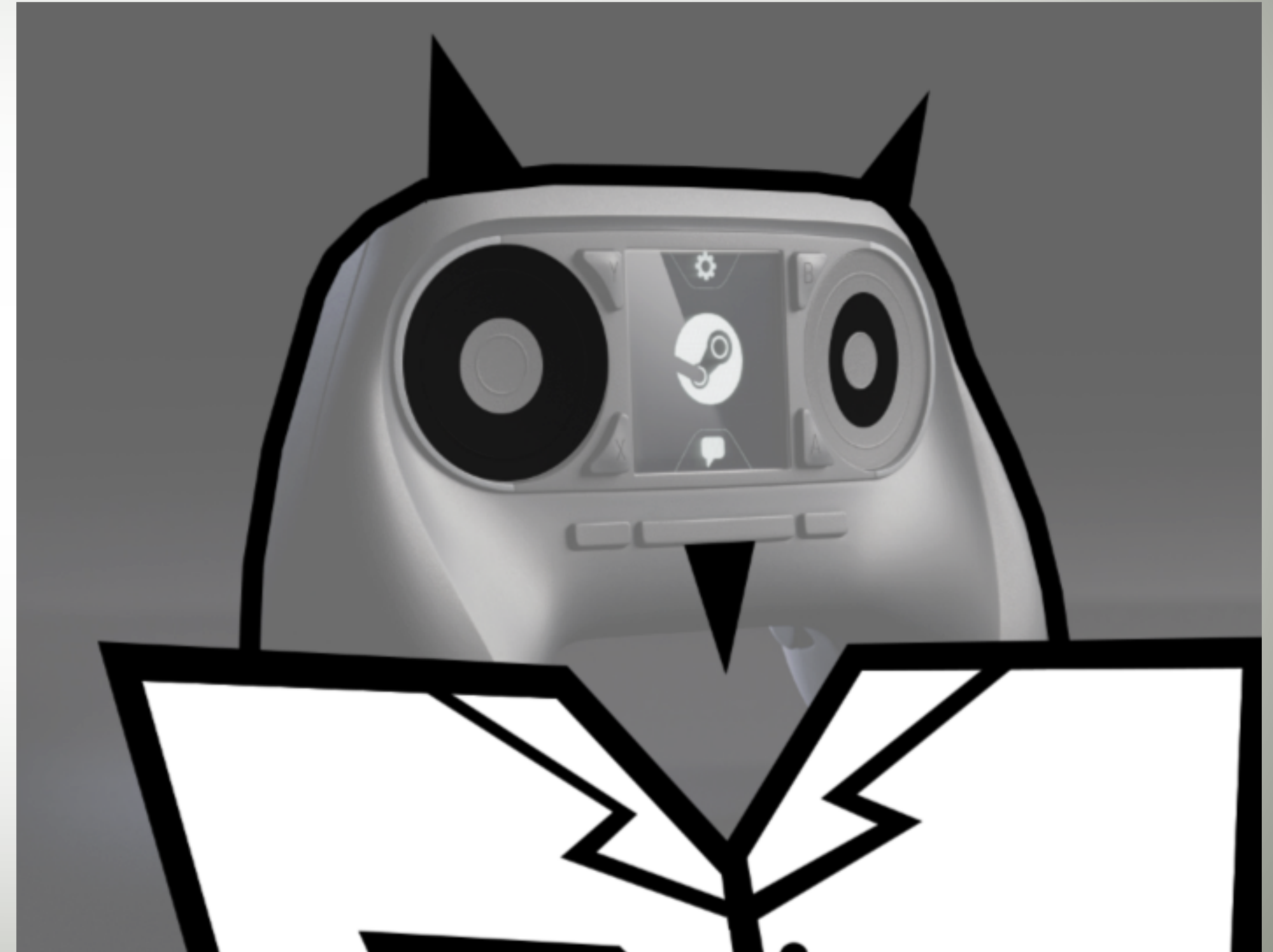


3D in-game representations (3d tooltips)

Controllers are essential in VR



- Finding WASD while in VR = terrible!
- Controllers!



Not all about players

What about Devs?

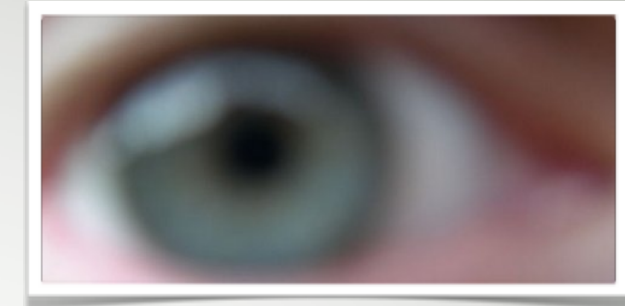


Development in VR can be hard



Switching contexts is tough

- Rift on, Rift off
- Tough on the eyes!
 - Especially with glasses



Subtle one-eye-only issues

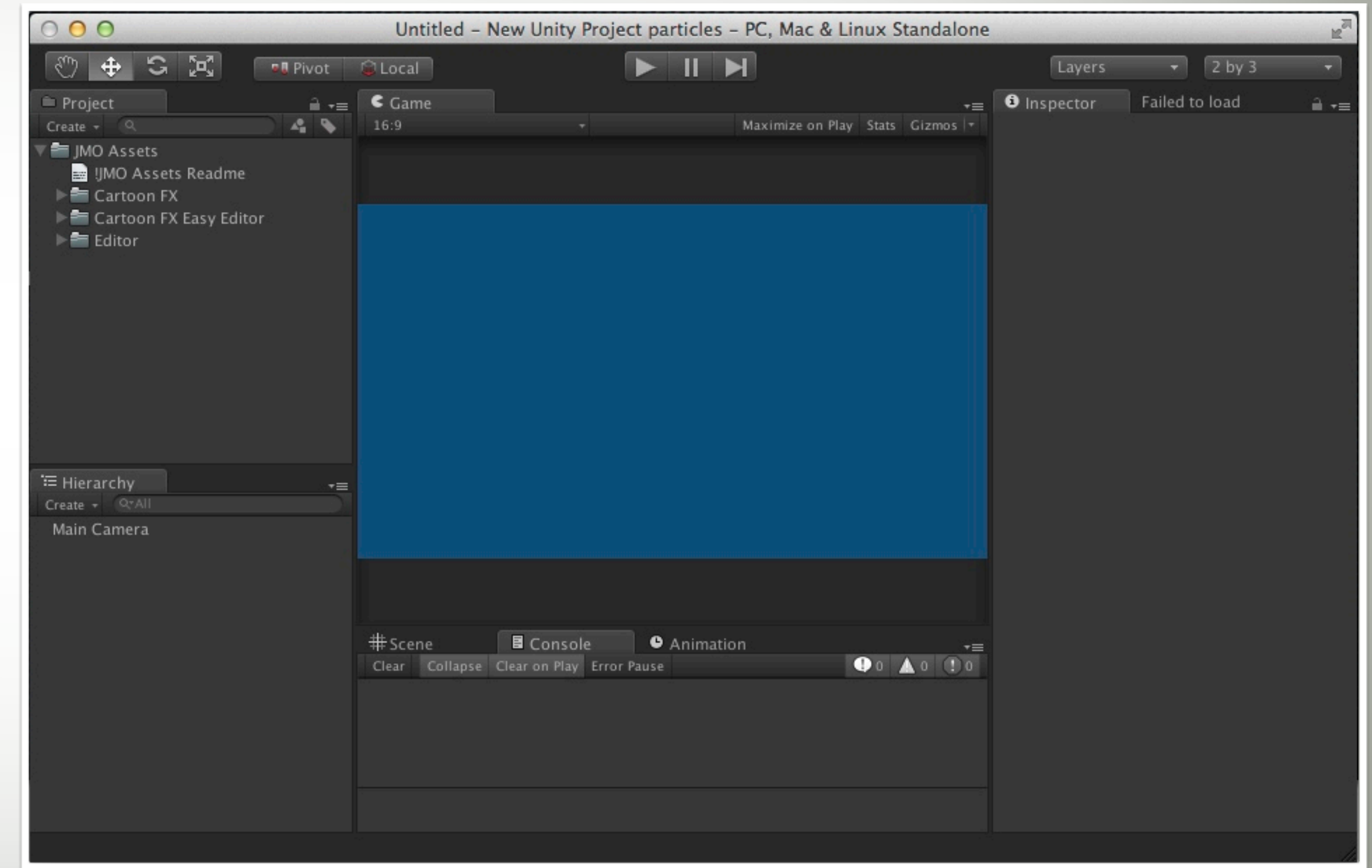
- Headache central!



Development in VR can be hard



- **Unity Editor “Maximize” is not full screen**
 - Try to test standalone builds

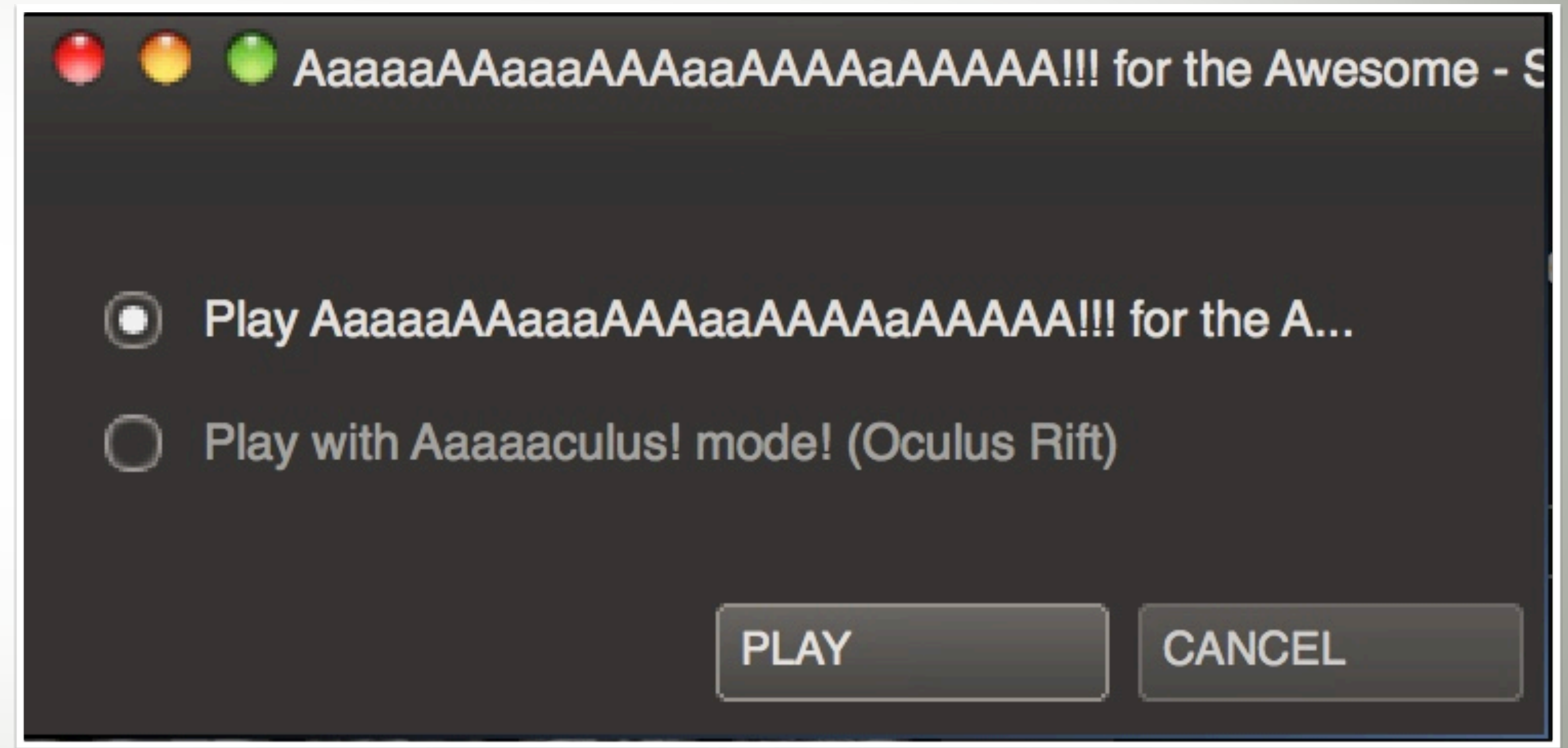


Development in VR can be hard



“Enable VR” option
in-game

NO!



VR Setbacks

~~At the time of Aaaaaculus! dev~~
Present day

- ~~• Less friction~~
- ~~• Playing and Buying VR games~~
- ~~• Support requests for Aaaaaculus!~~
- ~~• Resolution / Display~~
- ~~• Motion blur~~
- ~~• Latency~~
- ~~• Positional head tracking~~



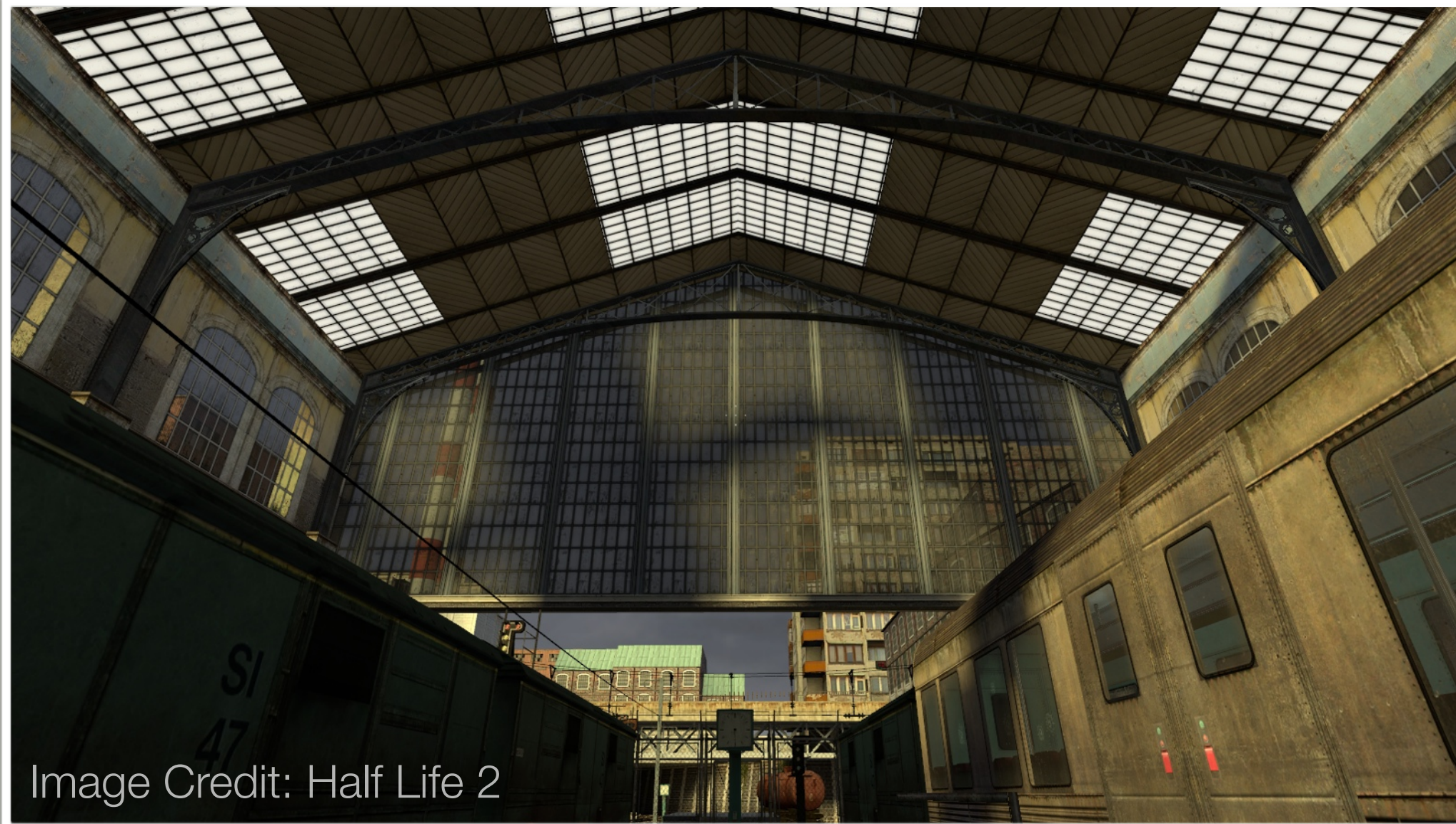
Back in my day...
We developed uphill both ways!

All that's left:

Building games that are perfect for VR

What genres will flourish with VR?

Exploration Games



Racing Games



Image Credit: iRacing

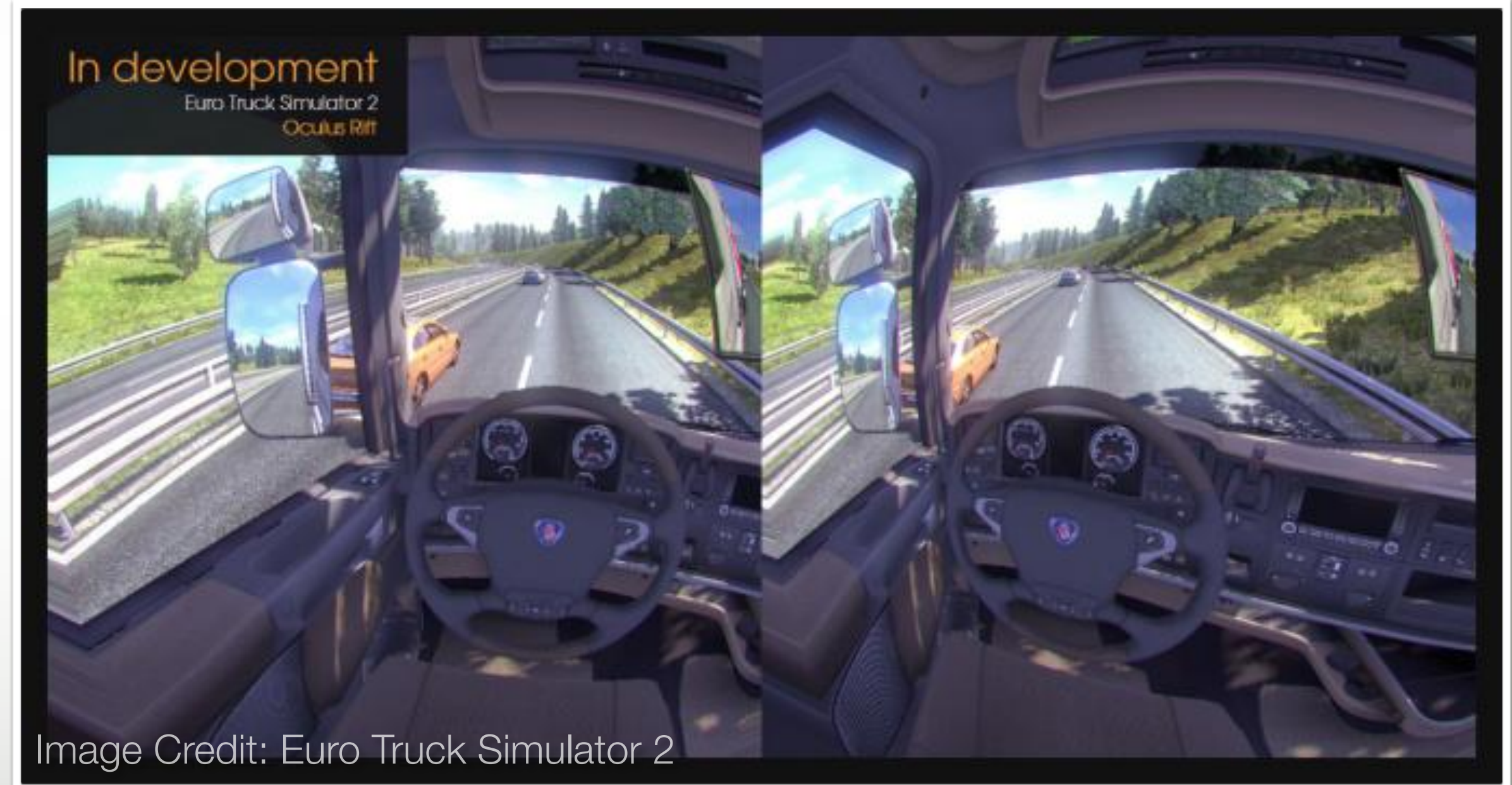


Image Credit: Euro Truck Simulator 2

Space Combat Games



Image Credit: Star Citizen



Image Credit: Eve Valkyrie

Horror Games

STEAM
DEV
DAYS



FPS-Reimagined

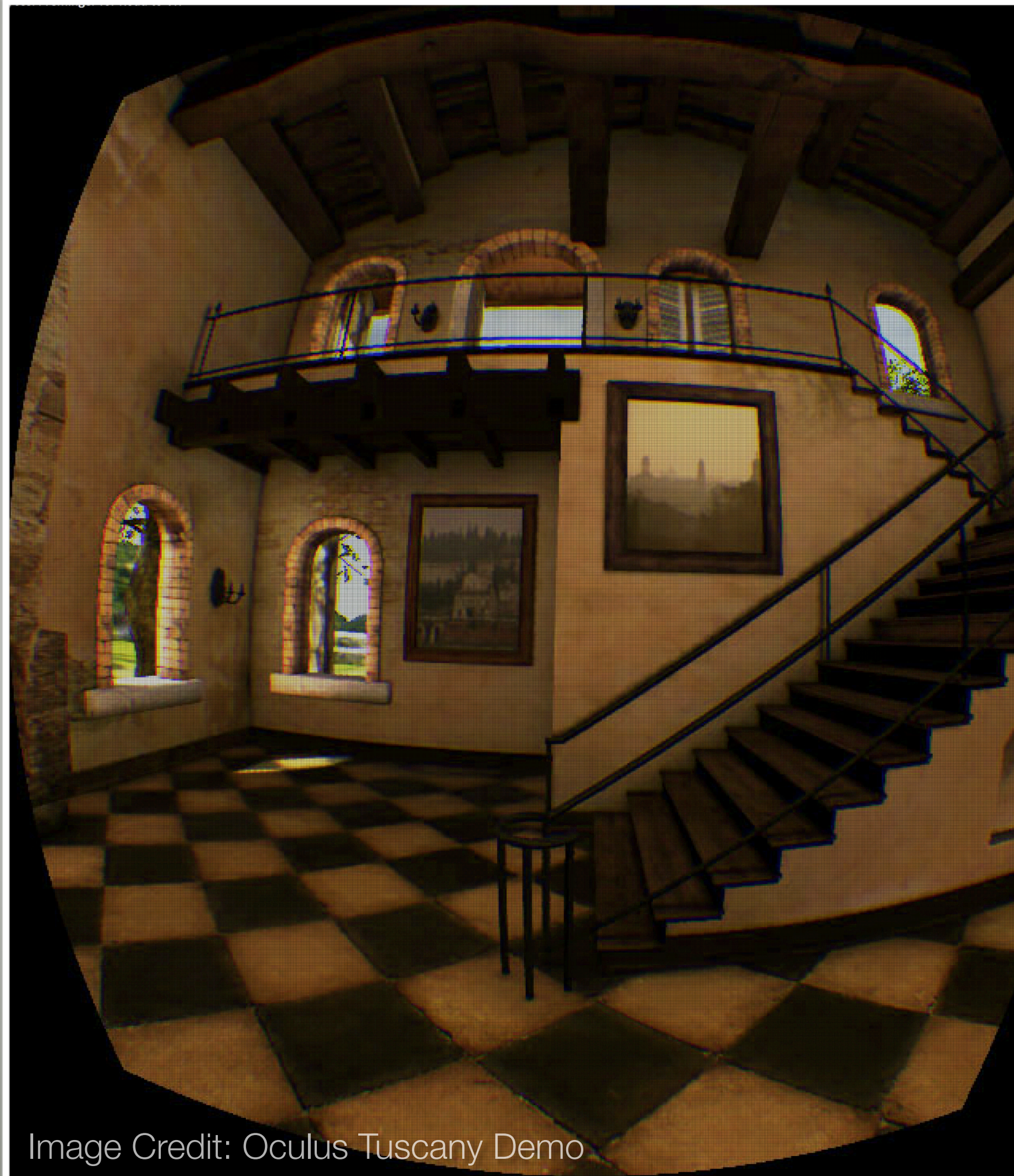
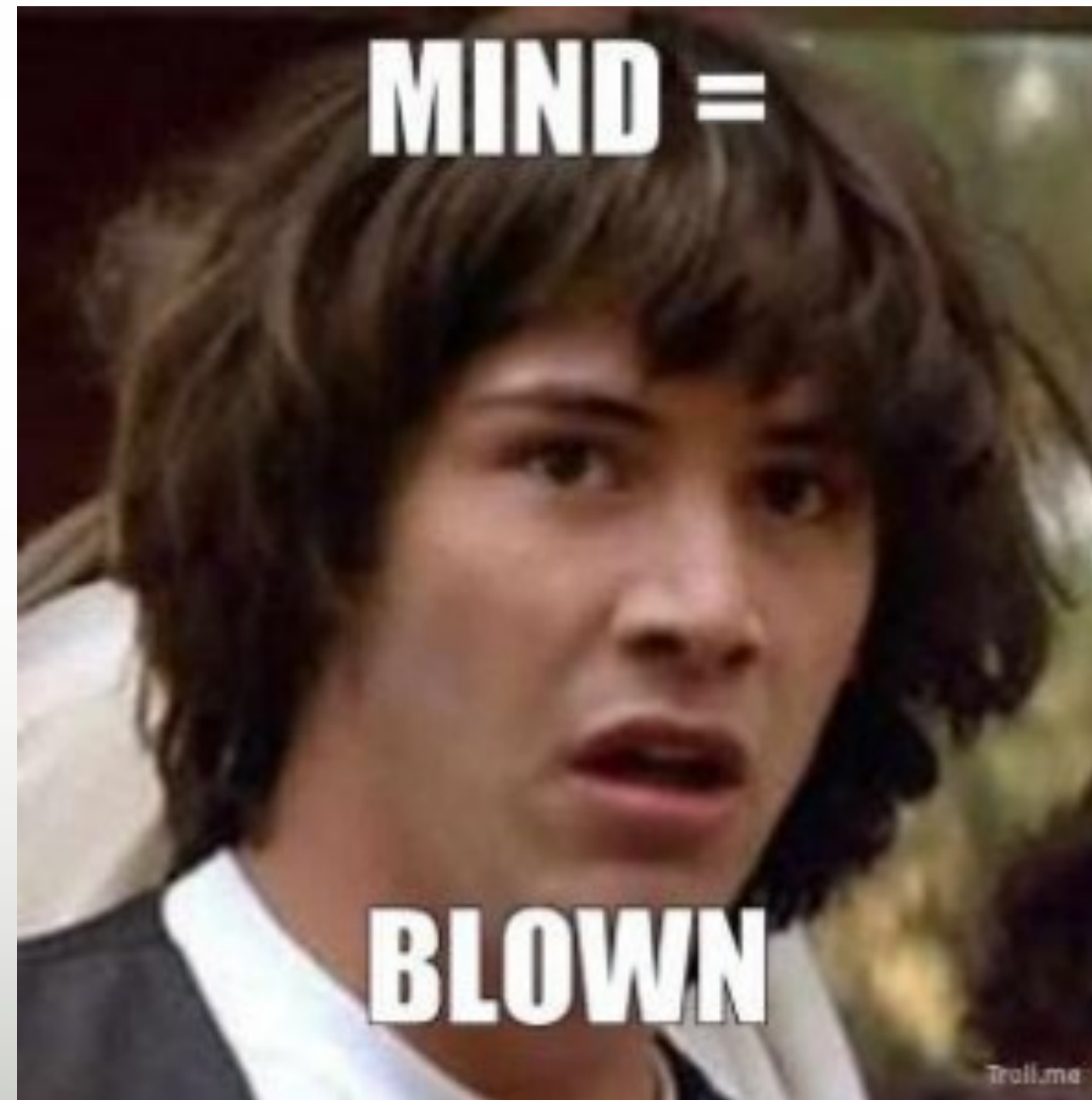


Image Credit: Oculus Tuscany Demo



Image Credit: Team Fortress 2

What genres don't yet exist that would be great with VR?





FULL GAME available now on

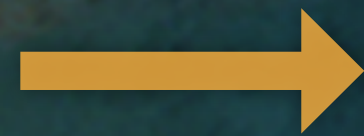


STEAM™

Thanks! The Wild West of VR

Lessons learned with Aaaaaculus!

We're available for
VR consulting!



Alex Schwartz
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Owlchemy
Labs

@OwlchemyLabs

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@GTJuggler