



The Wild West of VR

Lessons learned with Aaaaaculus!

Alex Schwartz
Devin Reimer



Introduction



Alex Schwartz

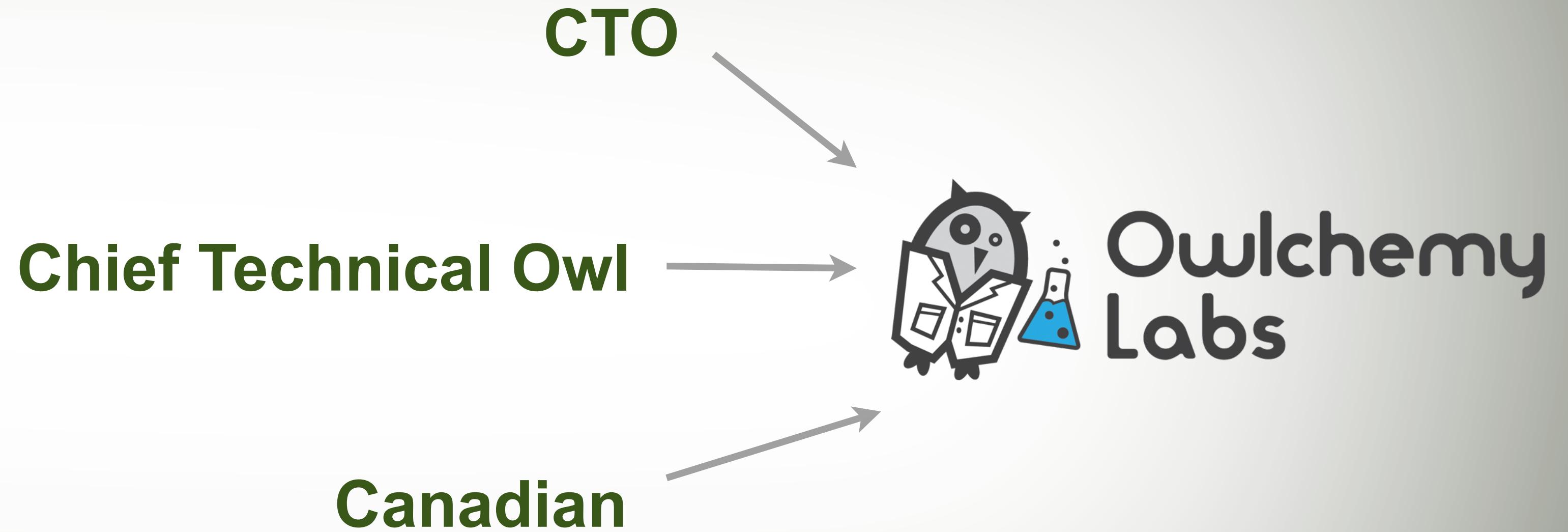
- Chief Scientist
- Founder
- CEO
- Janitor



Introduction



Devin Reimer



The Labs

(Actual Photograph)

Owlchemy Labs



Snuggle Truck

2010



**Keep those animals
in the truck !**





Owlchemy
Labs

SNUGGLE TRUCK

FACTSHEET



EUROGAMER
INDIE GAMES ARCADE



PAX East Boston
Indie Showcase



Kotaku
GAMING APP of the DAY



unity
awards

Gameplay Nominee



Top 10
iPhone Physics Game
POCKETGAMER
iPhone Game of 2011
Qualityindex



European
games
award
Best Indie Game
Finalist

JACK GUMBER



V 418



48 Apps
Editor's Choice



G4
Game of the Week



USA
TODAY
"Portable Picks"



POCKET
GAMER
Top Ten of the Month



Cult of Mac
"Must-Have App"

DYS COURSE



JUMP

SETUP

FLEE

AAAAAA...AAA
...FOR THE AWESOME!





SPEED



HUGS: 9

KISSES: 1

90
out of 100

Metascore

Universal acclaim
based on **12 Critics**

[What's this?](#)

PROXY

HUGS: 9

KISSES: 1

AaaaaAAaaaAAAaaAAAAAaAAAAAA!!!

~~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

SPEED

PROXY

Whoa!

This game needs to be in VR!

(Oh, and the fans wanted it)

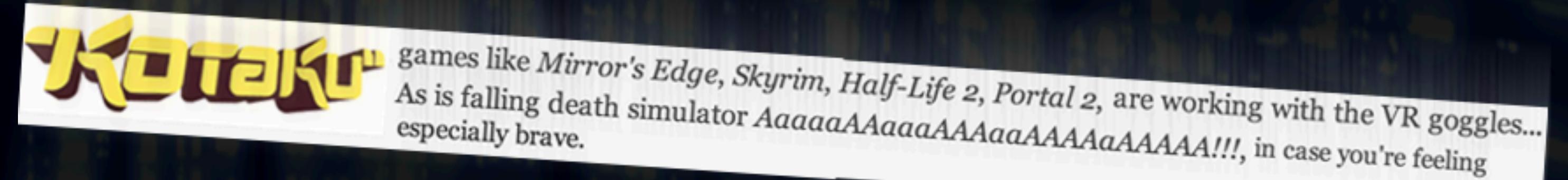


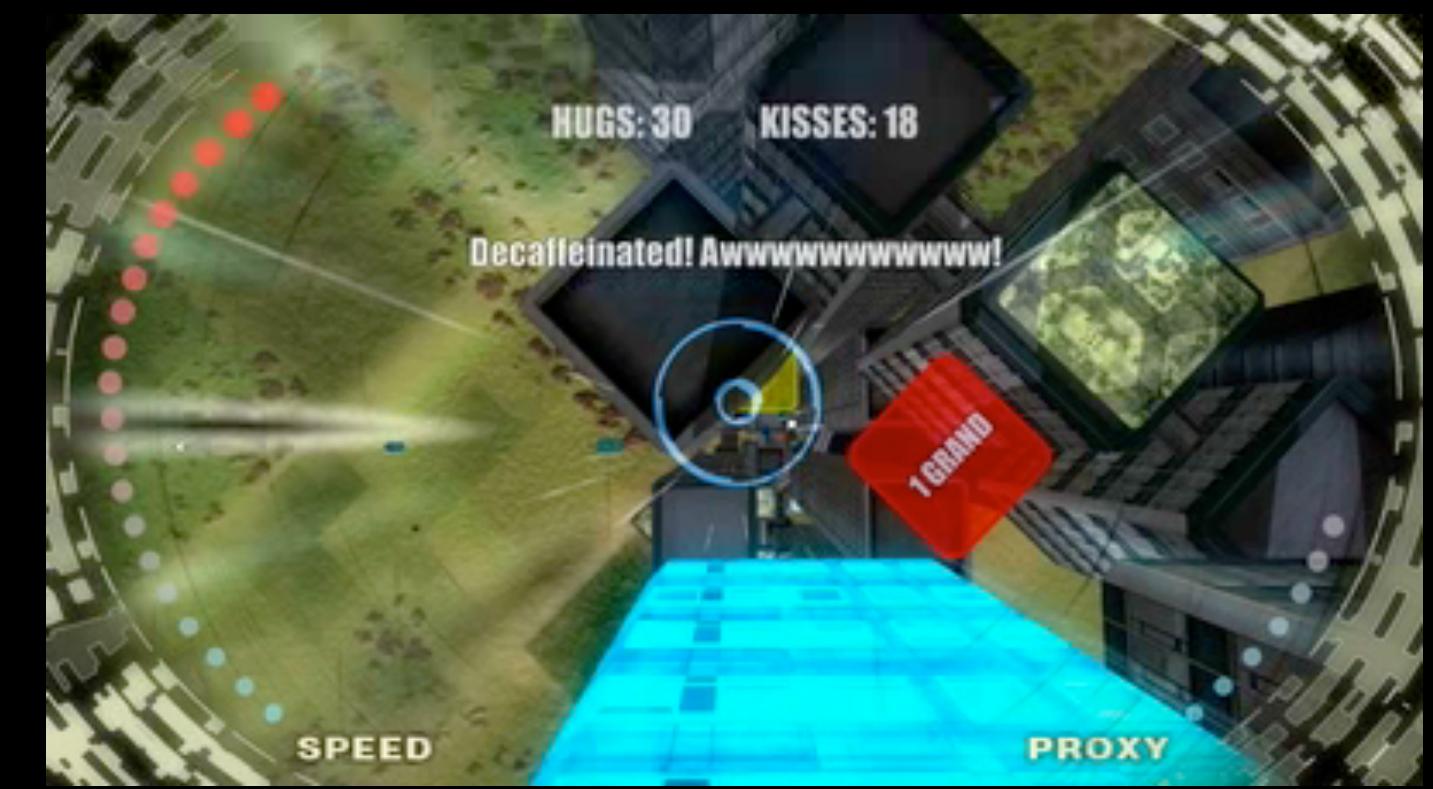
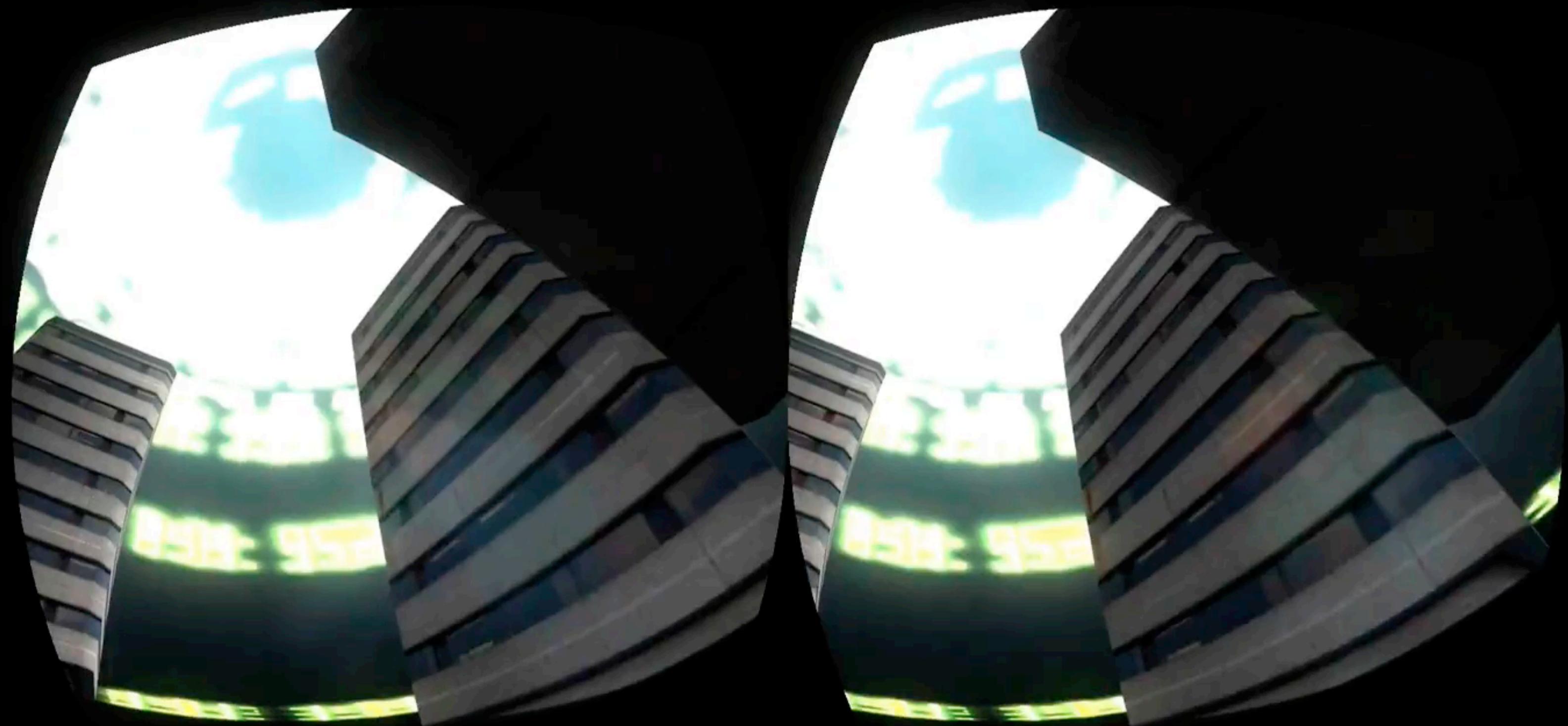
Thread: Games you wish to play with Oculus Rift

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





- 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

AAAAAAACULUS!!
AAAAA! OCULUS EDITION!



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.

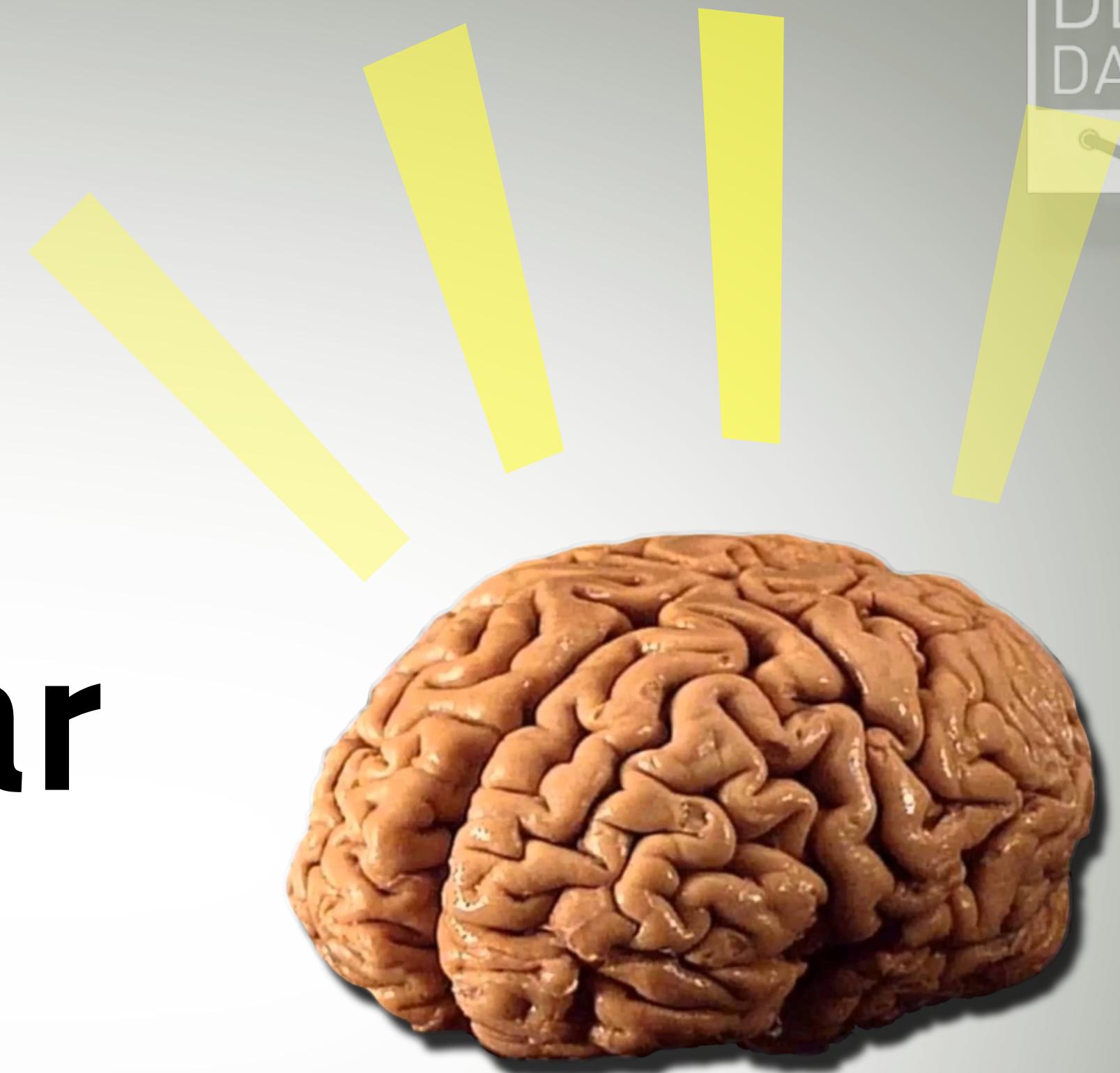
- Not Albert Einstein





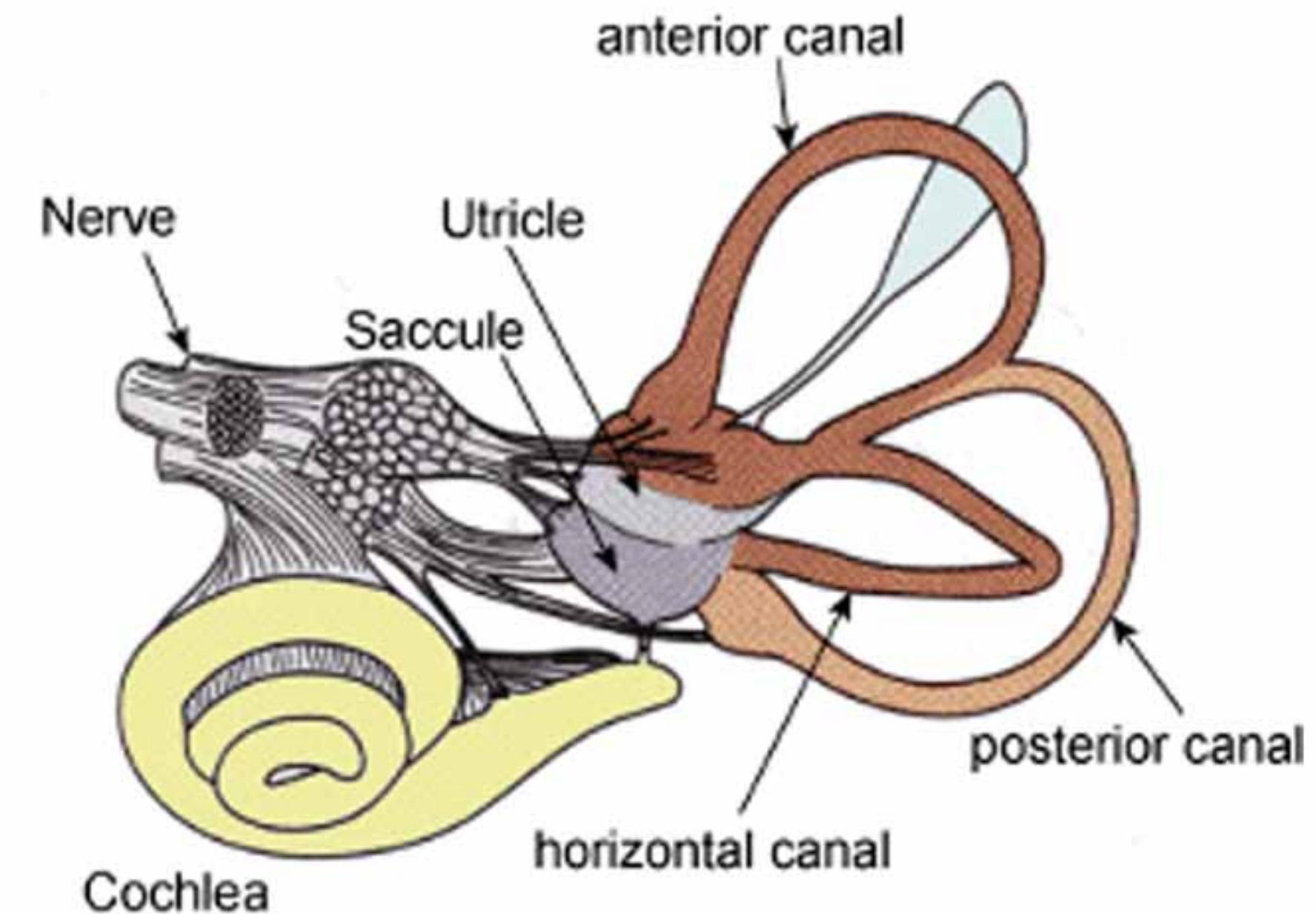
What we learned so far

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!

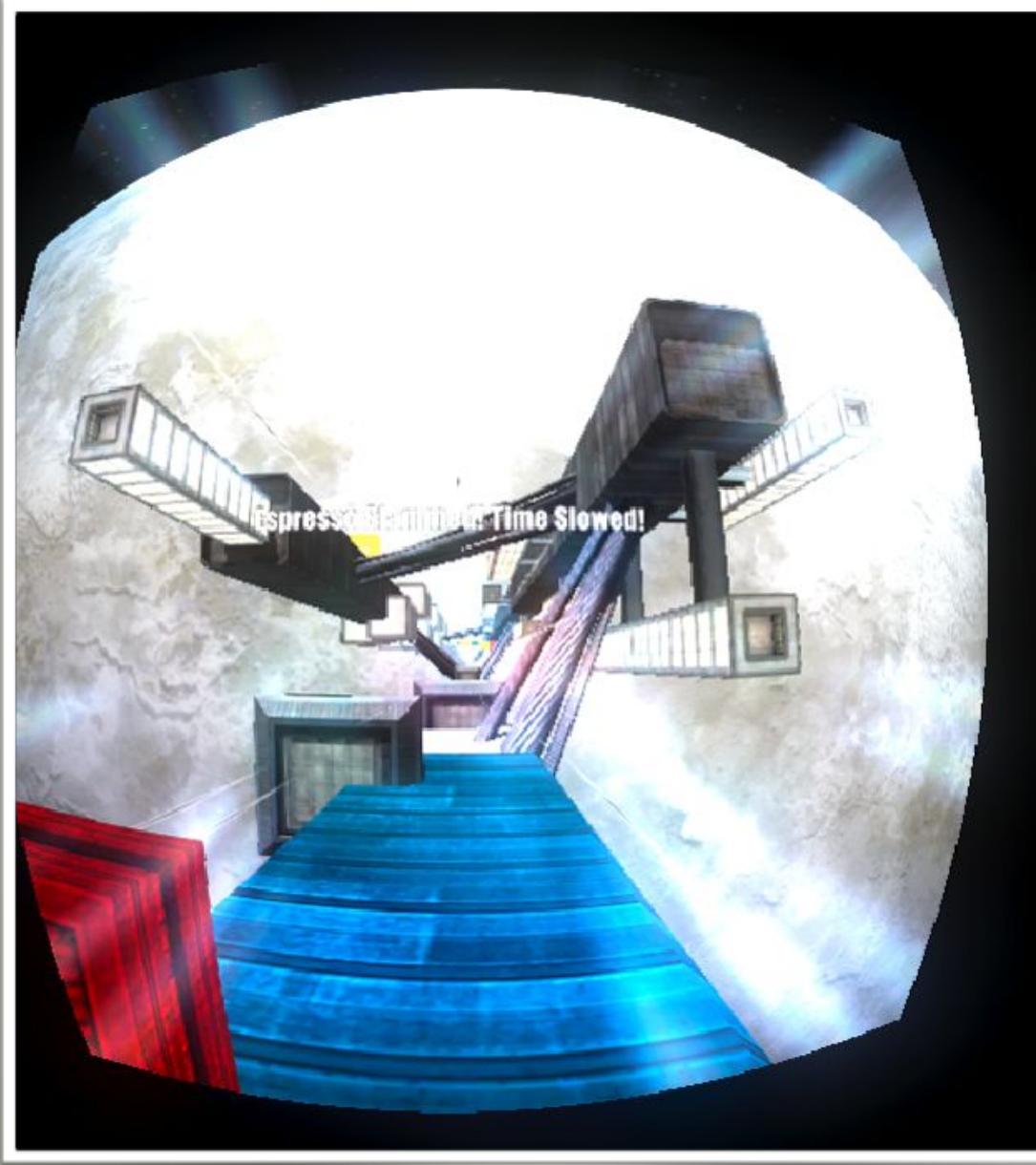


The brain can be tricked !

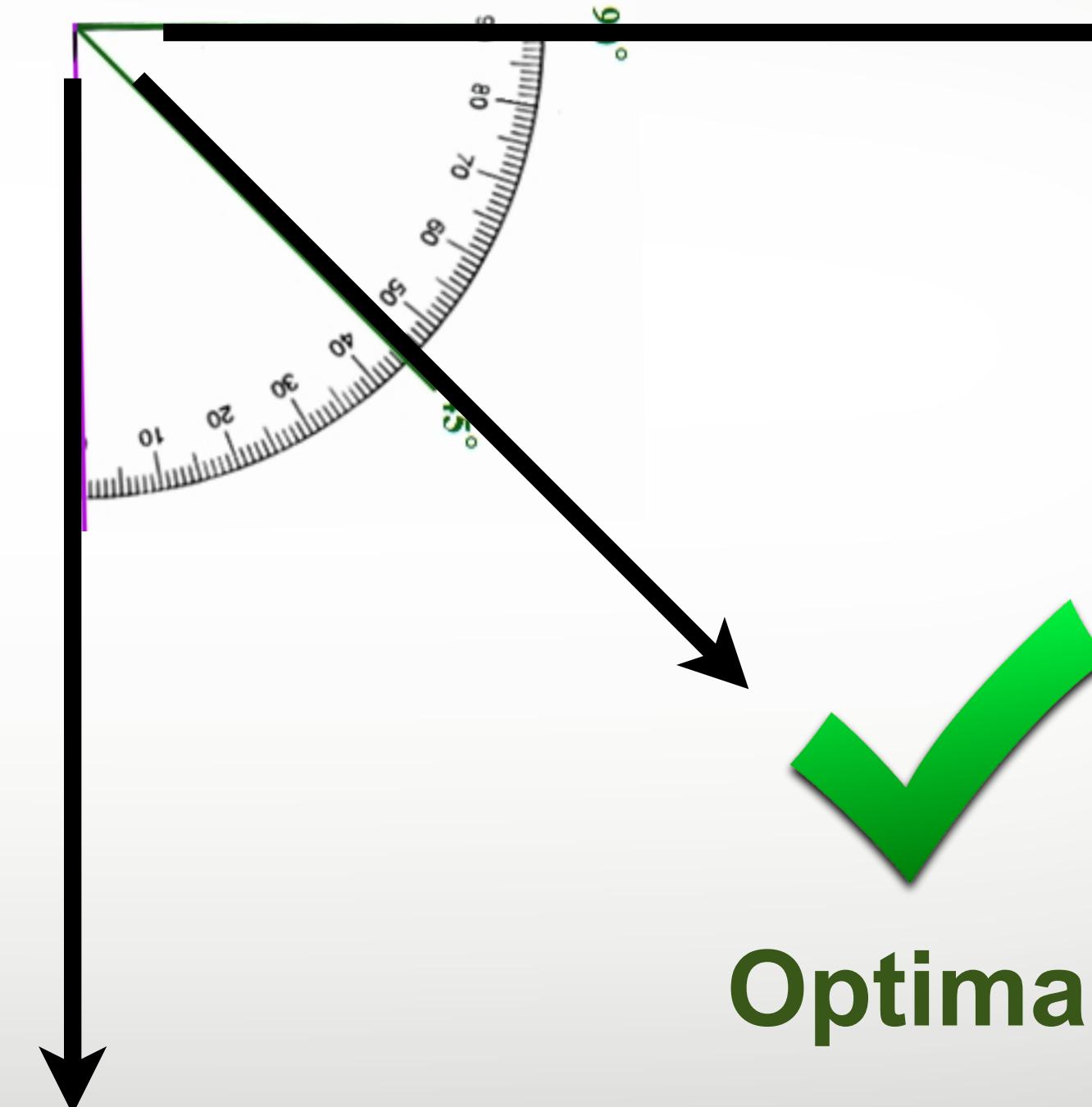
- You don't have to look straight down to feel like you're looking straight down



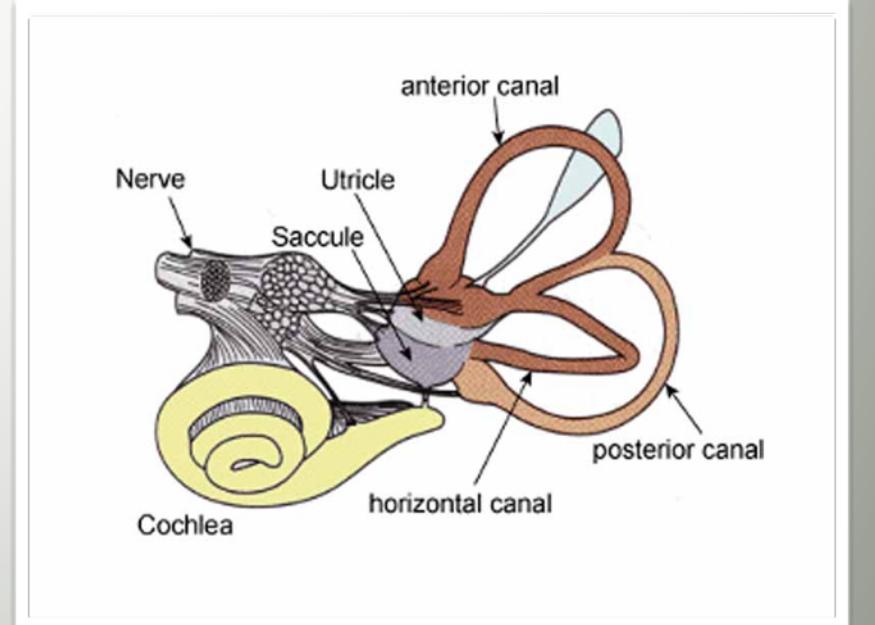
The brain can be tricked !



Neck-ruining



Superman



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!”



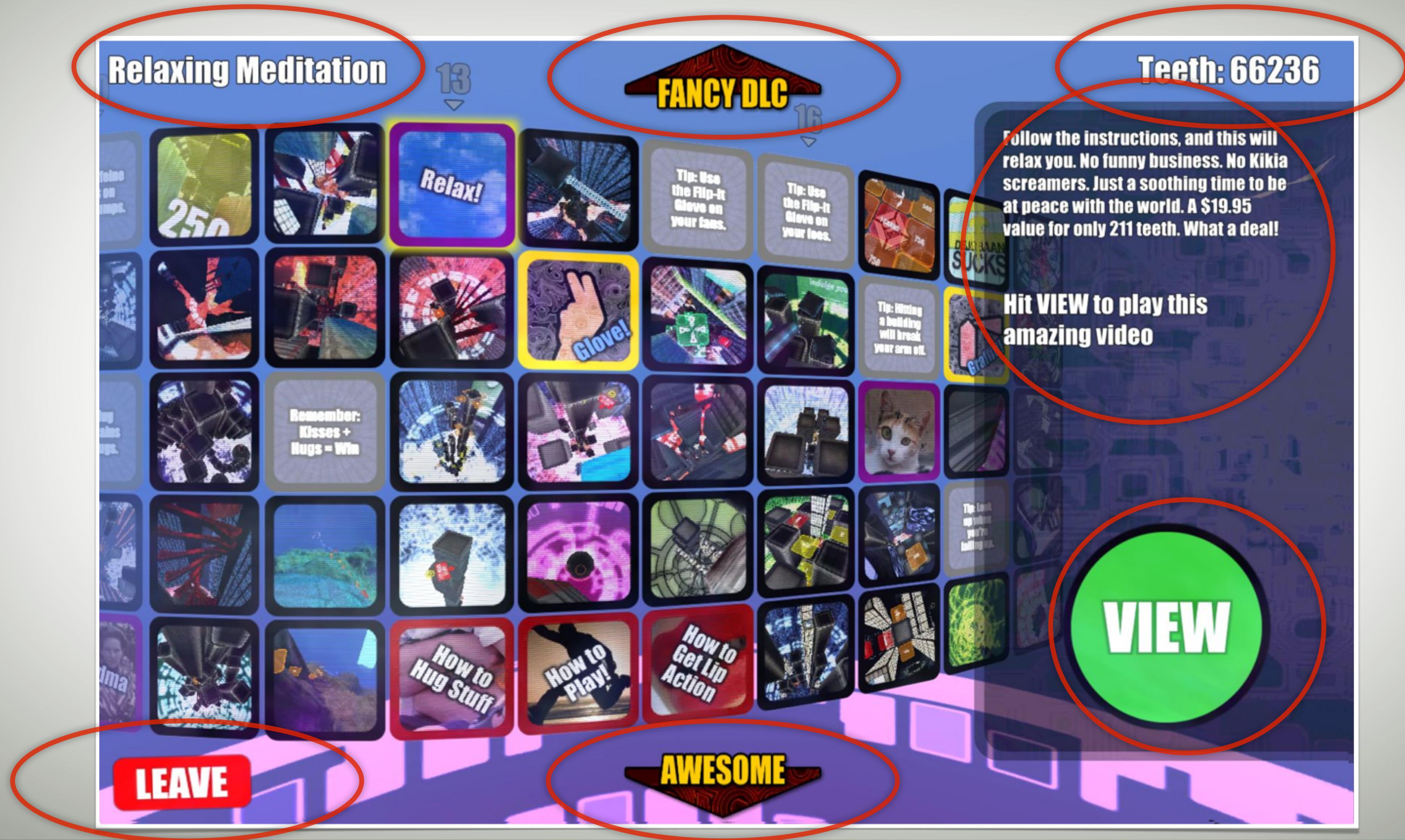
User Interface - Menu



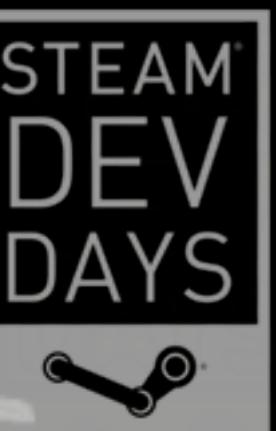
User Interface - Menu



User Interface - Menu



User Interface - Menu



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 ! ! !



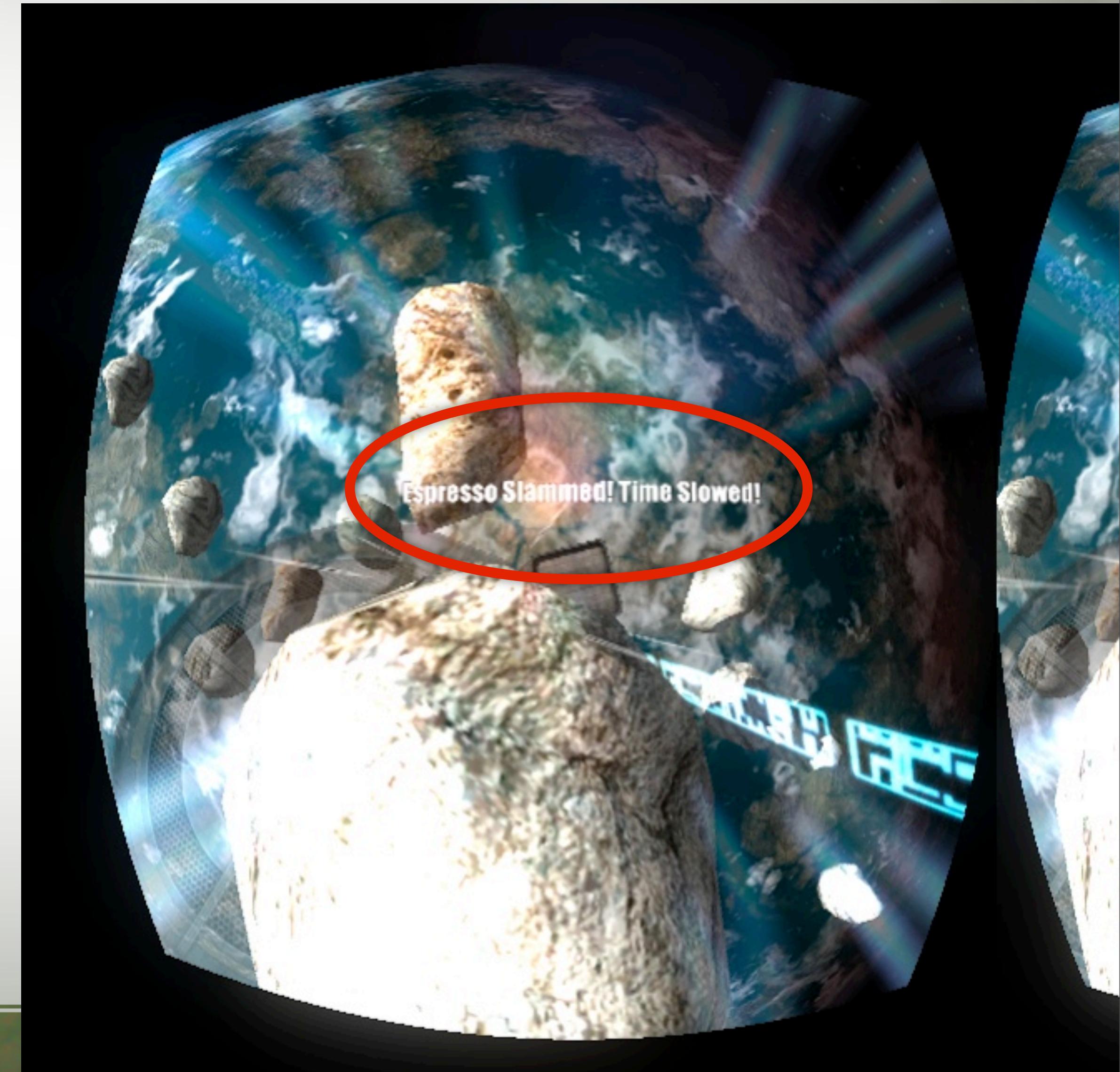
Notification messages

Front and center!

Rely on audio feedback

Bird strike

Hugs and Kisses



Contextual UI is always better



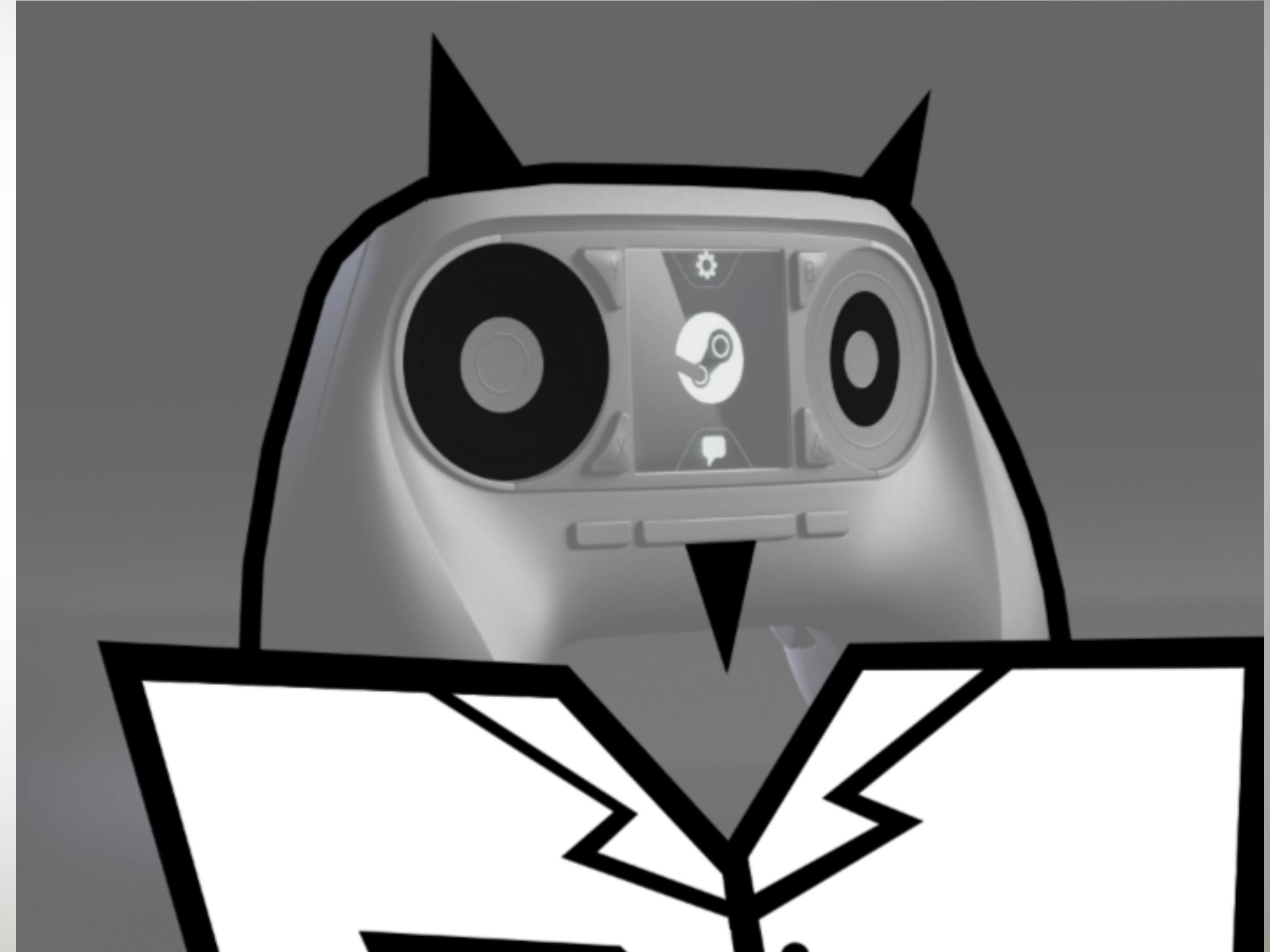
3D in-game representations (3d tooltips)

Image Credit: Dead Space

Controllers are essential in VR



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





Not all about players

What about Devs?

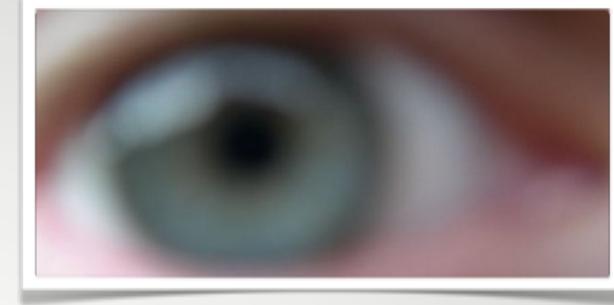


Development in VR can be hard



Switching contexts is tough

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



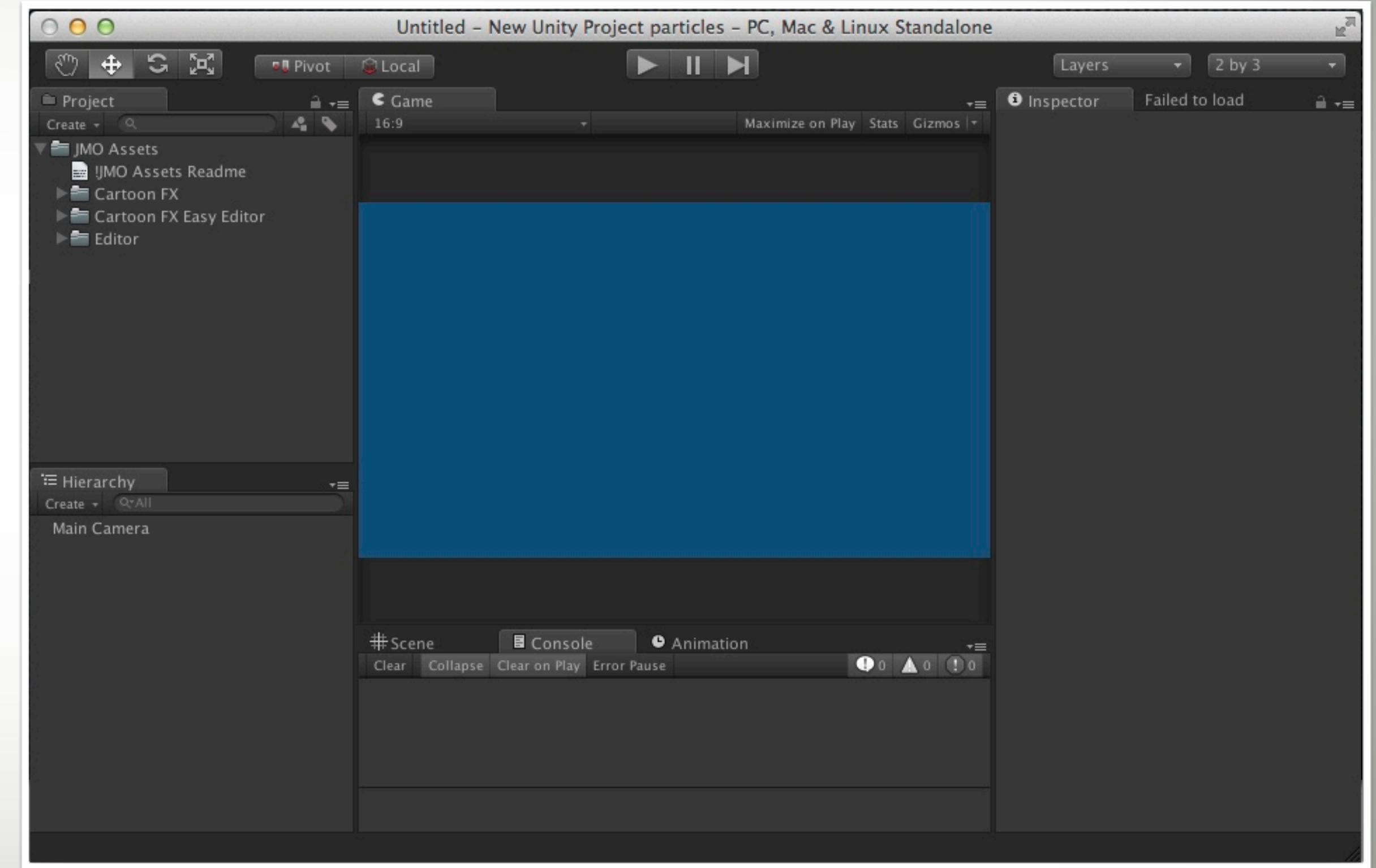
Subtle one-eye-only issues

- Headache central!

Development in VR can be hard



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

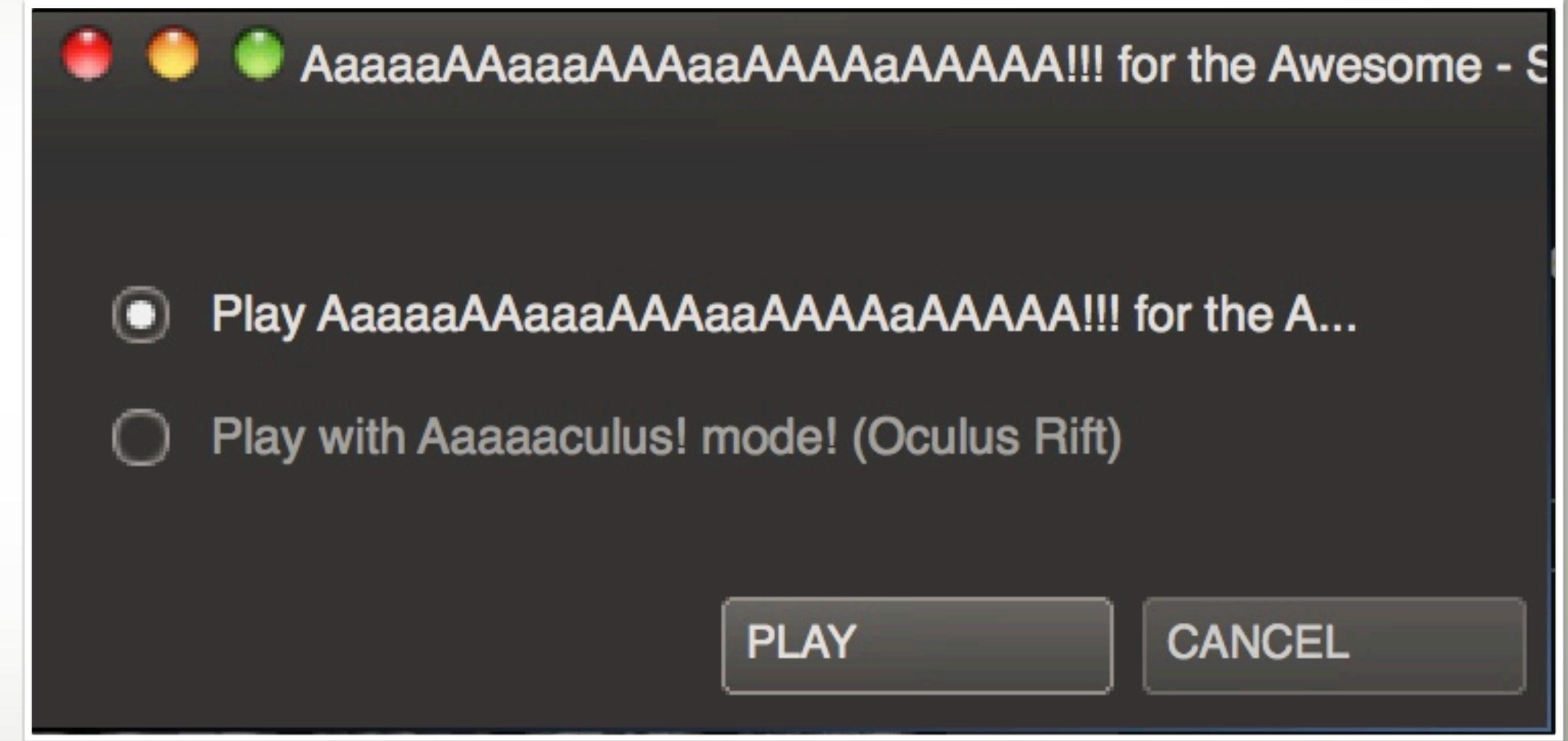


Development in VR can be hard



“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

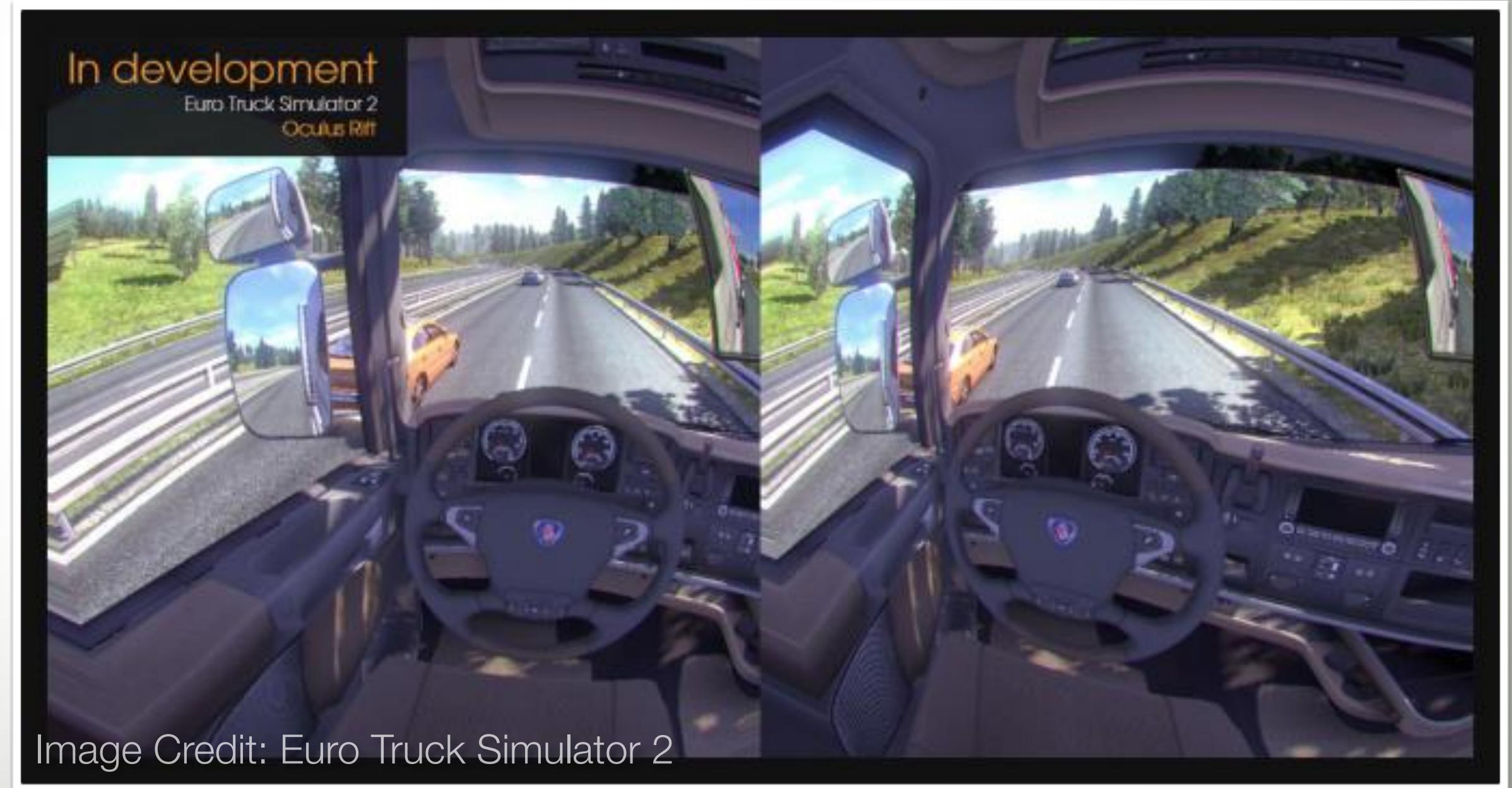


Image Credit: Half Life 2



Image Credit: Gone Home

Racing Games



Space Combat Games



Horror Games



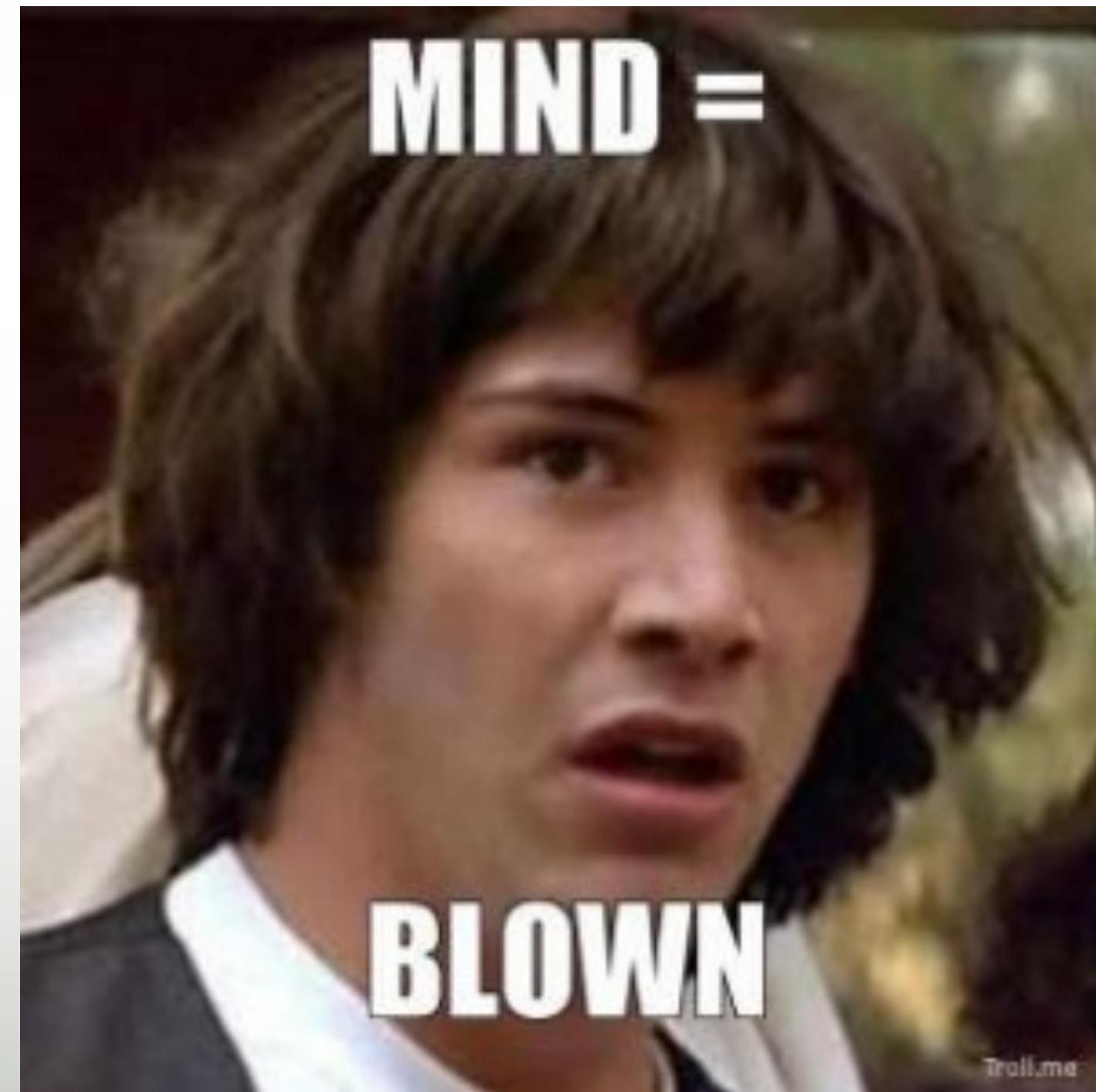
Image Credit: Alone

FPS-Reimagined





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





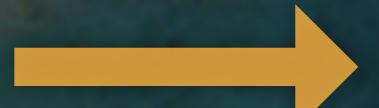
FULL GAME available now on



Thanks! The Wild West of VR

Lessons learned with Aaaaaculus!

We're available for
VR consulting!



Alex Schwartz
Devin Reimer



Owlchemy
Labs

@OwlchemyLabs
@DevinReimer
@GTJuggler