

**THE FOLLOWING PRESENTATION HAS BEEN APPROVED FOR  
ALL AUDIENCES**

**KERTGARTNER.COM**  
 @kertgartner

**VRDC**

# Behind the Scenes MIXED REALITY TRAILERS





📍 (Winnipeg actually!)



THE  
**A-TEAM****DRAGONBALL**  
*EVOLUTION***SILENT HILL****FIREWALL****THE CHUMSCRUBBER**  
Meet Generation Rx**CURSED**THE **X** FILES  
I WANT TO BELIEVE  
THE LAST STAND

CATW@MAN

THE CHRONICLES OF  
**NARNIA**  
PRINCE CASPIAN**LUCID****RESIDENT**  
**EVIL**: APOCALYPSETHE  
**RUINS****FULL**  
OF  
**IT****ALIEN**  
RESURRECTIONTHE  
**JOURNEY**  
TO THE **CENTER** OF THE  
**EARTH**

the big empty

**SCOOBY-DOO 2**  
MONSTERS UNLEASHED**ACROSS THE UNIVERSE**

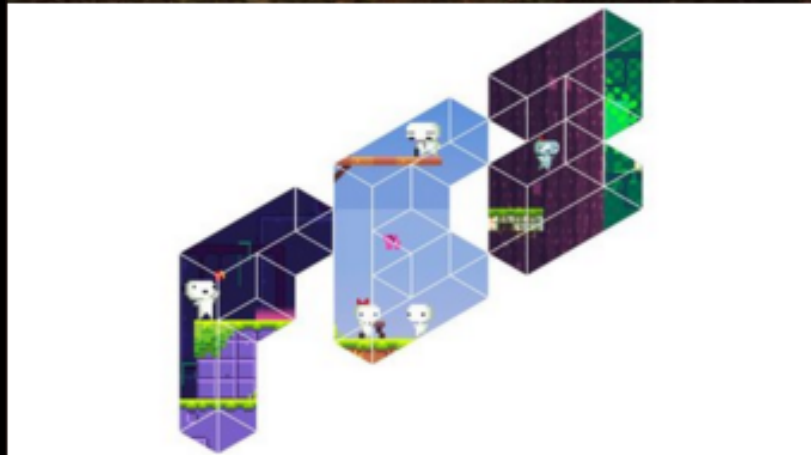
stay

**PAYCHECK**  
REMEMBER THE FUTURE**SUPERMAN**  
RETURNS™**IDLEWILD**THE  
**ITALIAN JOB**













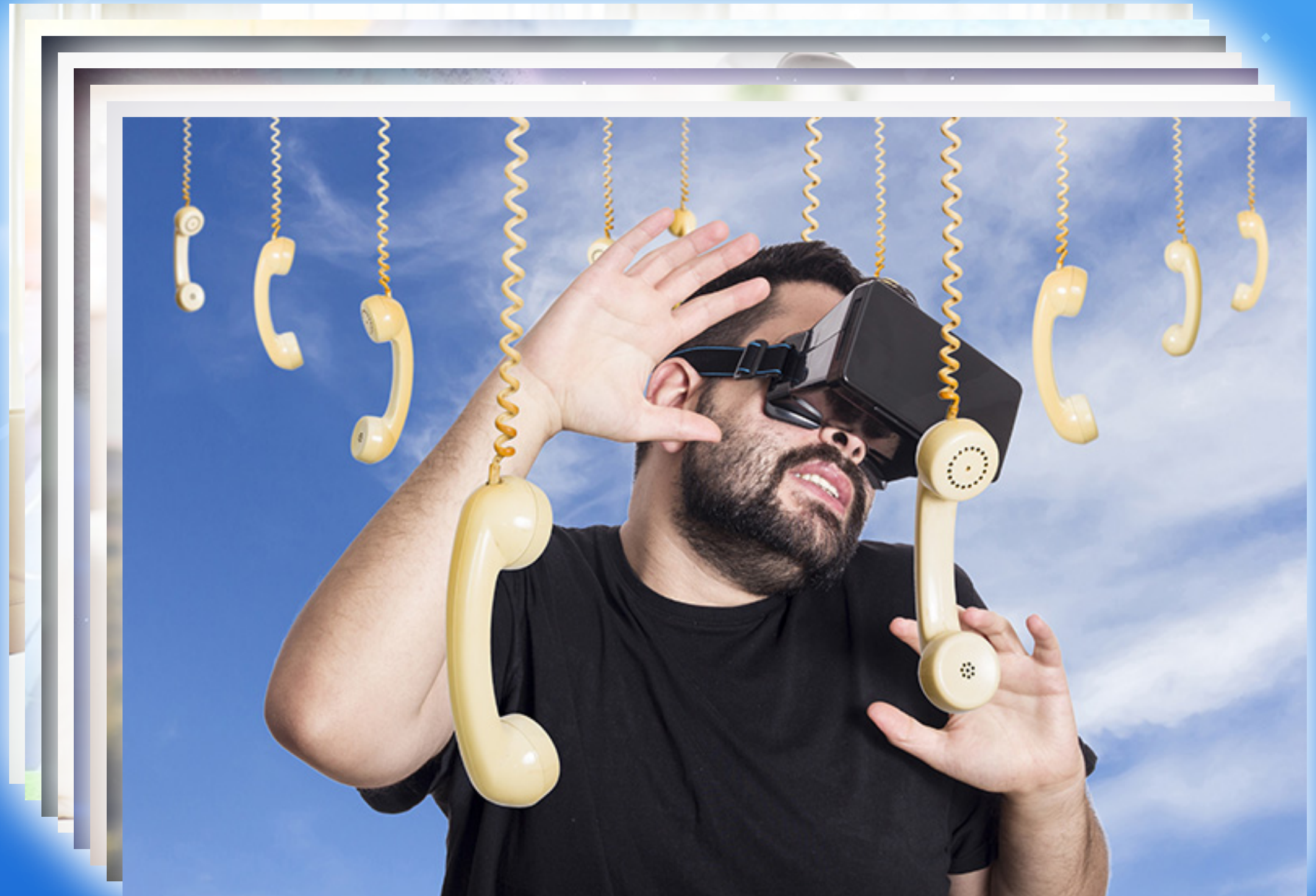
Job Simulator



Fantastic Contraption

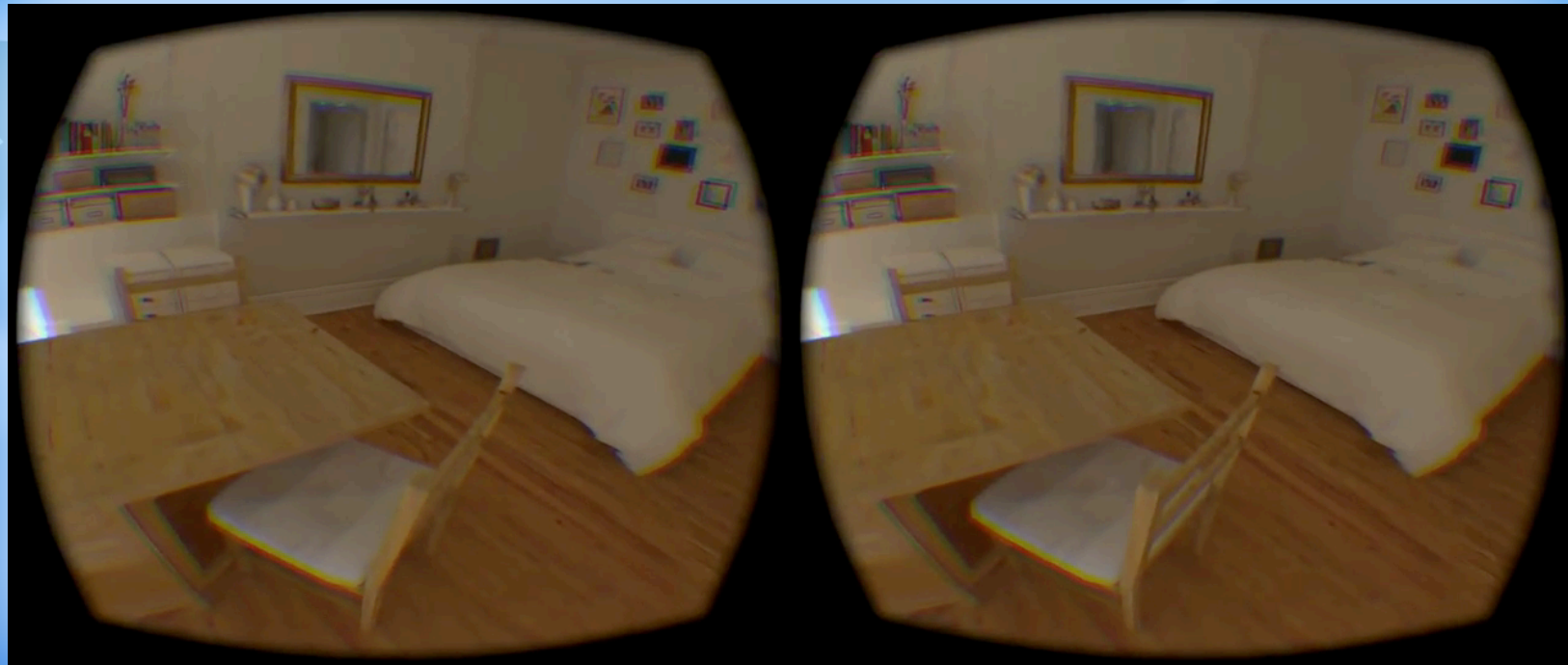


# VR has a communication problem





# What people have been doing so far...

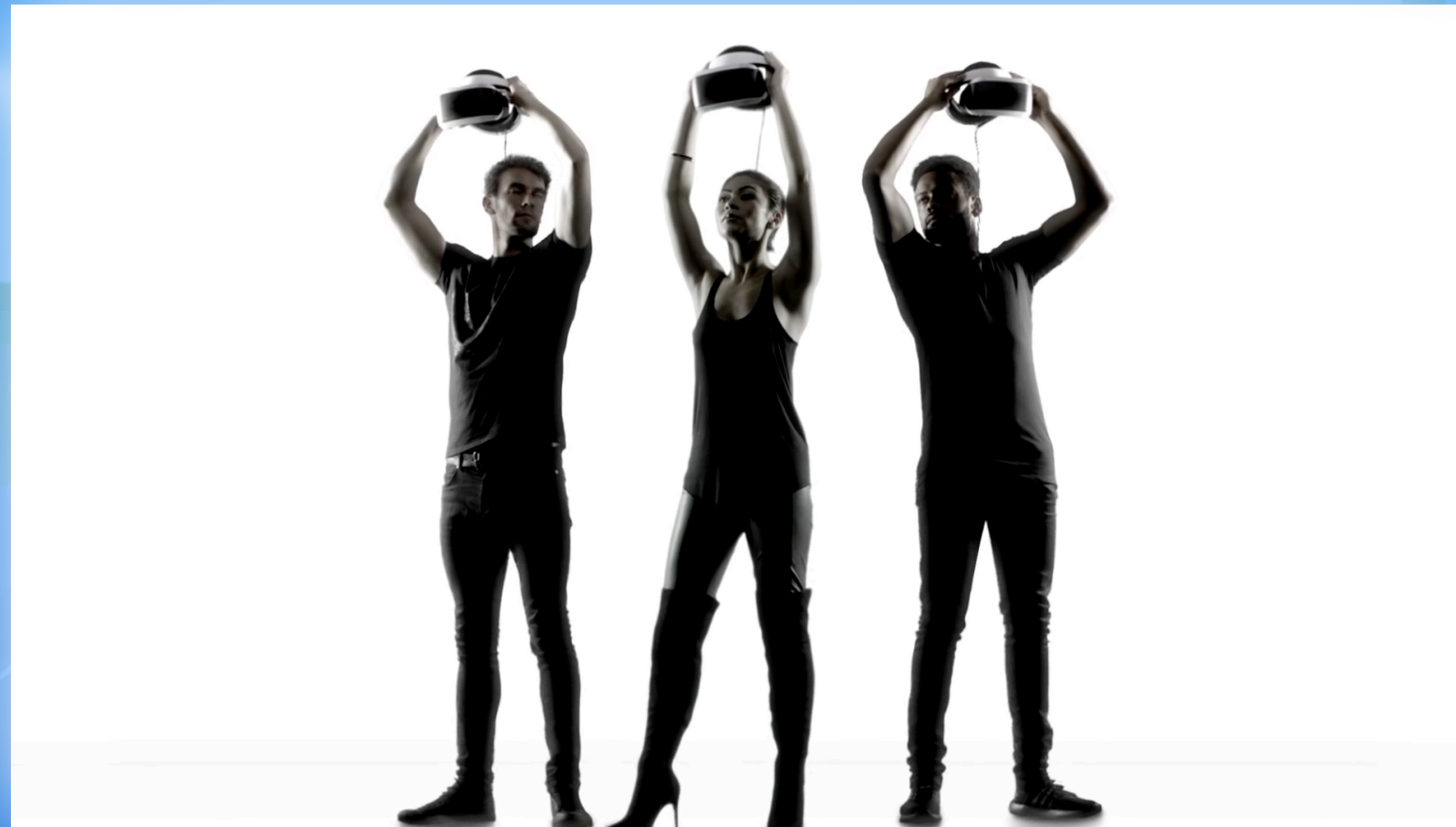


Dual Fisheye - WUT?



First Person - meh!

# What people have been doing so far...



Sony's virtual HMD's



# Making Mixed Reality Trailers



Job Simulator



Fantastic Contraption





# JOB SIMULATOR

■ the 2050 archives









# FANTASTIC CONTRAPTION



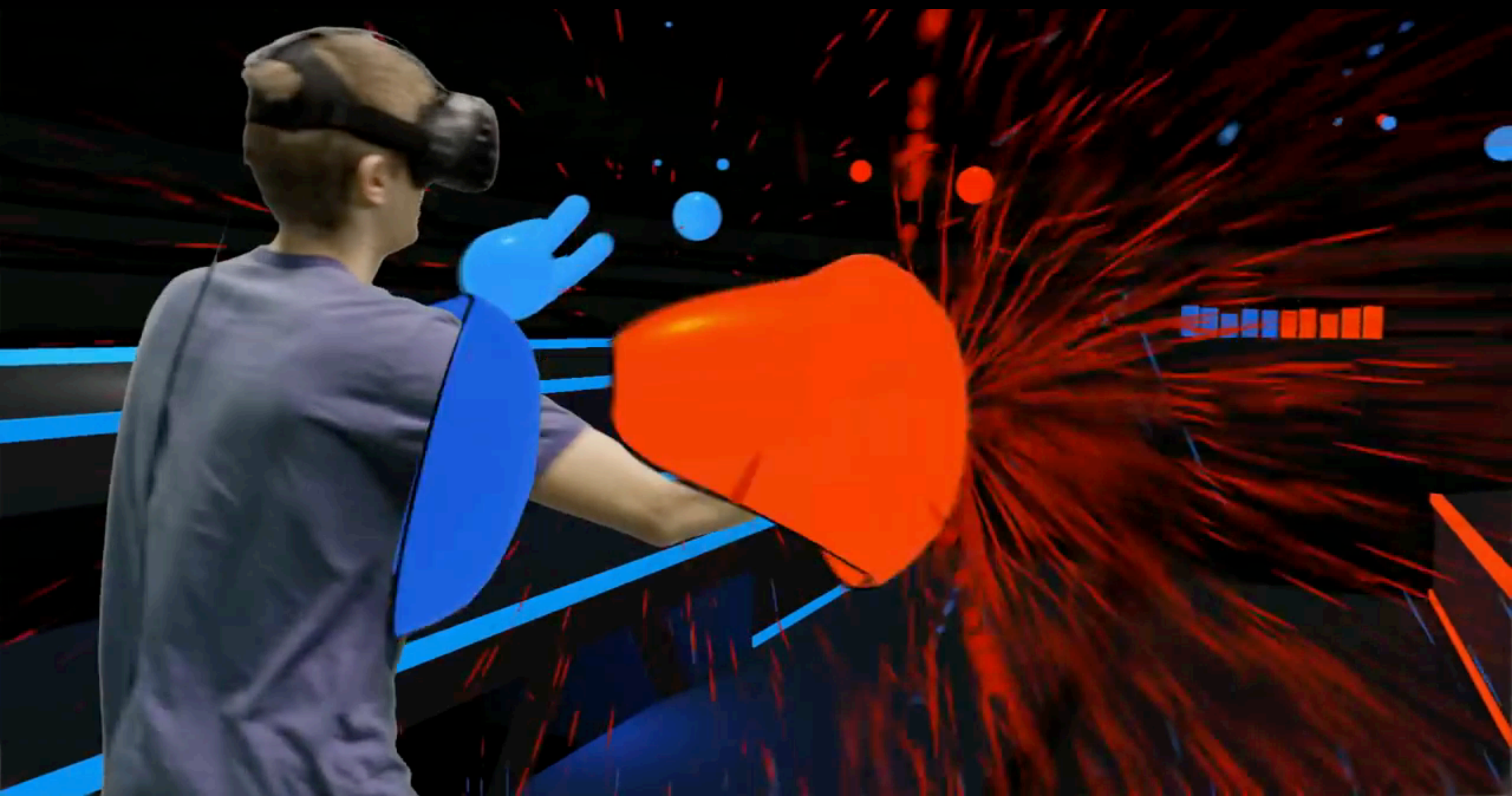




# WHY SHOOT A MIXED REALITY TRAILER?

It's the best way to convey what it is actually like to be in virtual reality on a 2D screen







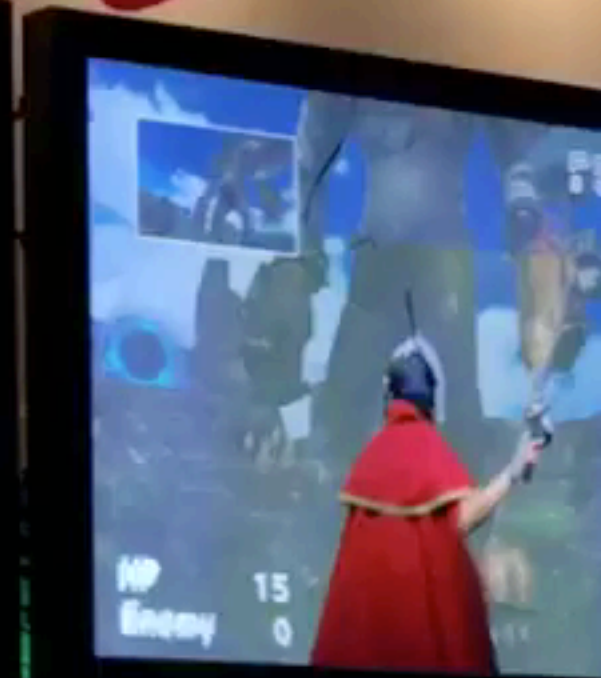








視覚化



VRSCOUT



# BLASTERS

OF THE  
UNIVERSE







For Fantastic Contraption we used three different techniques to convey what it's like to be inside VR.





When considering the relationship between virtual and physical camera move created in the real world





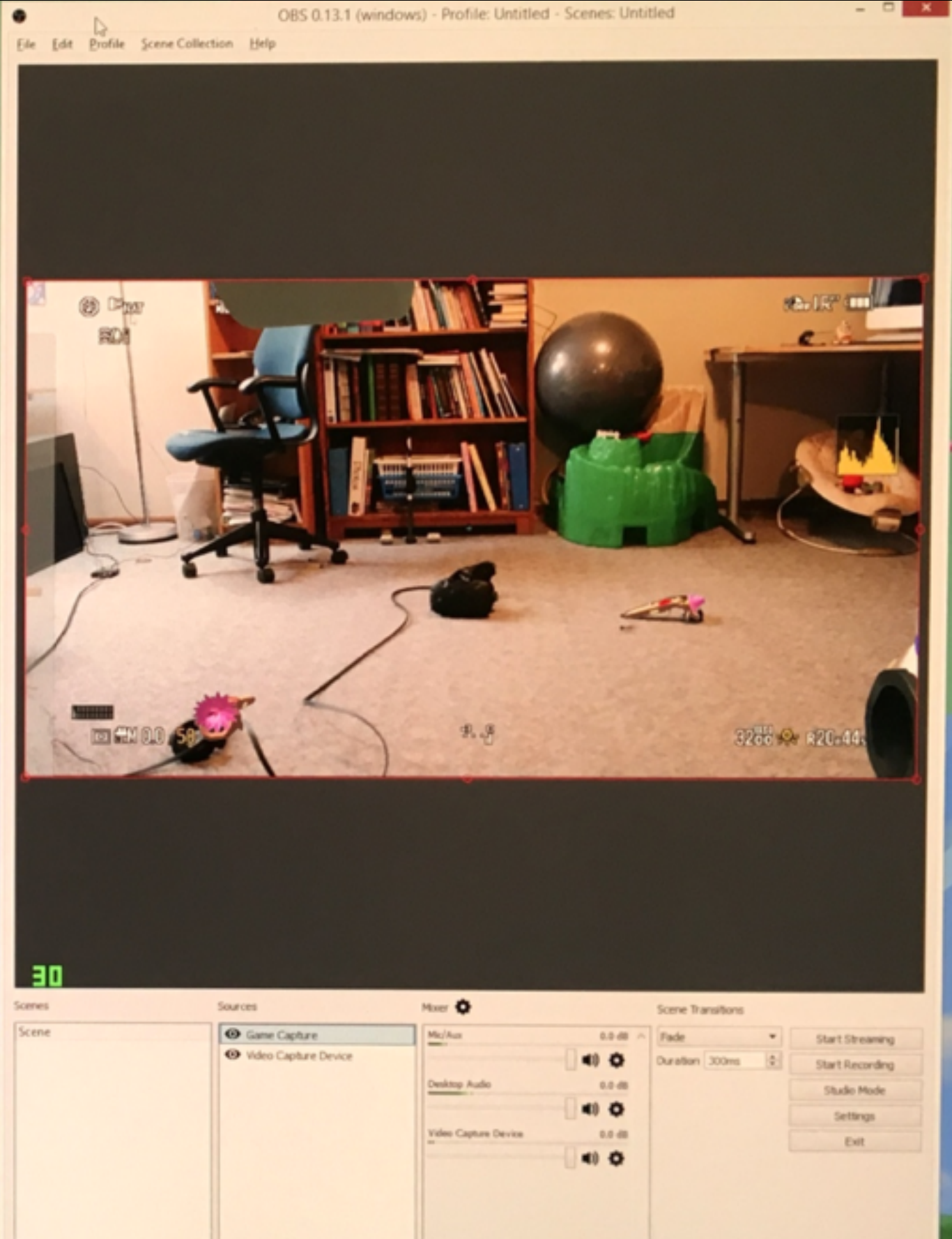




# Research and Development

















Decided to Shoot  
with a7s II on a  
Movi Steadycam

















1280 x 720 (1.00)  
Δ 0:01:06:00, 23.976 fps

Active Camera

FC\_012

FC\_013

FC\_014

FC\_015

FC\_016

FC\_017

FC\_018

FC\_019

FC\_020

FC\_021

FC\_022

FC\_023

FC\_024

FC\_025

FC\_026

FC\_027

FC\_028

FC\_018

FC\_017

FC\_016

FC\_015

FC\_014

FC\_013

FC\_012

fx Stereo Mixer

fx RSMB

fx Colorista III

3-Way

Auto Balance

HSL

Preview

Shortcut

Effects & Presets

0:00:22:06

00534 (23.976 fps)

bandicam 0011.mp4

FCH\_005.mov

FCH\_031.mov

bandicam 0038.mp4

FCH\_031

FCH\_031.mov

FCH\_032.mov

FC\_068.mov

FC\_042.mov

FC\_045.mov

FC\_073.mov

FC\_077.mov

FC\_077.mov

FC\_072.mov

FC\_072.mov

FC\_073.mov

FC\_073.mov

Adjustment Layer 3

Adjustment Layer 2

Adjustment Layer 1

"Impressively Intuitive and Whimsical"

Kotaku\_Website\_Logo.png

Black Solid 1

Black Solid 2

TEMP 3

Sky01.jpg Comp 1

FC\_018

Timeline

21:12f

22:00f

22:12f

23:00f

23:12f

24:00f

24:12f

25:00f

25:12f

26:00f

26:12f

27:00f

27:12f

28:00f

28:12f

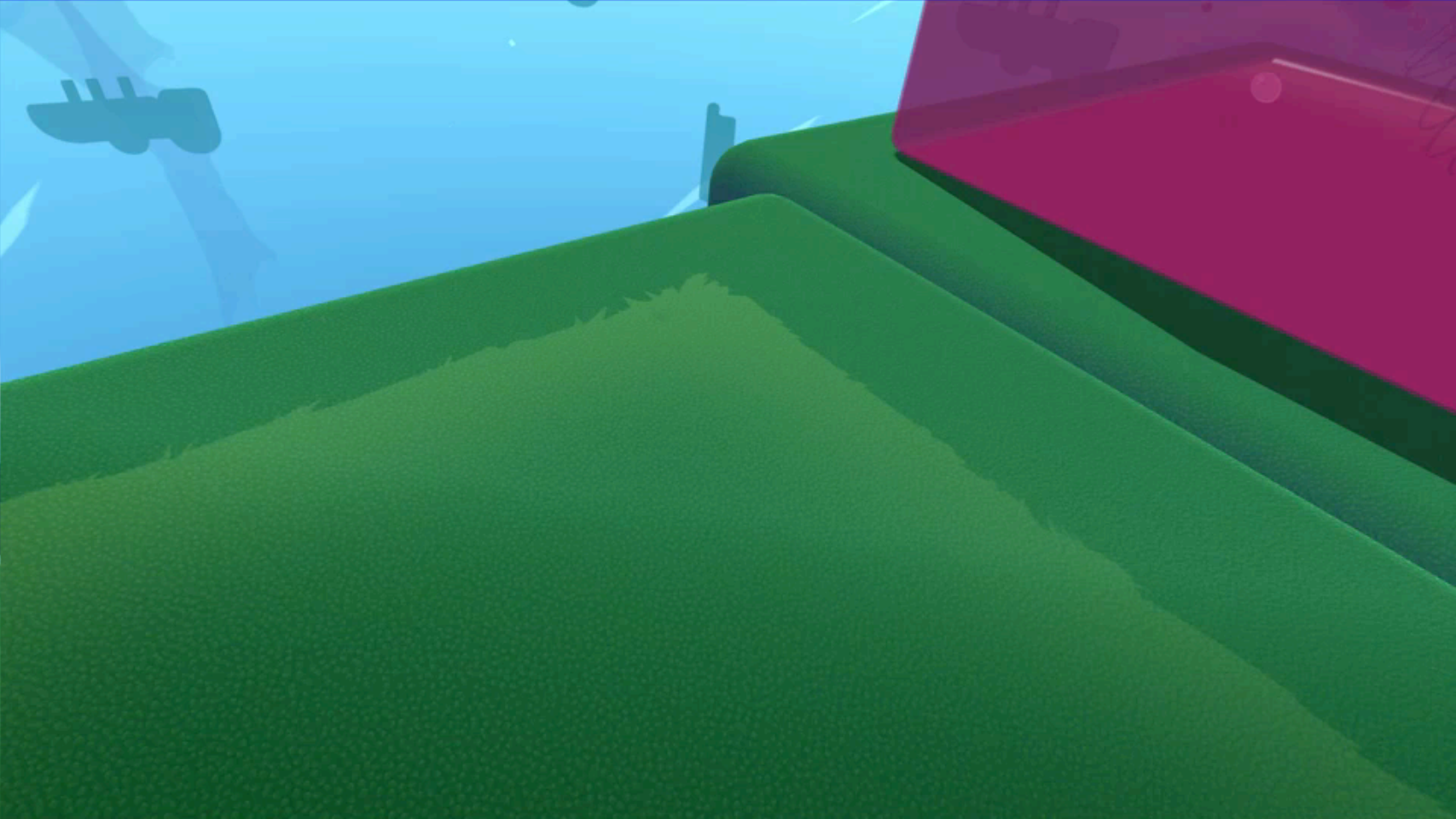
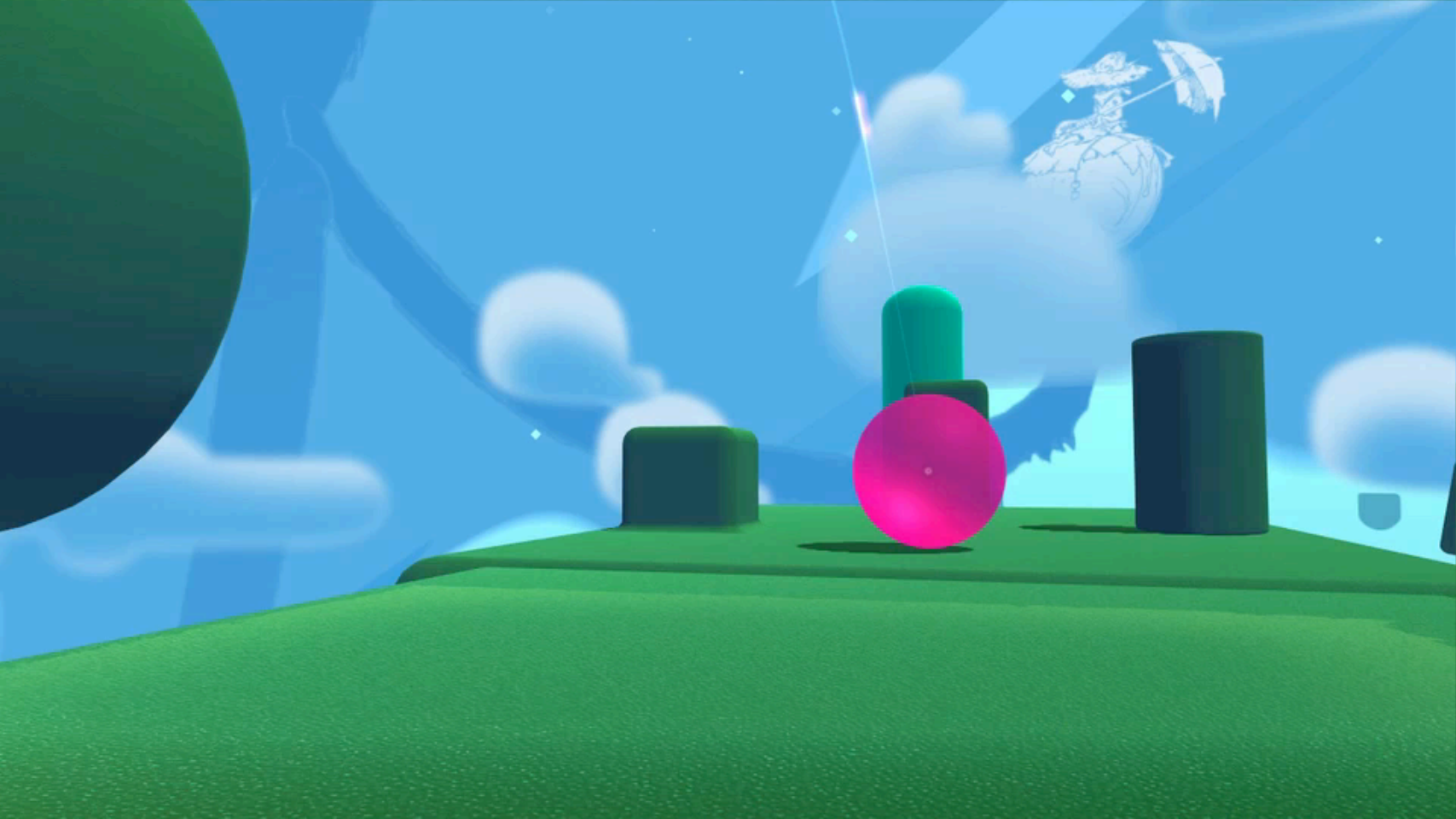
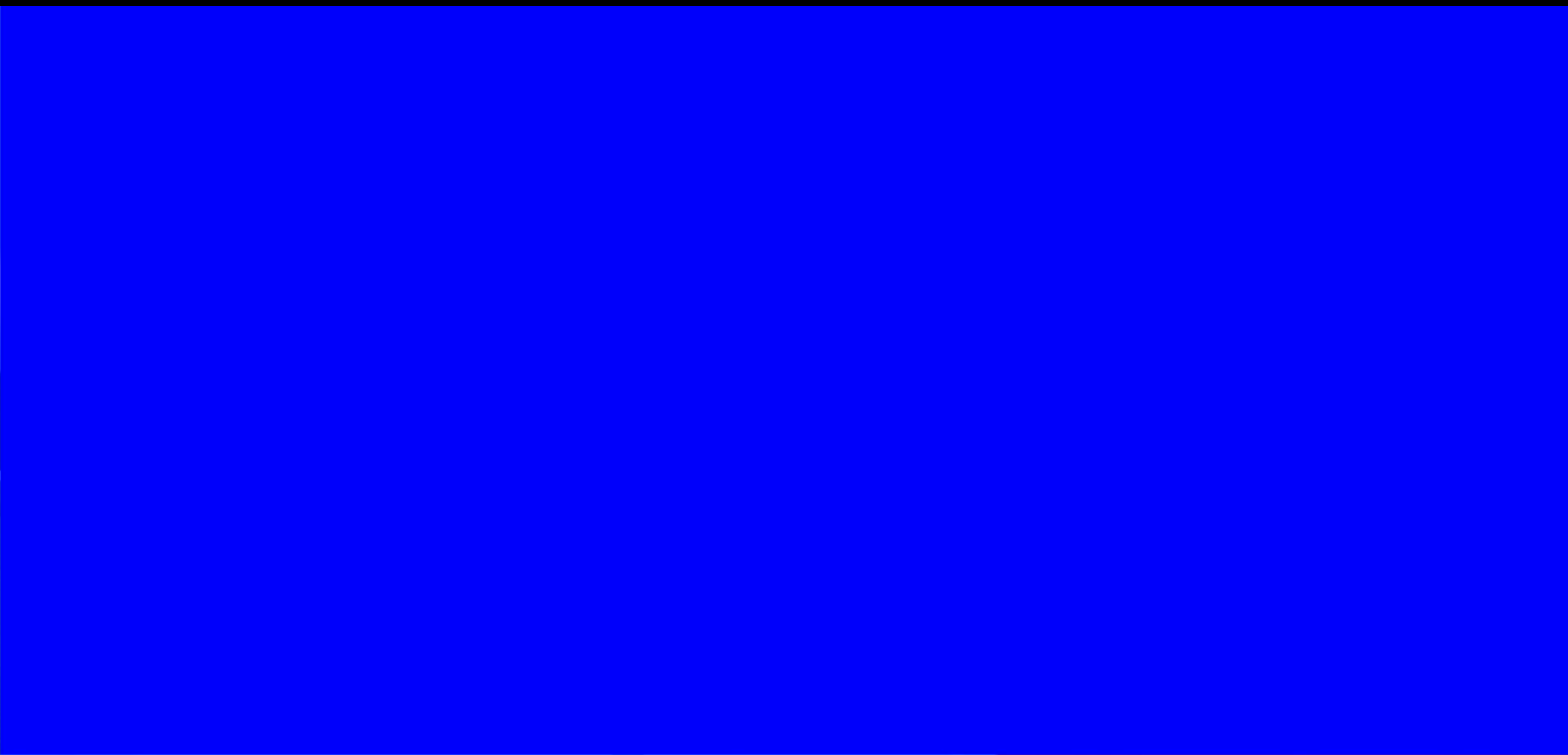
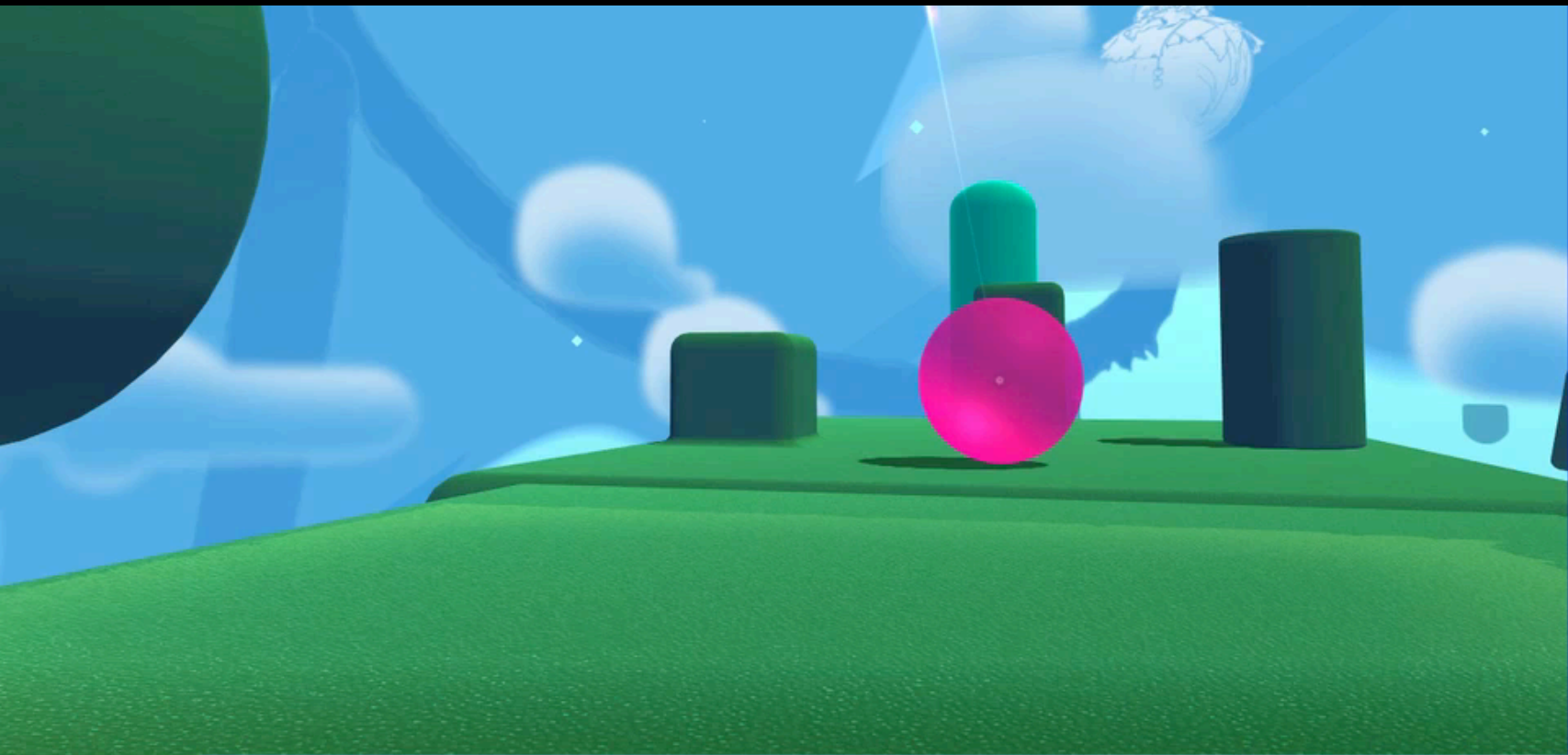
29:00f

29:12f

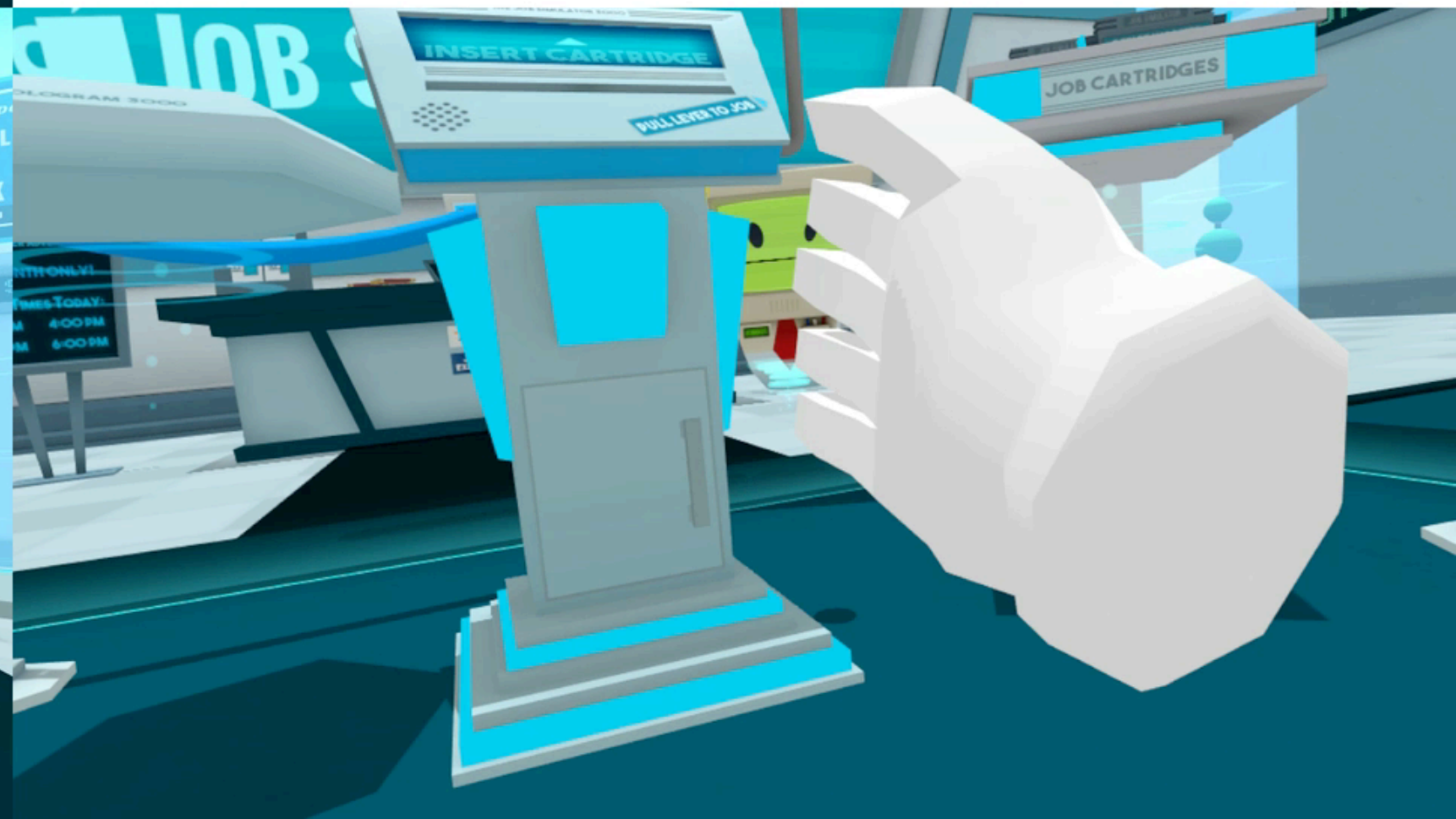
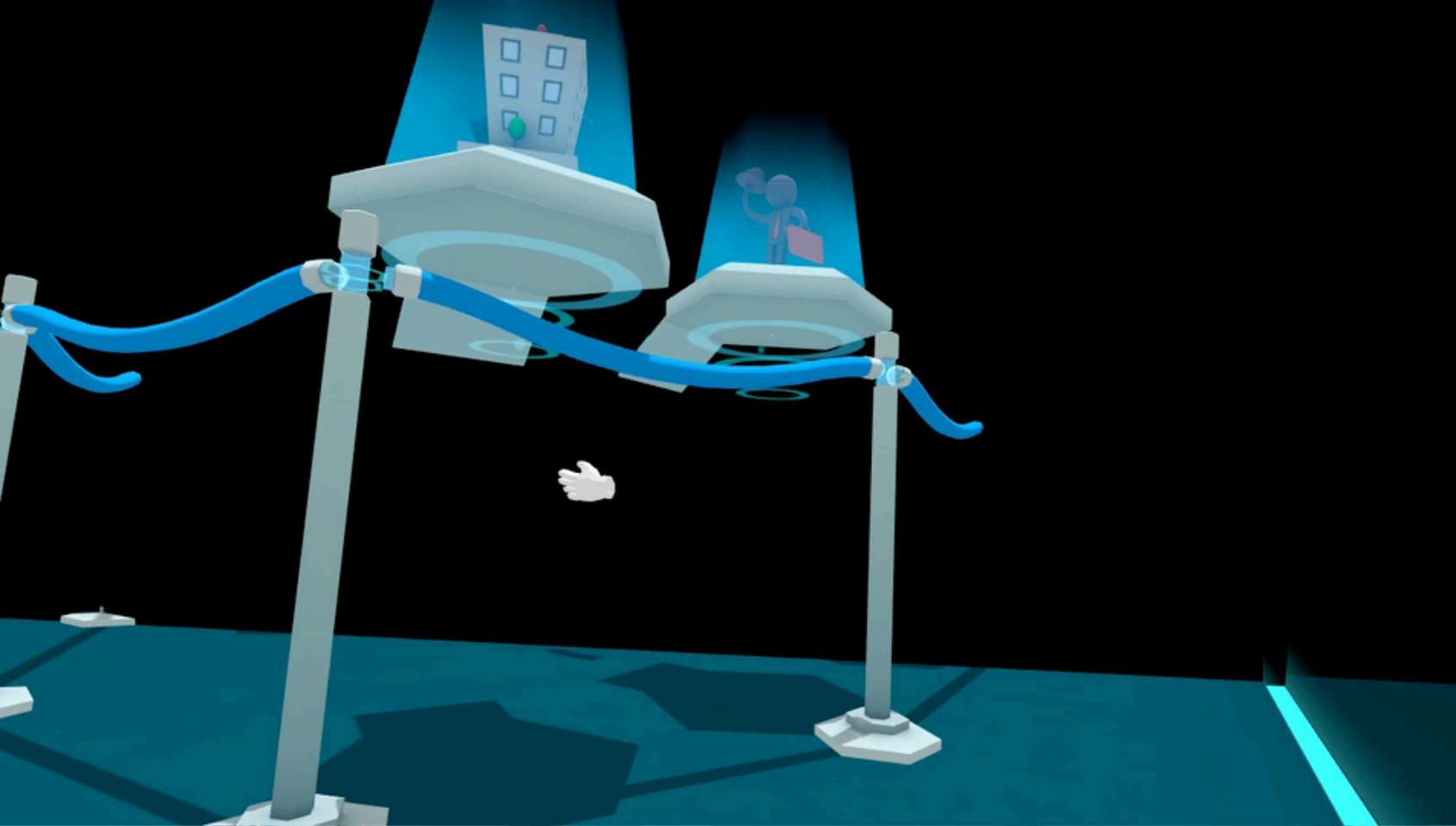
30:00f

Toggle Switches / Modes



















# **THIS IS AMAZING**

Per-Pixel Depth Sorting! No Seams! No Compositing in Post!

In-Game lighting affects the player!

# **THIS IS NOT SO AMAZING**

Depth Map is not perfect - has glitches and artifacts

ZED stereo camera does not produce as good of an image as a DSLR

Compositing in-engine is nowhere near as good as doing it in post

**NOBODY CAN USE THIS YET!**















## Problems and Hopes for the Future

Support for more than 2 Lighthouses

Dedicated tracking object for cameras

Support for multiple tracked Camera Objects

Unified Camera Calibration from Valve

Better options in the Valve Unity Plugin for Developers





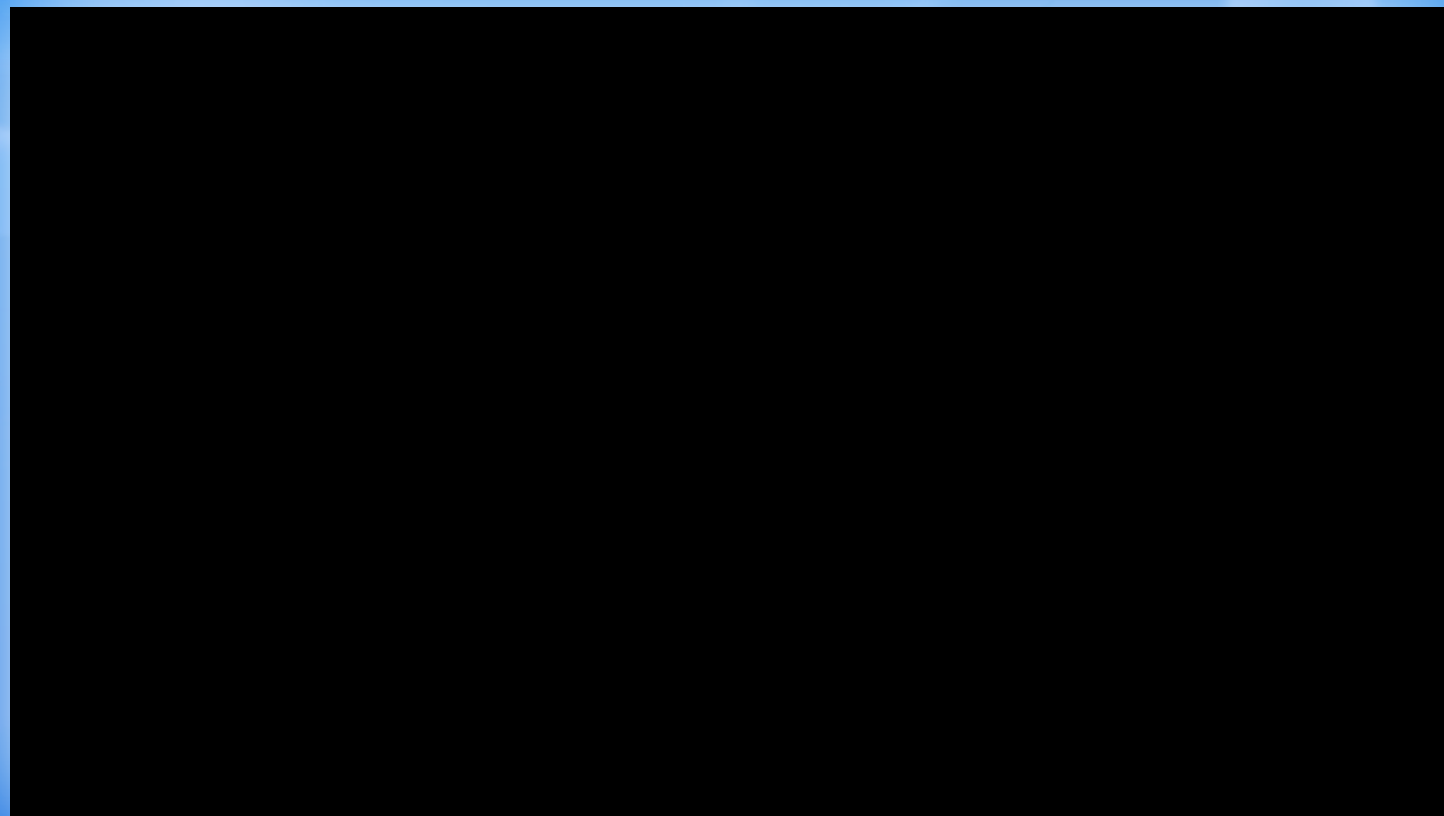


# THANK YOU!

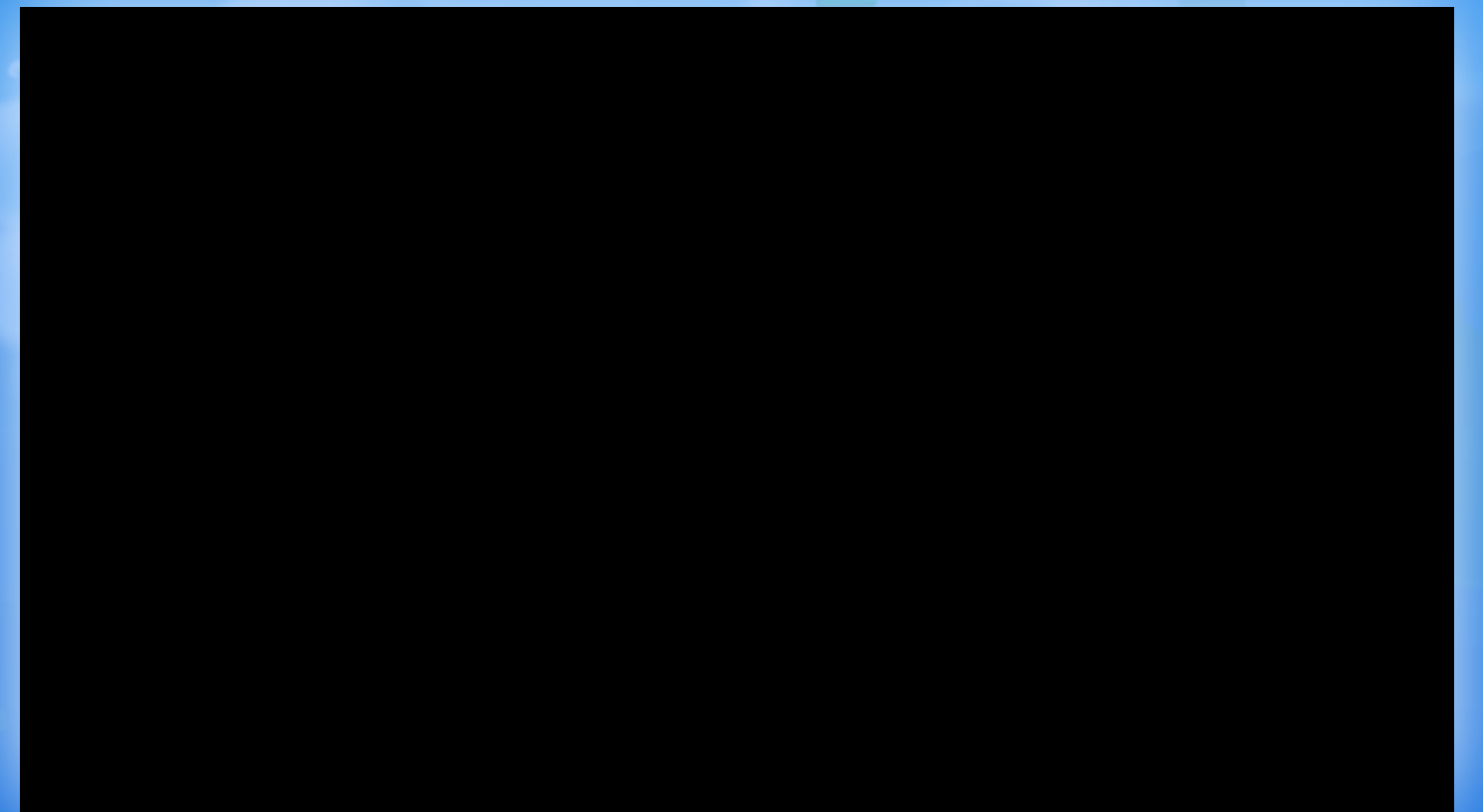
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JobSimulatorGame.com