

REBOOTING GAME DESIGN FOR VIRTUAL REALITY



GDC 'Eu

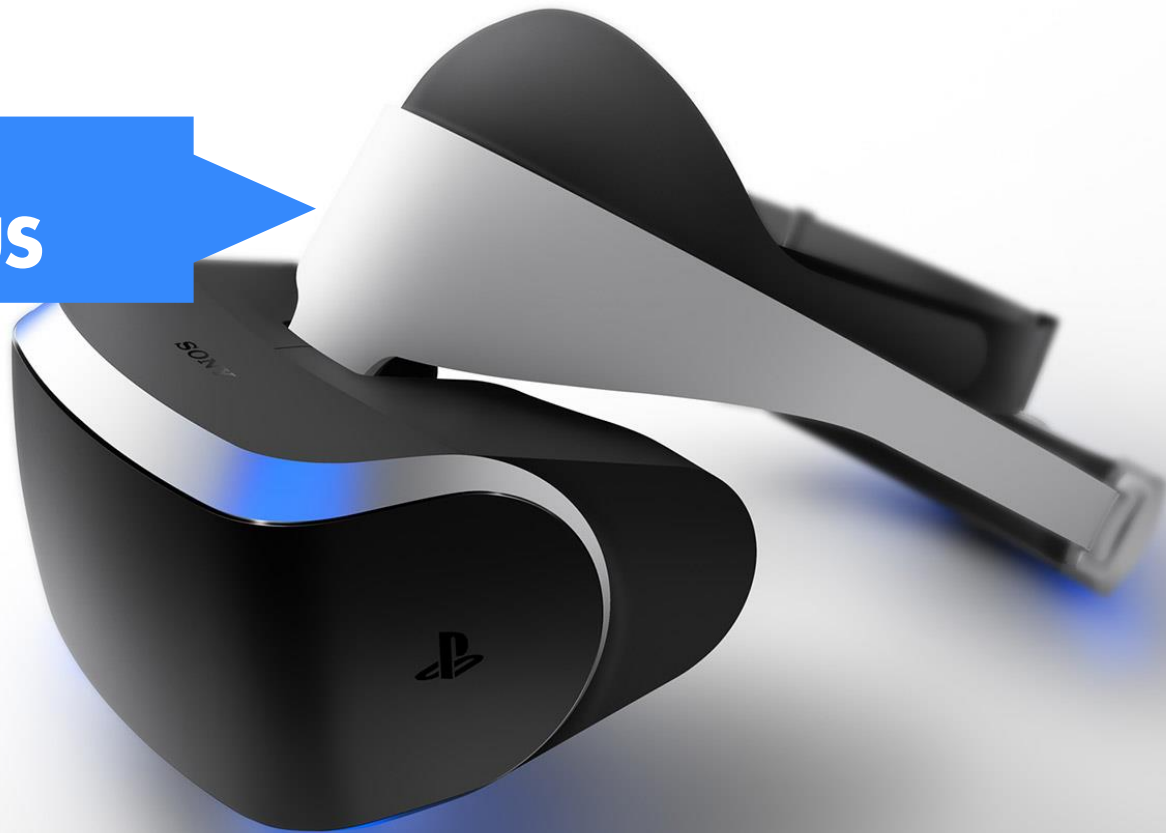


Jed Ashforth

Senior Game Designer, WWS Immersive Technology Group
Sony Computer Entertainment Europe

GAME DEVELOPERS CONFERENCE™ EUROPE
CONGRESS-CENTRUM OST KOELNMESSE · COLOGNE, GERMANY
AUGUST 11-13, 2014 · EXPO: AUGUST 11-12, 2014

PROJECT MORPHEUS

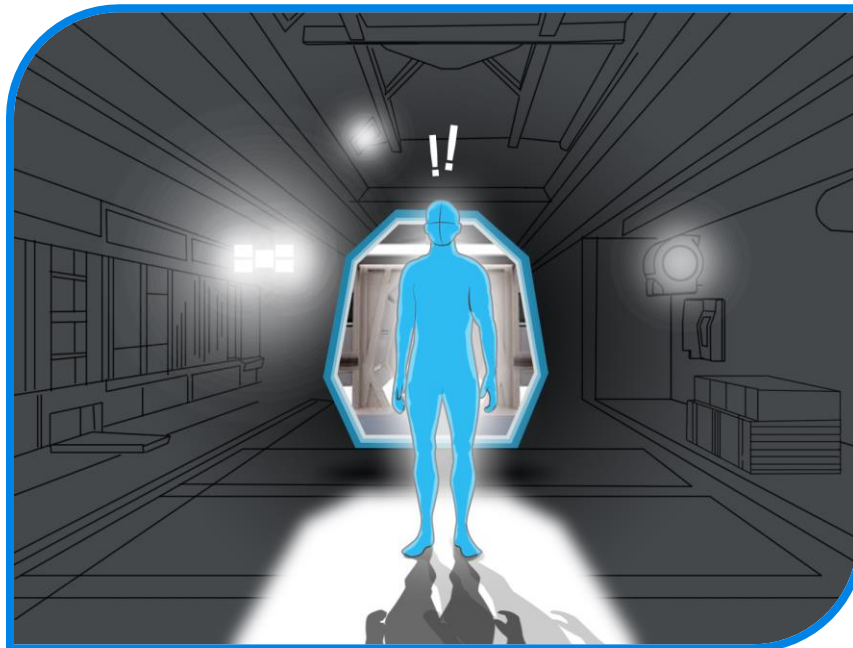




CONSUMER VR: THE PURSUIT OF PRESENCE

IMMERSION
DEEP MENTAL
STIMULATION

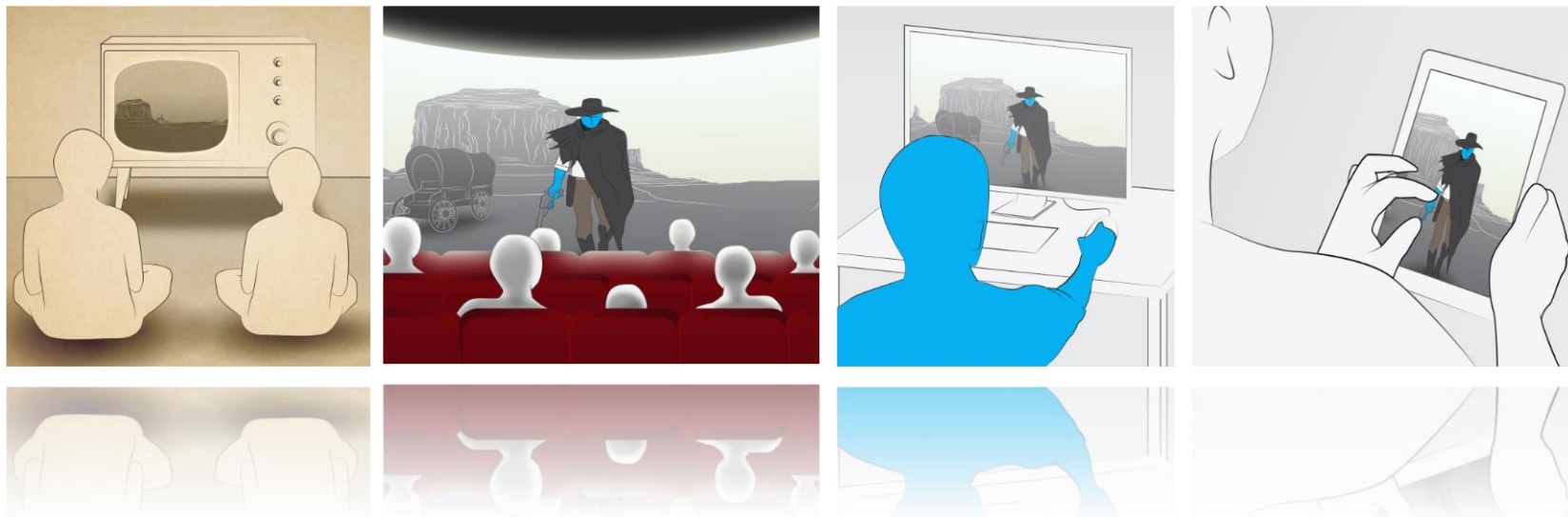
PRESENCE
BELIEVING YOU
ARE REALLY THERE





REBOOTING GAME DESIGN FOR VR

VR Represents a fundamental change in Viewpoint - This is **HUGELY** significant for Game Design!





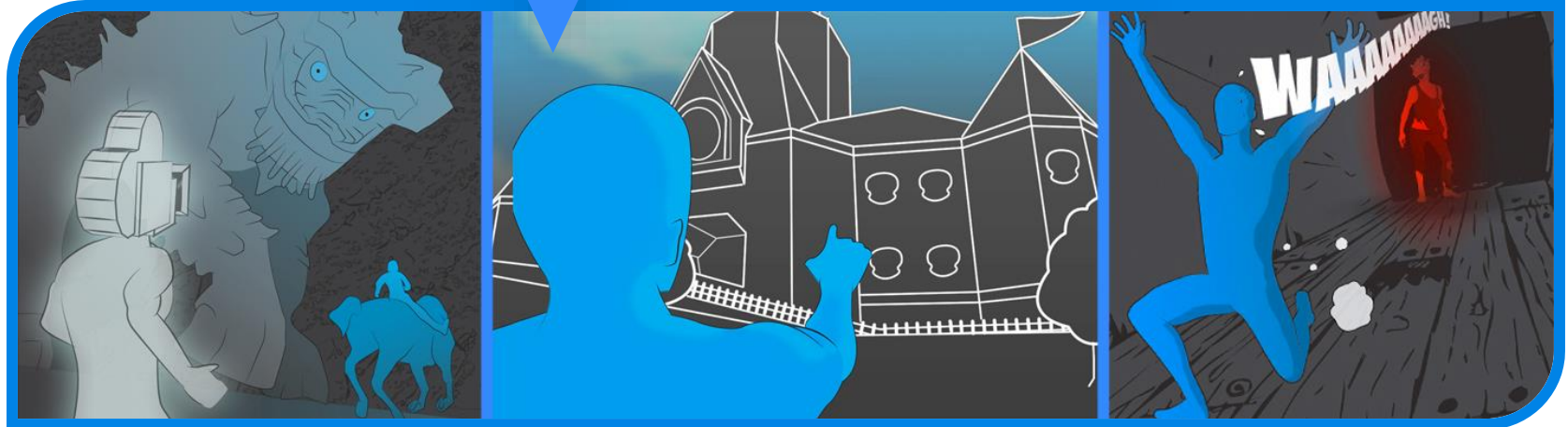
REBOOTING GAME DESIGN FOR VR

VR Represents a fundamental change in Viewpoint - This is **HUGELY** significant for Game Design!





LET'S TALK ABOUT GAME DESIGN FOR VR





WE'RE NO LONGER DESIGNING INTERACTIVE MOVIES

GIVE THE PLAYER WHAT THEY EXPECT

THE DEEPER THE IMMERSION, THE MORE FRAGILE

MISMATCHES ARE INEVITABLE

NEVER TAKE CONTROL OF THE PLAYER'S HEAD

PLAYER COMFORT MUST BE A PRIORITY



REBOOTING GAME DESIGN **FOR VR**

BEST **PRACTICE**

**WE'RE NO LONGER DESIGNING
INTERACTIVE MOVIES,
WE'RE IMAGINEERING
PLAYABLE THEME PARKS!**





REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**GIVE THE USER
WHAT THEY EXPECT!**



REBOOTING GAME DESIGN FOR VR

BEST PRACTICE

**GIVE THE USER
WHAT THEY EXPECT!**

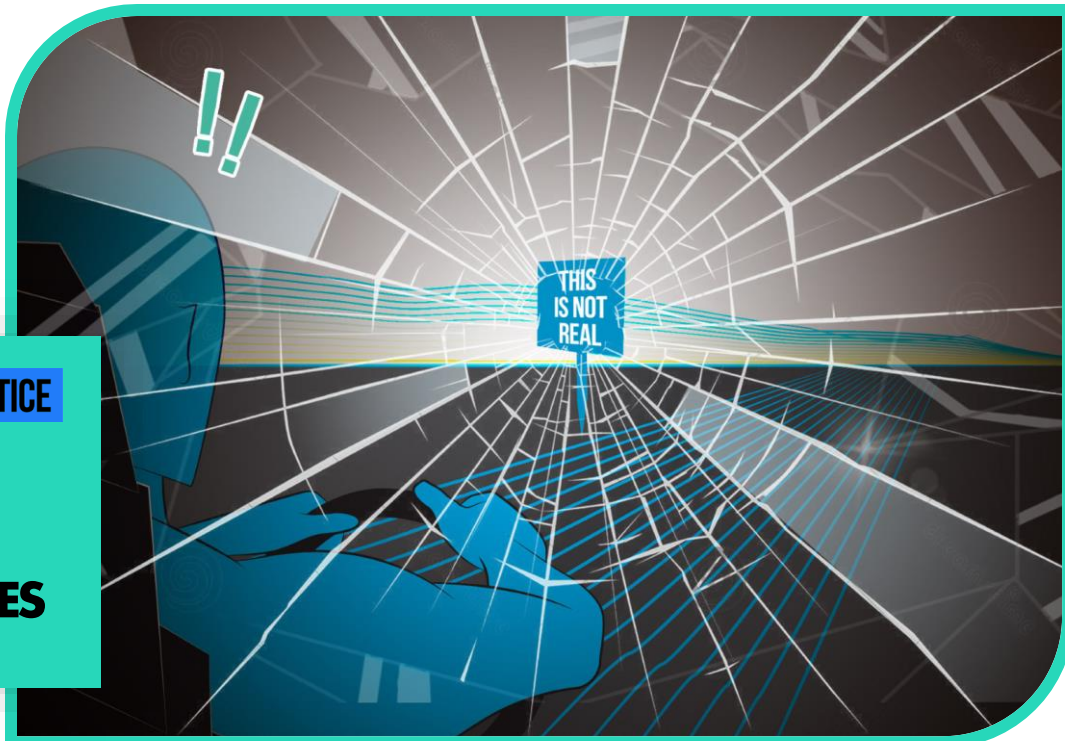
REBOOTING GAME DESIGN **FOR VR****BEST PRACTICE****GIVE THE USER
WHAT THEY EXPECT!**

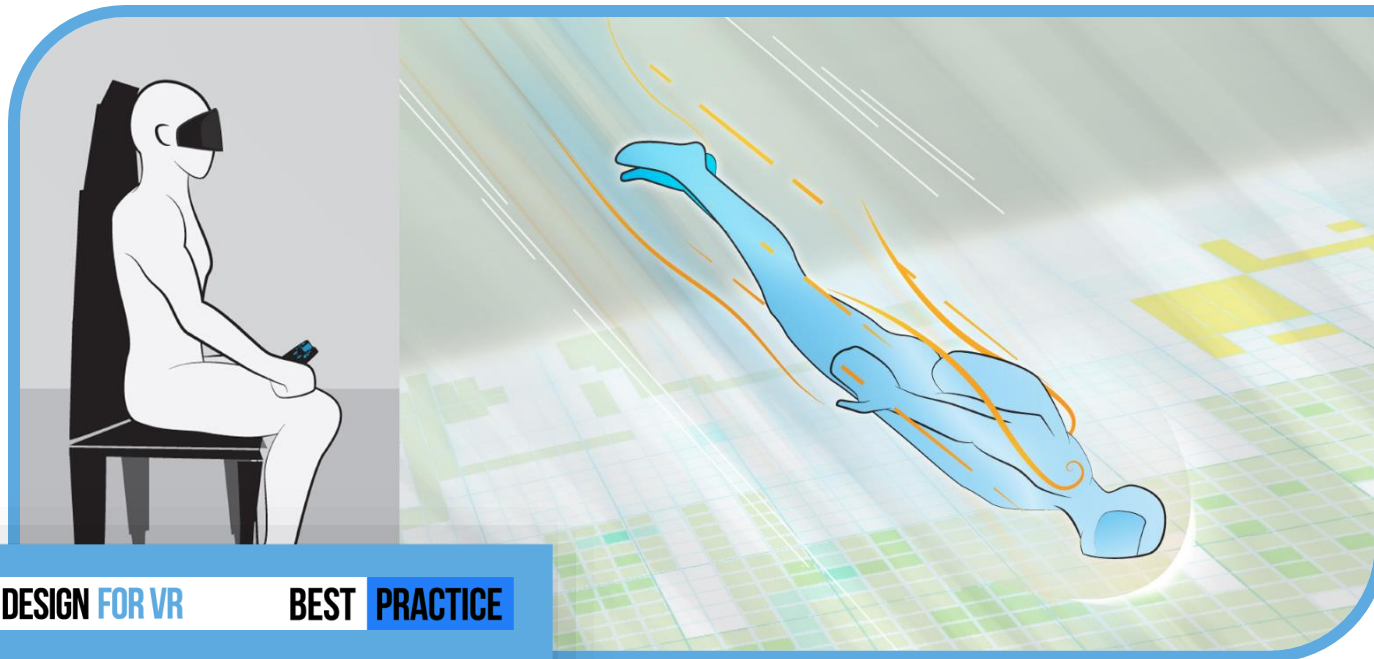


REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**THE DEEPER THE LEVEL OF
IMMERSION,
THE MORE FRAGILE IT BECOMES**

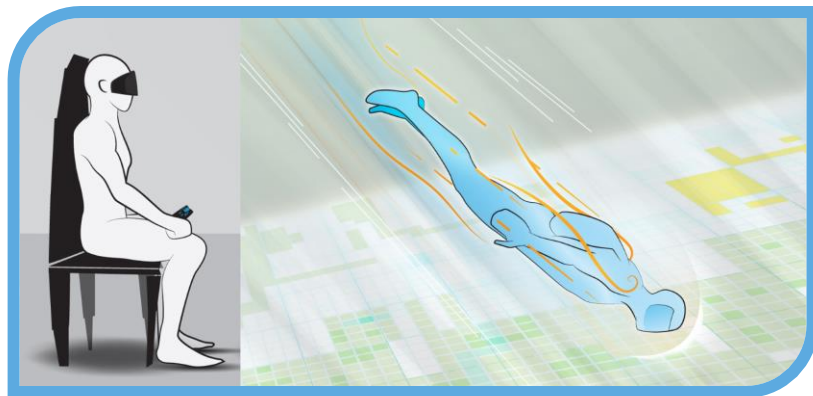




REBOOTING GAME DESIGN FOR VR

BEST PRACTICE

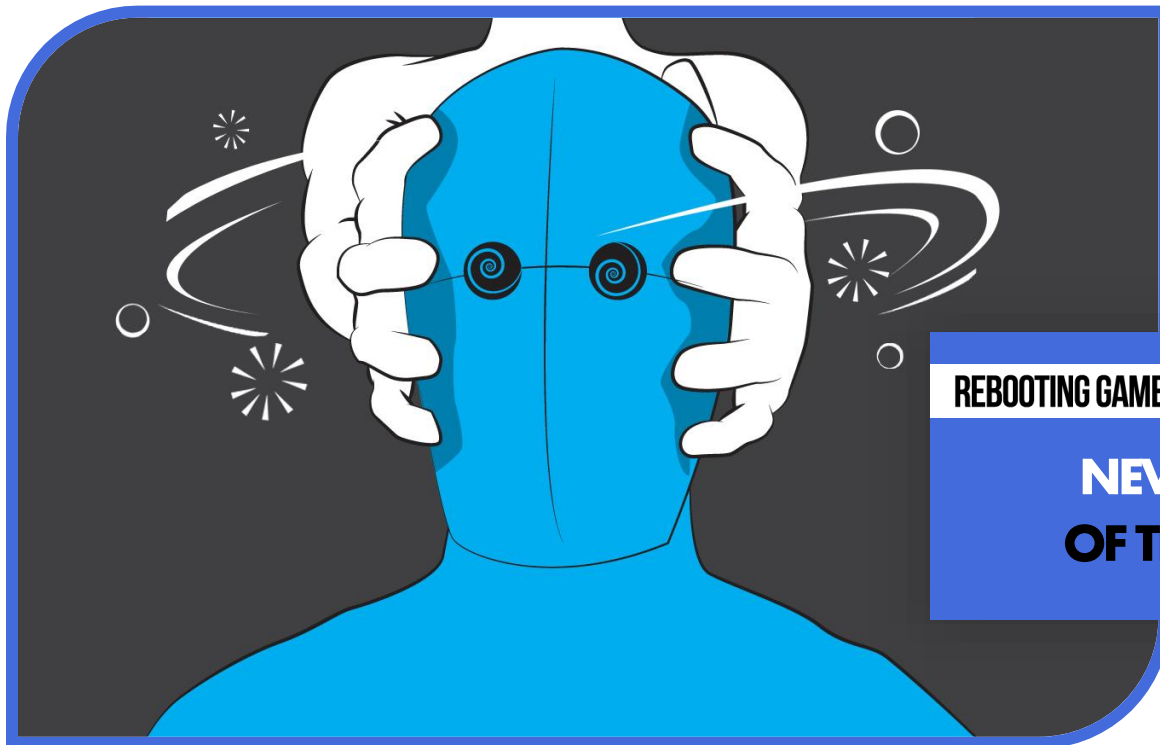
**MISMATCHES
ARE INEVITABLE !**



REBOOTING GAME DESIGN **FOR VR** BEST **PRACTICE**

**MISMATCHES
ARE INEVITABLE !**

- User's body posture may not match avatar's body posture
- User will not feel any motion cues
- Contact points with seat and controller will always be felt by user
- Heat, cold, wind, smell, touch, taste etc. are not simulated
- Real Life Heat, cold, wind, smell, touch, taste, sounds etc. may intrude on the virtual experience
- User will feel no resistive feedback when swords clash or walls are touched
- Weight of tracked controllers will not feel like a real broadsword or baseball bat
- VR Locomotion is performed through abstracted hand controls, not by using our feet 1:1 with real walking



REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**NEVER TAKE CONTROL
OF THE PLAYER'S HEAD !**



1st Person In-World



3rd Person In-World



Virtual Cinema Screen



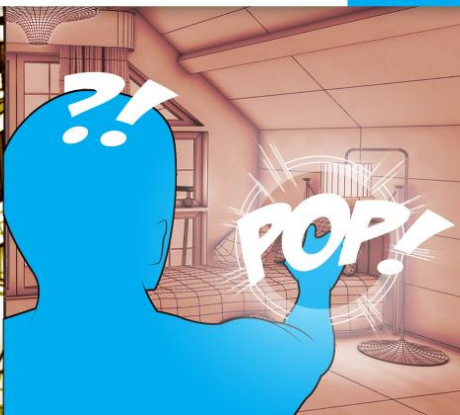
REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**NEVER TAKE CONTROL
OF THE PLAYER'S HEAD !**



SUDDEN CUTS TO A NEW VIEWPOINT CAN BE **DISORIENTATING**



REBOOTING GAME DESIGN FOR VR

BEST PRACTICE

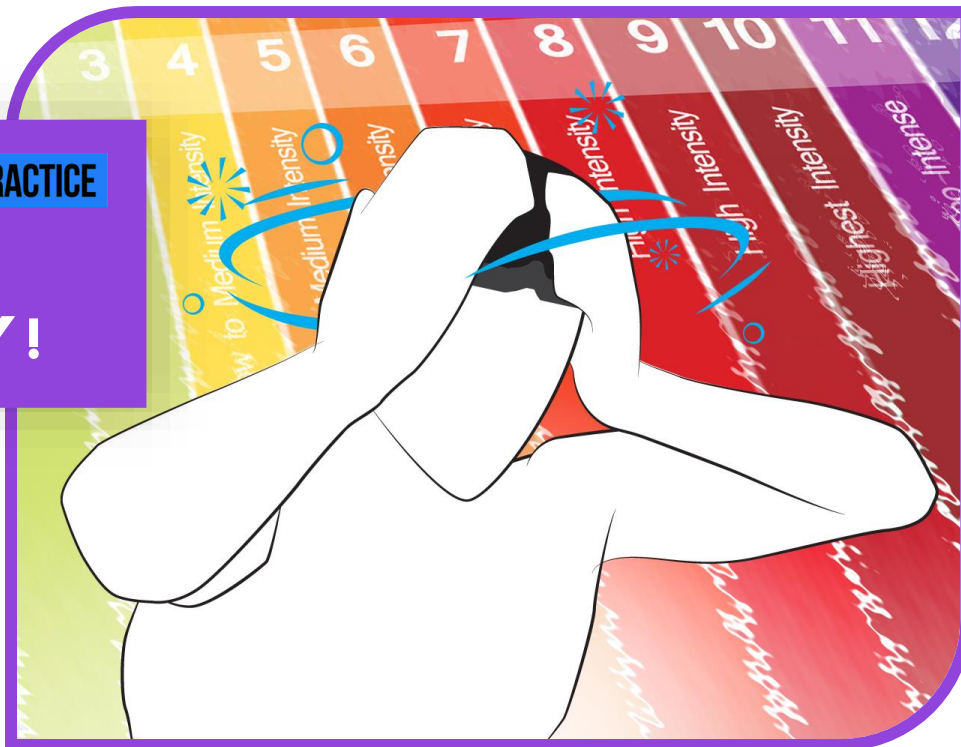
**NEVER TAKE CONTROL
OF THE PLAYER'S HEAD !**



REBOOTING GAME DESIGN FOR VR

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**

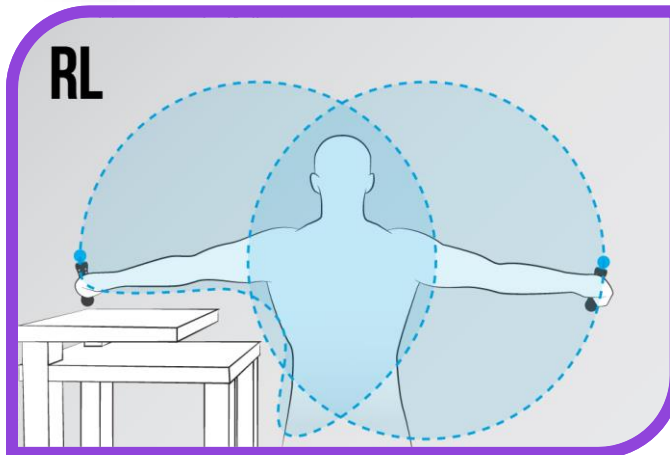




REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**

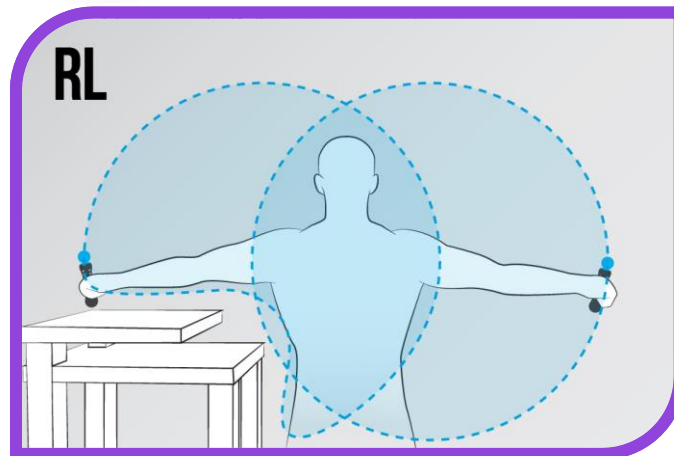




REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**





REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**





REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**





REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**





REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**





REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**





REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**

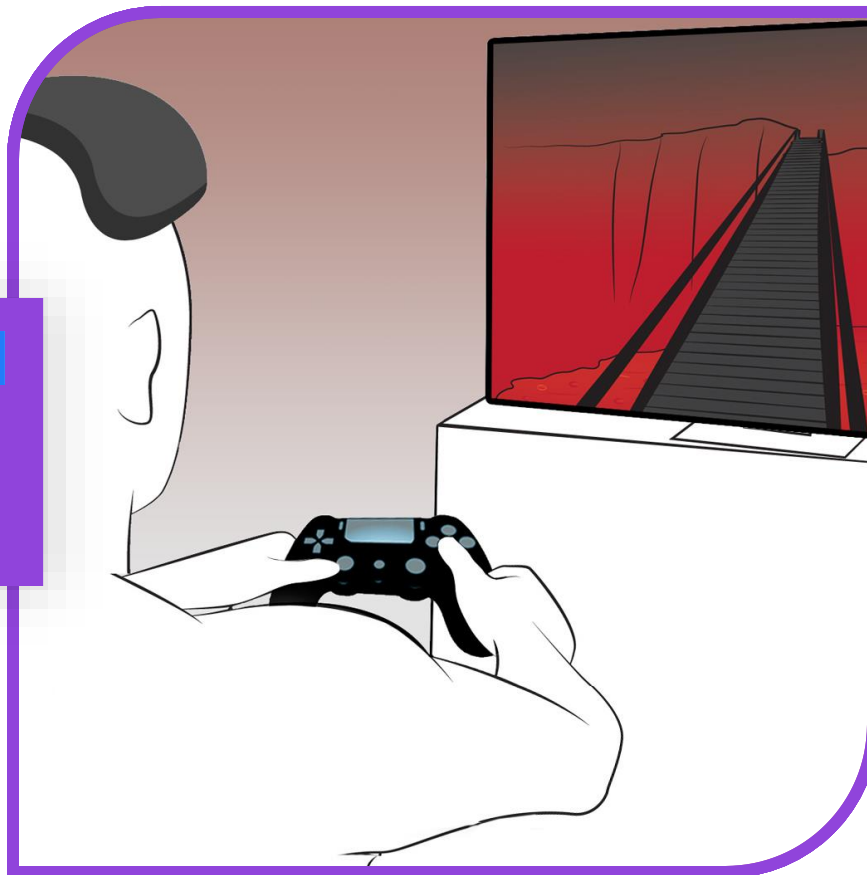




REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**





REBOOTING GAME DESIGN **FOR VR**

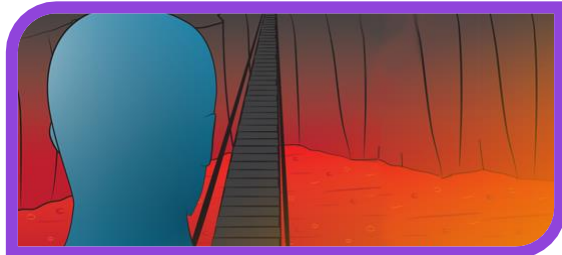
BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY !**

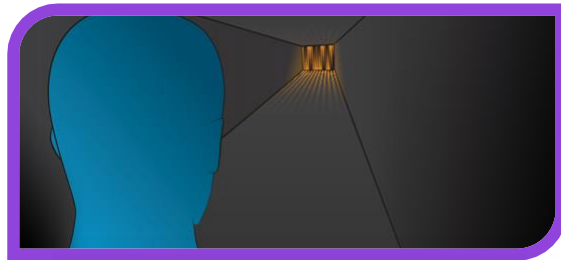




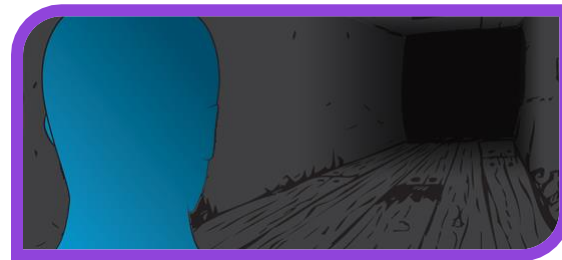
Vertigo



Claustrophobia

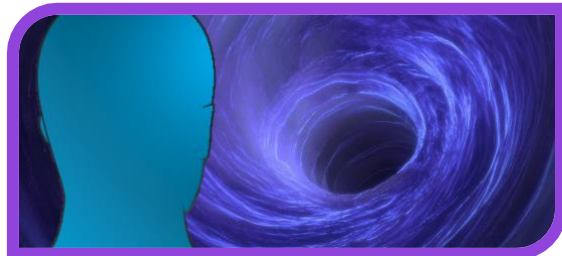


Fear of the Dark / Unknown



REBOOTING GAME DESIGN FOR VR

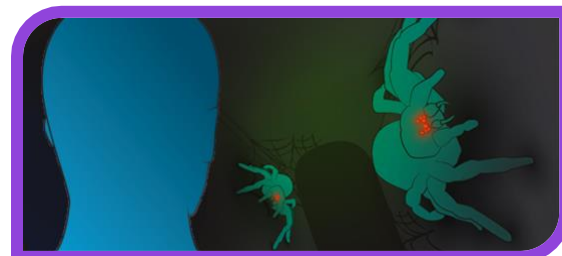
BEST PRACTICE

**PLAYER COMFORT
MUST BE A PRIORITY**

Fear of Void / Empty Spaces



Extreme / Intense Horror



Creature Phobia - Spiders. Snakes etc.



BUILDING ROBUST VR: DESIGNING FOR DEEP IMMERSION

REBOOTING GAME DESIGN **FOR VR**

BEST PRACTICE

**GIVE THE USER
WHAT THEY EXPECT !**

REBOOTING GAME DESIGN **FOR VR**

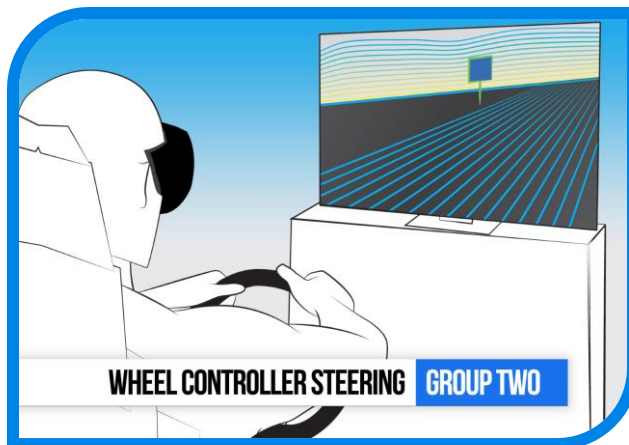
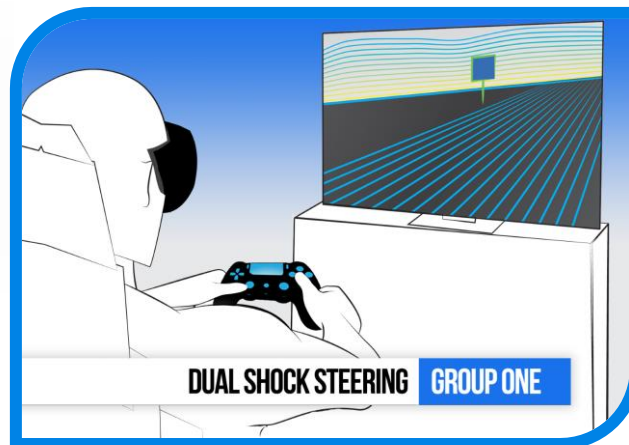
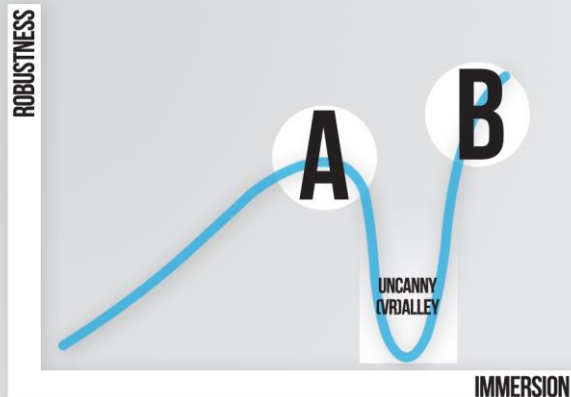
BEST PRACTICE

**THE DEEPER THE LEVEL OF
IMMERSION,
THE MORE FRAGILE IT BECOMES**



BUILDING ROBUST VR: DESIGNING FOR DEEP IMMERSION

THE UNCANNY [VR]ALLEY





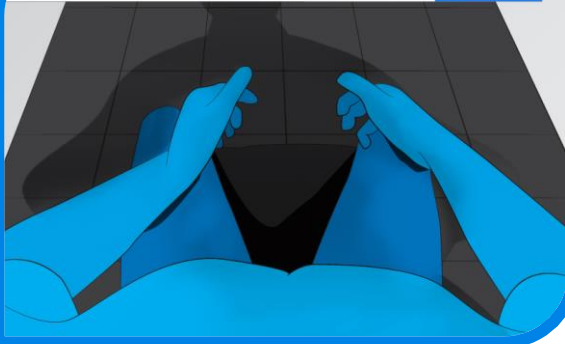
USING ACCURATE SCALE CAN HELP IMMERSION



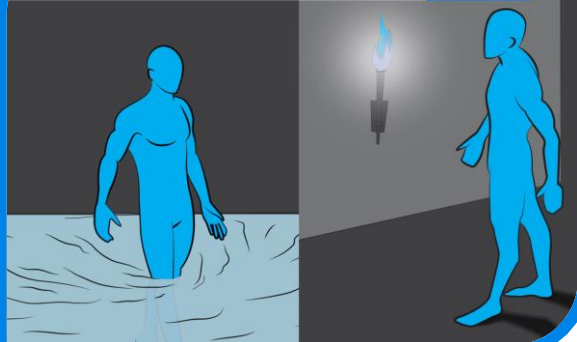
**BUILDING ROBUST VR:
DESIGNING FOR
DEEP IMMERSION**



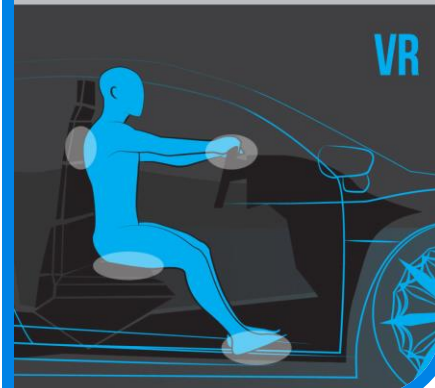
BODY PRESENCE (HANDS/BODY/SHADOW) HELPS IMMERSION

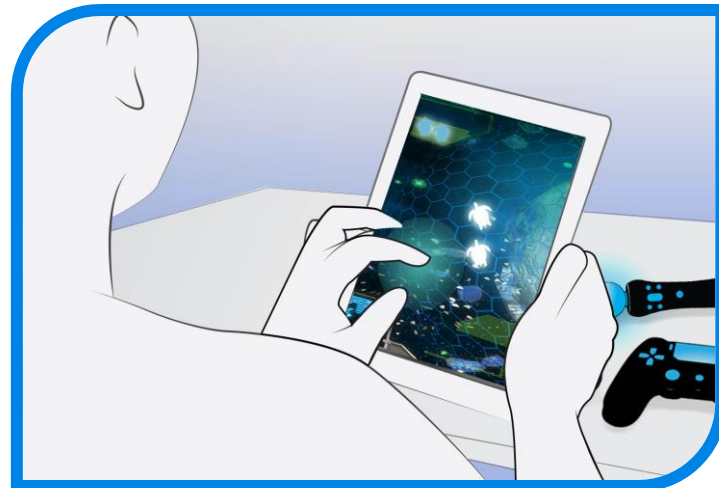
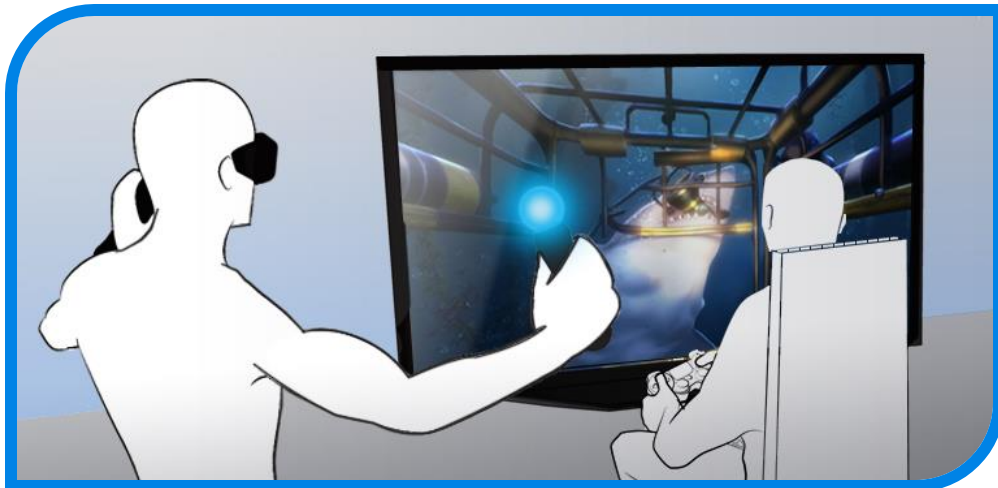


INTERACTIVE ENVIRONMENTS AND OBJECTS AID IMMERSION

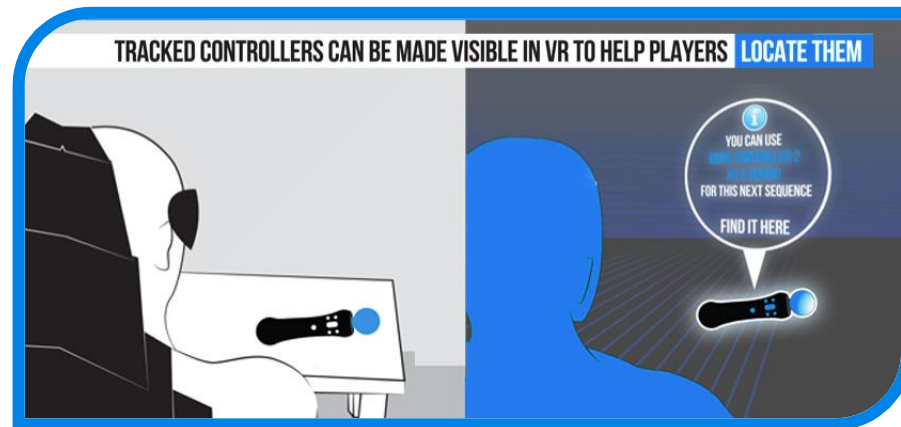
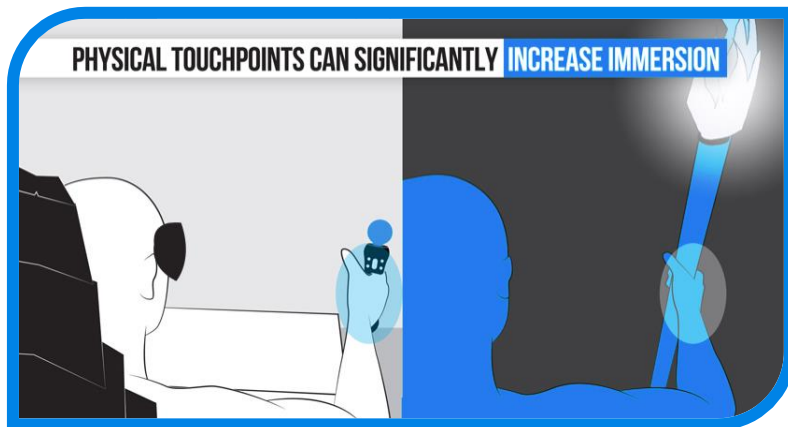


CONTACT POINTS CAN AID IMMERSION

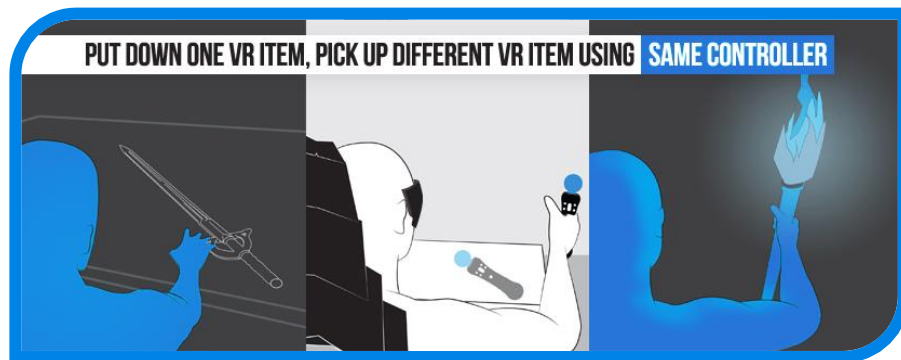




**THINKING ABOUT
THE MORPHEUS
DIFFERENCE**



**THINKING ABOUT
THE MORPHEUS
DIFFERENCE**





VIRTUAL PIONEERS NEEDED - APPLY WITHIN





WE'RE NO LONGER DESIGNING INTERACTIVE MOVIES

GIVE THE PLAYER WHAT THEY EXPECT

THE DEEPER THE IMMERSION, THE MORE FRAGILE

MISMATCHES ARE INEVITABLE

NEVER TAKE CONTROL OF THE PLAYER'S HEAD

PLAYER COMFORT MUST BE A PRIORITY

REBOOTING GAME DESIGN FOR VIRTUAL REALITY



GDC 'Eu



Jed Ashforth

Senior Game Designer, WWS Immersive Technology Group
Sony Computer Entertainment Europe

GAME DEVELOPERS CONFERENCE™ EUROPE
CONGRESS-CENTRUM OST KOELNMESSE · COLOGNE, GERMANY
AUGUST 11-13, 2014 · EXPO: AUGUST 11-12, 2014