Virtual Reality at CSU

FOSTERING EXPERIENTIAL LEARNING AND ENGAGEMENT WITH A VR CAVE

BARRY BRAUN . KRISTEN KRUEGER . KATHARINE LEIGH . KAIGANG LI . LAURA MALININ . ANNA PERRY
What is a VR CAVE?
Can you imagine.....?

...immersing yourself in simulations of the solar system based on imagery from the Hubble Telescope?
What about.....?

...traveling through the bloodstream to investigate diseased cells and their behavior?
And.....?

...interactively examining the brain of someone with Parkinson’s Disease?
Can you imagine .....?

...engineering a virtual prototype and walking through it to look for design flaws?
Or this.....?

...testing impacts of climate change on flooding potential for a proposed neighborhood design in China?
Could you collaborate and .....?

...train a medical team for complex procedures with simulations and real time feedback?
Can you imagine.....?

...competing in athletic challenges while recovering from surgery?
What if....?

... you could change perception of your body image to test weight management strategies?
How about.....?

...experiencing dementia, low vision, anxiety disorders, or other disabilities with your classmates?
Or.....?

...underwater exploration without gear to learn about biodiversity, water pollution, or reef conservation?
Navigating time and space.....?

.... to visit historical periods and places like the Battle of Gettysburg or the fall of Pompeii?
Why a CAVE for CSU?

VIRTUAL REALITY IS HERE TO STAY…

- CSU will lead the way as the ONLY university in Colorado with a CAVE.
- Students will advance beyond their peers in understanding implications of VR Technology for the future economy.
- New CAVE technology is more cost effective, easy to use, and portable than ever before.
- The CAVE will be part of a new VR Visualization Lab in which students can experience different modes of VR and explore potential applications.
- A CAVE will invite team and collaborative explorations.

The VisCube M4
How will we, as students, benefit?

A CAVE can be used by an entire class, a team of students, or for an individual project.
....providing access to futures technology skills + meaningful, high impact learning experiences

The VR CAVE will provide access for CSU students from diverse majors across campus to cutting edge technology not available at other universities and colleges in the state.

Access to this technology will prepare you to enter the workforce with unique applications and futures skills sought by industry TODAY.

- Powerful visualization capabilities
- Compelling sense of personal, social, and environmental immersion
- “Virtual” field trip activities
- Training simulations too costly or otherwise difficult to implement
- Analyze “real world” environments in real time, with real scale, in controlled settings
- Conduct experimental research with low cost and high control and ecological validity
- Easy and inexpensive to use; models can be made with SketchUp and other programs free to students
Viscube in the News

The [d]lab in Aylesworth Hall: A Collaborative Classroom Enhancing Creativity and Innovation
How and where will I gain access?

The [d]lab in Aylesworth Hall: A Collaborative Classroom Enhancing Creativity and Innovation
The Plan

The [d]lab in Aylesworth Hall: ID access to a secure space 24/7
Proposed new facility, located west of the stadium, provides access for students across campus
Today’s positioning as evidenced by the engagement of organizations including NREL and Disney into CAVE technology.

...positioning for the second wave of VR adoption; the curve is advancing upward...
Is this a good investment for my tech fee?

$90,000.00
TO SERVE 30,000 STUDENTS = $3.00 EACH
ONE TIME FUNDS

2016 NMC Horizon Report suggests universities plan to adopt VR within the next 2-3 years.

FIVE WAYS VR WILL IMPROVE EDUCATION:

1. Greater collaboration and social integration
2. Making new experiences possible
3. Increased student motivation
4. New rewards with a focus on positive stimulation
5. Inspiring creative learning

Disney says virtual reality “cave” is the future of immersion
- March 2015

- Many CAVE systems cost upwards of 500k
- M4 is $180k completely installed and portable
- Cost share with college, departments, OVPR.
Let’s make it happen at CSU!