

Building Virtual Worlds at UCI: Past, Present, Future

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The Virtual Reality Legacy

- Dreams and lucid dreaming
- Hallucinations: brain injury or psychoactive drug induced
- Physical, everyday socio-cultural worlds
- Physical fantasy worlds (Disneyland, *Burning Man*)
- Cyclorama and panorama venues
- Cinema, theater, concert and dome venues
- CAVE room, wall-based, or table-top
- Head-Mounted Displays, (audio, haptics?), PCs, mobile devices
- Symbolic worlds: literary, cosmological, musical, gustatory, etc.

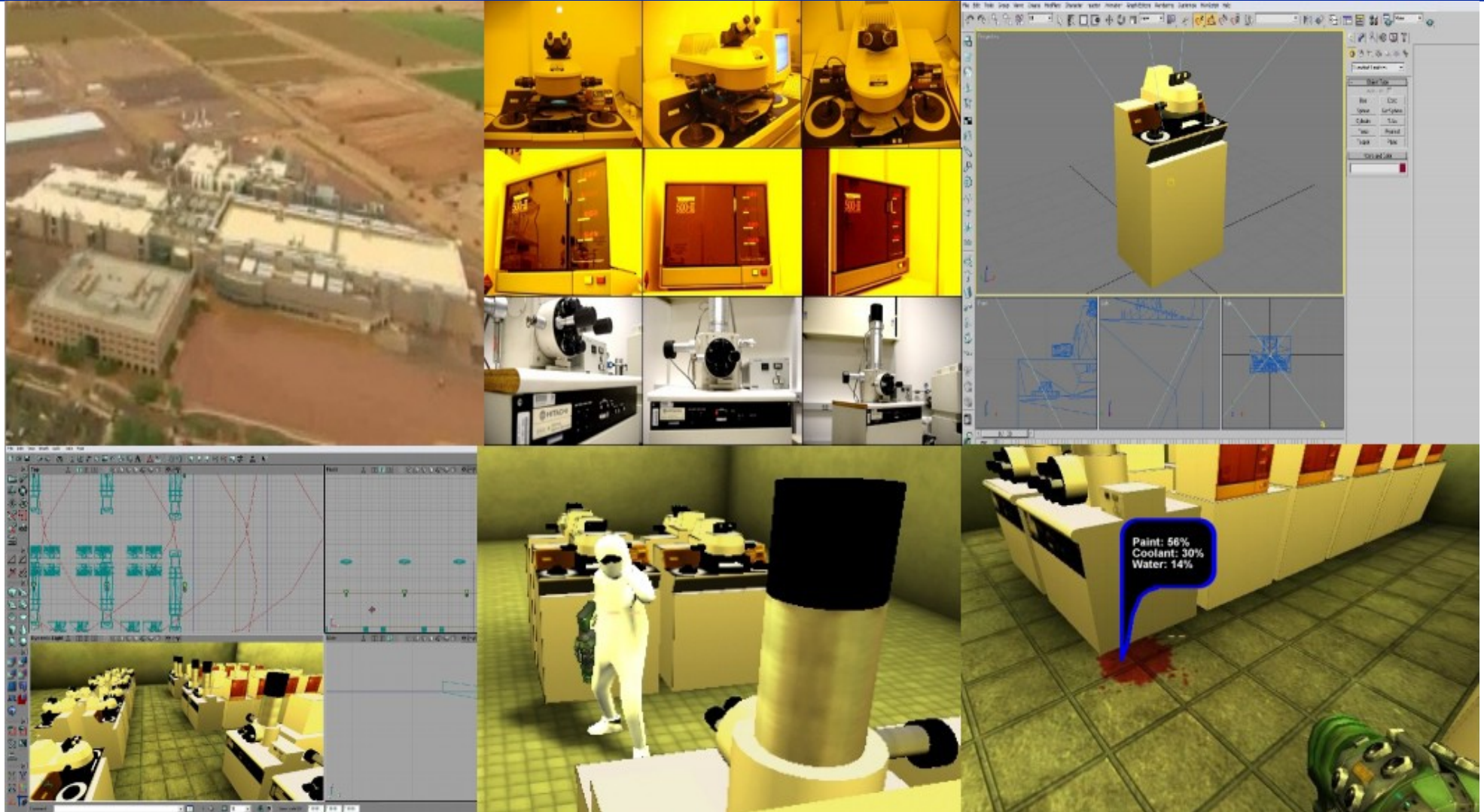
The Virtual Reality Legacy

- What is *virtual reality*?
 - Computer-mediated immersive presentation that encapsulates one or more senses that renders a virtual world for play, work, or learning activities
 - VR/AR is:
 - *Embodied* as technology affordances
 - *Rendered* as interactive media content
 - *Recognized* as immersive, flowing, and present user experience (*being there*)
 - VR is not one technology, content, or experience

DinoQuest Online: Game-Based Virtual World for Informal Life Science Education



FabLab: Semiconductor fabrication operations and diagnostics training game world



DECENT: Virtual world for experimentation in decentralized command and control



Large Group Virtual Research Conference



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Verisimilitude – how much is enough?



\$500 vs. \$5000 vs. \$50,000 vs. \$500,000 vs. \$5,000,000

Smart Workers and Augmented Work (with UCI Calit2)



Additional Information and Resources

- [*The Future of Research in Computer Games and Virtual Worlds: NSF Workshop Report*](#), (August 2012).
- [*Collaborative Game Environments for Informal Science Education: DinoQuest and DinoQuest Online*](#), (with R. Nideffer and J. Adams), *IEEE Conf. Collaboration Technology and Systems*, (CTS 2008), Irvine, CA 229-236, May 2008.
- [*Game-Based Virtual Worlds as Decentralized Virtual Activity Systems*](#), in W.S. Bainbridge (Ed.), *Online Worlds: Convergence of the Real and the Virtual*, Springer, New York, 225-236, 2010.
- [*Exploring the Potential of Virtual Worlds for Decentralized Command and Control*](#), (with C. Brown and K. Nies), *17th. Intern. Command and Control Research and Technology Symposium (ICCRTS)*, Paper-096, Fairfax, VA, June 2012.
- [VirtualWorldSociety.org](#) (Something New!)

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