Realizing a Multi-Disciplinary Center for Games Research at UCI

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Motivation

What are we doing?
- Empirical research and technology prototyping of computer games/virtual worlds (CGVWs) that support challenge problems in science, health care, art, technology and defense studies
- Collaborate with external R&D partners/sponsors
- High risk, adventuresome research projects
Why are we doing this?
- Computer games are both *technology* and *new media*
- *Play* and *work* are not fundamentally different activities
- Enable immersive and transformative learning experiences
- Engage new students and emerging scholars
- Realize the interests of more than 50 UCI faculty at IVECG
Some game R&D projects of interest

- Science learning games for informal science education at *Discovery Science Center*
- Game-based semiconductor fabrication operations training simulator at *Intel*
- Virtual worlds for space science on a sphere at *DSC*
- Game-based decentralized command and control training simulator for *Naval Postgraduate School* and *Northrop-Grumman*
- Informal classical music learning game environment for *San Francisco Symphony*
- Experimental games for business, cultural critique, art and technology
- Facilitating local game development community
- New projects in progress:
  - Games for Biological and NeuroScience Education
Web-based science learning games for informal science education for K-6th grade students and families

Semiconductor/nanotechnology fabrication training game

Semiconductor/nanotechnology fabrication training game: “gowning processes”
Planetary science data visualization and “spherecasting” support: *NOAA Science on a Sphere* installation in *Opensim VW* platform

Supporting virtual exploration of planetary and near-earth objects (space debris, small satellites, near-earth asteroids)
Mission Control Room: Vision for *Discovery Science Center*
VW for experimental studies in decentralized command and control centers using open source software (*OpenSim*)
Informal Classical Music Learning Game Environment: SFSKids.org
CBA: Customer relations work practices simulator implemented using low-cost, rapid micro-development cycle
2D, side-scrolling, *World of Warcraft* inspired, role-playing game and CGVW development/modding kit

Aoedipus.net
Envisioning a virtual social computing world
Modeling and Simulating the design of a Personal Rapid Transit system for Uppsala, Sweden
Game-based VW incorporating real-world news feeds and geopolitically located Twitter feeds
Game-based VW simulator interfaces for immersive motorsports racing experiences: *cost vs realism?*

$500 vs. $5000 vs. $50,000 vs. $500,000 vs. $5,000,000
Game-based VW simulator you can actually drive in physical world! -- *OutRun @ UCI*

http://www.conceptlab.com/outrun
Community development concept: Supporting UCI video game developers club projects (sample)
Community development concept: Supporting UCI video game developers club via Computer Game Science Laboratory
Community development concept: *IEEE Intercollegiate Computer Game Development Showcase (2012-2014)*

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**Game Event**

details about game event

Venue: University of California at Irvine in Bren Hall, Saturday, April 27. Setup starts at 11:00 AM. Main event starts at 2:00PM and ends at 4:00PM, followed by a reception with game demos from 4:00PM to 6:00PM. [READ MORE]

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**Our Esteemed Sponsors**

making this event possible

We have attracted even more sponsors this year, helping us make this event more exciting than ever. Please support these fine schools and companies... [SEE COMPLETE LIST]

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**Submission Guidelines**

our submission rules etc.

Submissions begin on April 1, 2013 at 12:01AM Pacific Time (PST), and end on April 7, 2013 at 8:00AM Pacific Time (PST). Finalists will be selected based on their one page Executive Summary and 3-5 minute YouTube video submissions... [READ MORE]
Game-Based Worlds for Neuroscience

Adventure/Quest games for learning neuroscience via experiments in simulated brain/anatomical testbeds to study:

- Neurobiological processes
- Disease and drug pathologies
- Brain repair and rehabilitation
- Brain-computer interaction (HMD, EMM, EEG, 5.1 headphones)
Games for Biology/NeuroSciences?
Research Collaborators

**Faculty**
– Robert Nideffer (RPI), Thomas Alspaugh, Jill Berg, Yunan Chen, Steve Cramer, Garnet Hertz (Emily Carr U), Alfred Kobsa, Jung-Ah Lee, Crista Lopes, Gloria Mark, Bonnie Nardi, David Redmiles, Richard Taylor, and many others

**Research Staff**
– Craig Brown (NomNom Games), Yuzo Kanomata (IGB), Kari Nies (ISR), Alex Szeto (American Honda, ISR), and others

**Students**
– UCI Video Game Developers Club
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– Digital Industry Promotion (DIP) Agency, Daegu, South Korea
– UCI Video Game Developers Club

😊 No review, approval, or endorsement implied.