Recent Advances in Computer Games and Virtual Worlds

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http://cgvw.ics.uci.edu
Overview

- Recent computer games and virtual world (CGVW) projects for Science or Technology R&D
- Future opportunities in CGVW for science and technology R&D
Recent CGVW Projects for Science and Technology at UCI

• Game-based science learning games exhibits for Science Centers
  – DinoQuest and DinoQuest Online
• Collaborative science learning and data exploration environment with spherical displays at Discovery Science Center and in OpenSim
  – Science on a Sphere
• Collaborative game world for semiconductor fabrication or nanotechnology design
  – FabLab training simulator
• Envisioning future virtual worlds for possible cultural experiences and new technological innovation opportunities
  – Virtual Life 2010+
  – Immersive motorsports racing experiences
    • Low-cost to high-cost virtual world simulators
      – OutRun @ UCI
• UCI undergraduate student game projects
  – Game Jams at UCI
  – Intercollegiate game development competition
Web-based science learning games for informal science education for K-6 students and families

Mixed reality games for informal science education for K-6 grade students and families at DSC

http://www.DiscoveryCube.org/
Spherical displays and “spherecasting” support: NOAA Science on a Sphere installation in Opensim
Game-based virtual world for semiconductor/nanotech fabrication training, remote presence and diagnosis

FabLab Demo Reel
Semiconductor/nanotechnology fabrication training game

working in a cleanroom

- Suit made of ultra clean material
- Battery pack for air filter system
- 2 pairs of gloves: nylon & latex
- 2 pieces of foot gear: disposable shoe covers & outer booties
- Helmet: includes air filter unit
- Will also wear hairnet & safety glasses
- Belt
Virtual Life Demo Reel
CBA: Customer relations training system 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
Game-based VW incorporating real-world news feeds and geopolitically located Twitter feeds
Game-Based Virtual World Simulator Interfaces for immersive motorsports racing experiences
Game-based VW simulator you can actually drive in physical world! -- OutRun @ UCI

OutRun: Augmented Reality Driving Video Game

YouTube
CGVW Laboratory and experimental game devices
Demos

Angry Hand of God

The Angry Hand of God Trailer

TAGS

3d afl artist blizzard business contest demo field trip first meeting game design game idea game industry leaders game industry professionals game jam GDC guest speaker help howto meeting mobile new room no meeting obsidian oc weekly opportunity pitch poll producer projects research rookies slides summer svn tips top this tour trivia night tutorial tutorials uci alum vgdc in the news video video game development club game @ UCI
Computer games developed by UCI video game developers club (undergrad students)
UCI students build video games in week

By IAN HAMILTON / THE ORANGE COUNTY REGISTER

After a week spent building a computer game from scratch, Justin Britch is sitting behind a laptop Monday night just five hours from an 11 p.m. deadline.

"We couldn't get our levels to work for a very long time," Britch tells Reza Ghassemi, president of UC Irvine's Video Game Development Club.

"For how long?" asks Ghassemi.

"Are they working now?" Britch, asks his teammates.

No, half the levels still don't work.

Britch, 19 and a resident of Mission Viejo, is participating in his second "Game Jam," a week-long marathon competition put on by the university's gaming club pitting teams of computer science, art and informatics majors working around the clock against one another to build computer games.

Though the games are simple, mostly two dimensional with flat maps and relatively simple multicolored animated characters, the third "Game Jam" competition held by the club is an opportunity for budding artists, game designers and programmers to add a finished product to their portfolio. And they do it in just a week while experiencing what it's like to work and collaborate on a project.

With video game giant Blizzard Entertainment nearby, UC Irvine is seeing an increase in the
First Intercollegiate Game Development Showcase (2012)

**Venue:** Chapman University, Folino Theater,
Saturday, April 28, 2012

**Game Event**
- Details about game event

**Contest Parameters**
- All platforms are acceptable. Submissions will be judged based on originality, creativity and execution—and on whether they are fun to play...

**Submission Guidelines**
- Finalists will be selected based on YouTube videos 3 to 5 minutes long. These should demonstrate gameplay and key visuals and should include the name of the game...

*Game Programming skills on Fire*
Future opportunities areas for collaborative R&D

• Science
  • CGVW-based Science Center
  • CGVW technologies for biological, chemical, ecological, and social science research

• Technology
  • CGVW for advanced manufacturing processes
  • CGVW-based training for software development
  • CGVW for developing, operating, and servicing of advanced automotive systems
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