Creating Opportunities for Computer Game R&D Projects

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Overview

– Motivation and self interest

– About game making projects: reflective practice

– Project examples

– Work in progress and game demo
What are we doing?
- Empirical research and technology prototyping of Computer Games and Virtual Worlds that support challenge problems in science, health care, art, technology and defense studies
- Serial research entrepreneurship!

Why are we doing this?
- Computer games are both *technology* and *new media*
  – An opportunity area for research and innovation in playful socio-technical systems
- Enable immersive and transformative experiences that facilitate learning through R&D, play and failure experiences
- Engage new students and emerging scholars
Research Collaborators

**Faculty**

**Post-Doctoral Scholars**
- Garnet Hertz (UCI LUCI)

**Research Staff**
- Craig Brown (SMU), Yuzo Kanomata (VDIO), Kari Nies (HRI/ISR), Alex Szeto (ISR)
– Actively participate in game culture and technology activities  
  * play/experience games, “read” game genres, socialize with gamers and non-gamers.
– Scour research funding sources for “game friendly” solicitations
– Get audiences with game-friendly sponsors
– Create game project concept realities
– Remix, reuse, repurpose, extend, blend prior Game project results/experiences
Some game projects of interest

- Science learning games for informal science education at Discovery Science Center
- Game-based semiconductor fabrication operations training simulator
- Virtual worlds for space science on a sphere
- Game-based decentralized command and control training simulator
- Experimental games for business, cultural critique, art and technology
- Facilitating local game development community
- New projects in progress:
  - World of Music, and Science Mission games
Web-based science learning games for informal science education for K-6 students and families: *DinoQuest Online*

Presenting *DinoQuest Online* at Game Developers Conference 2007 thanks to UC Office of the President
Semiconductor/nanotechnology fabrication operations and diagnostics training game

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
Planetary science data visualization and "spherecasting" support: 
*NOAA Science on a Sphere* installation in *Opensim VW* platform

Supporting exploration of planets, earth systems (ocean, climate) and near-earth objects (space debris, small satellites, near-earth asteroids)
VW for experimental studies in decentralized command and control centers
DSC Mission Control Room: Vision
Envisioning a virtual social computing world

Virtual Life Demo Reel
CBA: Customer relations work practices simulator implemented using low-cost, rapid micro-development cycle
2D, side-scrolling, *World of Warcraft* inspired, role-playing game parody and CGVW development/modding kit

Aoedipus.net
Game-based VW incorporating real-world news feeds and geopolitically located Twitter feeds
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 via Computer Game Science Laboratory
Community development concept: Supporting UCI video game developers club projects (sample)
Community development concept: IEEE Intercollegiate Computer Game Development Showcase

Intercollegiate Game Showcase 2012

Do You Have What It Takes?

Programming skills on Fire
Venue: Chapman University, Folino Theater
Saturday April 28, 2012

Compete in our Game Contest, Win Prizes, Earn Achievements & Fine Tune Your Skills

Game Event
details about game event
Venue: Chapman University, Folino Theater, Saturday, April 28. Setup starts at 1:00. Main event starts at 2:00 and ends at 4:00...
READ MORE

Contest Parameters
know more about contest
All platforms are acceptable. Submissions will be judged based on originality, creativity and execution — and on whether they are fun to play...
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Submission Guidelines
our submission rules etc.
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...
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New project: develop reusable framework for developing “science mission games”

Sample game activity: Capture a near-earth asteroid
**Work in progress:** Informal game-based music learning environment for 8-13 year old students
The Hampsong Foundation is pleased to introduce "Song of America," a 13-week radio series that reveals American classic song – poetry set to music by American composers – as a vibrant diary of the American experience.

Programs include Stephen Foster, dedicated exclusively to the 19th-century songwriter who is considered the father of American music; Song of Walt Whitman, examining the great poet as well as his deep influence on American composers; "There Is No Gender in Music," exploring the contributions of American women composers; and Langston Hughes and the Harlem Renaissance, which traces the roots and influence of the great 20th-century poet who gave jubilant voice to the lives of African Americans.
Interactive music composition application – Composerizer
New York Philharmonic KidZone Game Room

Choose a game to play!

privacy policy | credits | sitemap
Making Music, Morton Subotnick, Interactive CDRoms

www.creatingmusic.com
2D, side-scrolling, music composition game – *Mario Paint Composer*, c. 1993

*Bohemian Rhapsody*
Video Game Live – Game music symphonic performances
Goal: *Align* music learning games with National Standards

1. Singing, alone and with others, a varied repertoire of music.
2. Performing on instruments, alone and with others, a varied repertoire of music.
3. Improvising melodies, variations, and accompaniments.
4. Composing and arranging music within specified guidelines.
5. Reading and notating music.
6. Listening to, analyzing, and describing music.
7. Evaluating music and music performances.
8. Understanding relationships between music, the other arts, and disciplines outside the arts.
9. Understanding music in relation to history and culture.

Related Links:
- [Summary Statement](#) Education Reform, Standards, and the Arts—Summary Statement to the
- [National Standards for Arts Education: Introduction](#)
- [National Standards for Arts Education: A Brief History](#)
- [National Standards for Arts Education](#) (complete K-12 standards, hosted by ArtsEdge)
Informal game-based music learning environment: demo!
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– Digital Industry Promotion (DIP) Agency, Daegu, South Korea
– UCI Video Game Developers Club
– IEEE GameSIG

– No review, approval, or endorsement implied.