INFORMATION TECHNOLOGY / HYBRID DESIGN TECHNOLOGIES

IDIA LAB

INSTITUTE FOR DIGITAL INTERMEDIA ARTS
BALL STATE UNIVERSITY
virtual reality + hybrid arts + simulation + human computer interface

2011.2 UPDATE

UPCOMING EVENTS

VIENNA ARCHEOLOGY CONFERENCE

John Fillwalk will present HDT and IDIA work in hybrid design simulations at the 16th International Conference on Cultural Heritage and New Technologies 2011. November 14th – 16th 2011, Vienna, Austria.

INTERNATIONAL TOURING EXHIBITION

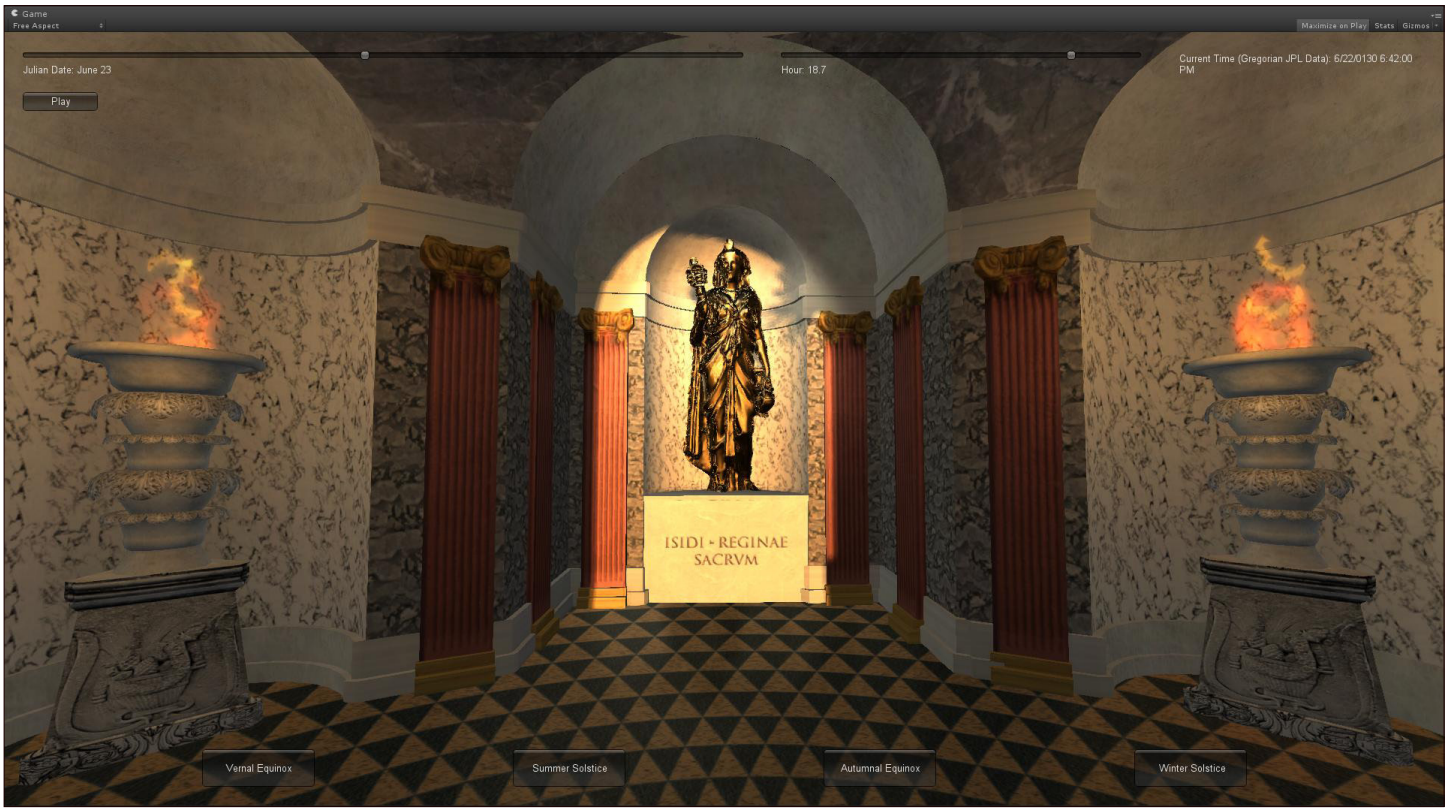
John Fillwalk's digital art work was accepted into The 24th Festival Les Instants Vidéo 2011. The exhibition will be on tour in France, Italy, Mexico City, Cuba, and India from November 2011 to December 2011.

"THE SENSES" MUSEUM EXHIBIT

IDIA staff is wrapping up production and installation on the Muncie Children's Museum exhibit "The Senses" from an immersive learning experience. Opening at Muncie Children's Museum Fall 2011.

NEWS

The Office of Information Technology has created a new unit, Hybrid Design Technologies - www.bsu.edu/hdt - an evolutionary extension of the IDIA Lab's successful innovation in virtual and hybrid environments. Current projects, events and accomplishments of HDT and IDIA include a National Science Foundation funded simulation project and virtual learning initiative with the Virtual World Heritage Laboratory at the University of Virginia that recreates Hadrian's Villa as a living museum; a sponsored invitation from the Indian Institute of Technology, Mumbai for their annual technology festival; an exchange program in Intermedia Arts with the Technische Universität Dortmund and BSU; and our commission from the Eli and Edythe Broad Museum of Art to create a virtual presence for the museum, designed by architect Zaha Hadid.



Roccabruna Interior - Statue of Isis showing solstice alignment, Hadrian's Villa

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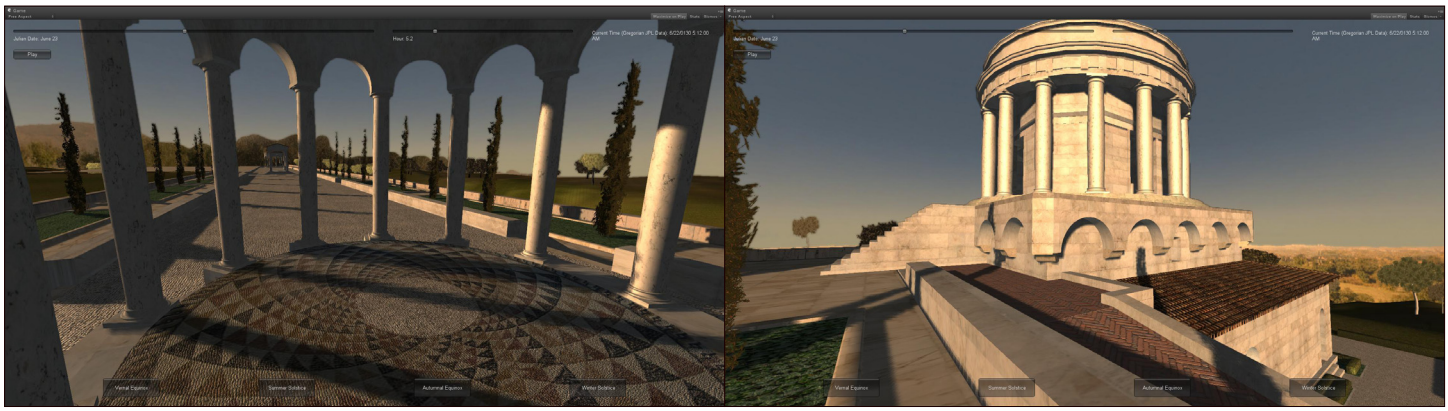
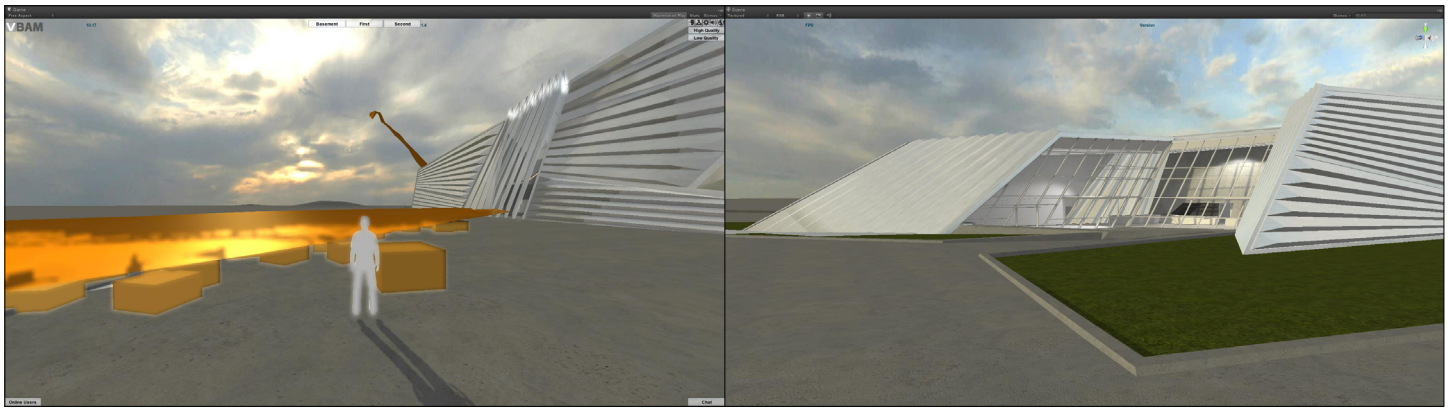


Esplande and Roccabruna exterior, Hadrian's Villa

NSF FUNDED VIRTUAL SIMULATION OF HADRIAN'S VILLA

IDIA Lab is designing and producing a virtual simulation of the villa of the Roman Emperor Hadrian, which is located outside of Rome in Tivoli, Italy. This project is under contract with the Virtual World Heritage Laboratory (VWHL) at the University of Virginia (UVA), directed by Dr. Bernard Frischer and funded by the National Science Foundation. This large-scale recreation will reconstruct the entire villa complex in consultation with the world's foremost villa scholars and educators. The project is being authored in the game engine of Unity 3D as a live 3D multi-user online learning environment and will allow students and visitors to immerse themselves in all aspects of the simulated villa.

The project will not only accurately recreate the villa buildings but also include a complete Roman avatar system, non-player characters with artificial intelligence, furniture, indigenous vegetation, dynamic atmospheric system and sophisticated user interface. The interface will not only provide learning, navigation, reporting and assessment opportunities but will also allow users to change the position of the sun to any date in 130 AD using data from the Horizons database at JPL NASA - testing theses of astro-alignments of architectural features during solstices and equinoxes. UVA students will be briefed on the culture and history of the villa as well as learn the virtual environment for five weeks prior to immersing themselves within it. The avatar system will allow for them to enter the world choosing class and gender - already being aware of the customs and behavior of the Roman aristocracy, soldier, slave or politician. This project will be delivered to VWHL at UVA in early March.



Virtual artworks for the Virtual Broad Art Museum Project [VBAM]

VIRTUAL BROAD ART MUSEUM COMMISSION

IDIA has been commissioned to design and build a virtual presence and artworks for the upcoming Eli and Edythe Broad Art Museum at Michigan State University. The physical Museum in East Lansing Michigan, designed by architect Zaha Hadid, is slated to finish construction in Spring 2012. Museum Director Michael Rush commissioned Fillwalk and the IDIA to envision and curate a dynamic program of exhibitions and events including virtual installations, visiting artists, lectures and even artist studio space for the Virtual Broad Art Museum project (VBAM). Fillwalk's works in collaboration with IDIA will be exhibited in the inaugural premiere of the project scheduled for late Fall 2011. The Institute is also working with project co-director and IDIA Lab fellow Adam Brown, MSU to virtualize one of his current works to be included in the VBAM program. IDIA is developing the project in the game engine of Unity 3D which will allow the virtual world to be experienced entirely within a web browser. Next steps include augmented reality and mobile art applications for future VBAM projects.

BALL STATE UNIVERSITY AND TU DORTMUND EXCHANGE PROGRAM IN INTERMEDIA ART

Ball State University and the Technische Universität Dortmund have partnered in creating an international exchange program for students studying the design and technology of Intermedia artforms. This program will provide opportunities for students and faculty engaged in experiential project-based approaches to the collaborative creation of new media art. The Hans Breder Foundation, which is a non-profit international Intermedia art organization, has contributed a significant body of historic artwork to the Museum Ostwall in Dortmund – the largest art museum in Germany. The archive will serve as a catalyst for research and production of Intermedia based projects initiated by the BSU and TU Dortmund exchange. John Fillwalk, also president of the Hans Breder Foundation, initiated the exchange program with the assistance of the Rinker Center for International Programs. He will be present at the formal signing ceremony on November 19th in Dortmund, Germany.

VIRTUAL MIDDLETOWN IN BLUE MARS PREMIERED

The Virtual Middletown Living Museum Project, which brings to life aspects of the 1929 and 1937 Lynd Study of Middletown America, is now live in the virtual world of Blue Mars. The project, which simulates the Ball Glass factory, incorporates various modes of learning and interaction while maintaining an immersive experience. Life and conditions in the factory were one of the key elements of the Middletown Studies by Robert S. and Helen Merrell Lynd in their landmark studies Middletown (1929) and Middletown in Transition (1937). These in-depth accounts of life in Muncie, Indiana, became classic sociological studies and established the community as a barometer of social trends in the United States. In the years since, scholars in a variety of fields have returned to Muncie to follow up on the Lynds' work, making this small city among the most studied communities in the nation.

Virtual Middletown Living Museum Project in Blue Mars

This simulation of industrial life, built as a prototype for a much larger project dealing with all aspects of the Lynd Study, has aimed to create a virtual living museum experience expanding the opportunities for both learning and interpretation. The approach to interactive design embeds learning and navigation experiences subtly into the project to maintain the sense of immersion. IDIA has prototyped several techniques to accomplish this - including interactive objects that allow for close up inspection, objects that when clicked bring up web-based content, and annotated plans or photographs used in the interpretation. Also, non-player character factory workers, a live interactive avatar of Frank C. Ball who greets visitors and introduces them to the factory, video and audio files of factory experts, and archival films - all assist in bringing the project to life. IDIA designed an in-world interactive Heads-Up-Display (HUD) that provides deeper investigation and navigation throughout the factory as well as a supporting webpage with complete documentation on all resources used in this interpretation. Project partners include the Center for Middletown Studies and Library Services. This project was funded by the Emerging Media Initiative at Ball State University.

Video walkthrough here: http://www.youtube.com/user/IDIALab#p/u/2/MYT4TRnRzqc
To download the Blue Mars client, create an account and tour Virtual Middletown, please visit:
http://blink.bluemars.com/City/IDIA_IDIALabExhibitions/

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HYBRID DESIGN TECHNOLOGIES AT BSU

Hybrid Design Technologies (HDT) is a new initiative through the Office of Information Technology at Ball State University, supporting the design and production of virtual, immersive and interactive environments - advancing the University's expertise in virtual cultural heritage, museums, arts, teaching and hybrid learning. John Fillwalk serves as the Senior Director of HDT, as well as directing the IDIA Lab. www.bsu.edu/hdt

BSU IDIA LAB NOW AUTHORIZED CRYENGINE 3 DEVELOPERS

The CryEngine® is a highly advanced development solution for the creation of games, movies, high-quality simulations and interactive applications. The third iteration of Crytek's proprietary CryEngine® allows for delivery on multiple platforms including PC, Xbox 360™ and PlayStation®3. The IDIA under HDT will be developing cinema quality, virtual learning projects, multiuser cultural heritage simulations and specialized R&D projects.

BSU'S IDIA LAB INVITED TO INDIAN INSTITUTE OF TECHNOLOGY

The Indian Institute of Technology in Mumbai, India has invited Ball State University's Institute for Digital Intermedia Arts and HDT to showcase our innovation in hybrid design and technology projects. In its 14th year, this international festival is the largest of its kind in Asia with over 70,000 attendees. Invitees have included CERN, Oxford, Nissan, Airbus and Google in this important emerging technology showcase.

NURSING INTERVIEW SIMULATOR

IDIA, in partnership with the BSU School of Nursing, developed and launched a new Nursing Interview Simulator in the virtual world of Blue Mars. Blue Mars is a next generation and high fidelity virtual world that uses the CryEngine game engine. Student nurses practice interviews via role-playing - using avatars with predefined health histories. http://bit.ly/riEpFb

VIDEO ART AT BSU MUSEUM OF ART

Renowned intermedia artist, Hans Breder, has donated a work of video art to the Ball State University Museum of Art. The work has been installed in a temporary new media gallery at the BSUMA. The reception for the exhibition was held on Thursday, September 15th and will be on display until November 27th, 2011. Breder's MFA program in intermedia at the University of Iowa was the first of its kind in the nation.

TWEETS

- Virtual Middletown press release in Hypergrid Business http://www.hypergridbusiness.com/2011/08/glass-museum-recreated-in-blue-mars/
- Developed the capability to use the Kinect SDK in Unity 3D to provide input for navigation and gesture based interactions in virtual worlds and games.
- The Video For Performance workshop students, in conjunction with Audra Sokol and students in the dance department, presented Metabellum at the Triskelion Arts Dance festival in Brooklyn, NY on October 15th and 16th. They performed live video with Max/MSP Jitter.
- BSU Summer Immersion Seminar in Animation at Heartland Film Festival http://bit.ly/ppCYqp
- Produced and published the following virtual walkthroughs:
  Rising Day in 1915 World's Fair in Blue Mars:
  http://www.youtube.com/user/IDIALab#p/u/0/DtQXXq7Z2mY
  Descending Night in 1915 World's Fair in Blue Mars:
  http://www.youtube.com/user/IDIALab#p/u/1/CBj0mRk7RLo
  Amida Buddha in Blue Mars:
  http://www.youtube.com/user/IDIALab#p/u/4/D_GkzrnHufc
- IDIA is developing a multi-screen interactive system responding to sound, light and proximity inputs.

About HDT and IDIA

Hybrid Design Technologies and the Institute for Digital Intermedia Arts engage artists, scholars, designers, educators, scientists, and technicians in the exploration of the intersections between the arts, science and technology. Scholarly, creative and pedagogical projects investigate virtual reality, human computer interface, visualization and 3D simulation. The lab develops projects in partnership with our international clients - investigating the forefront of discourse in emergent media design.

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