



BALL STATE UNIVERSITY

INSTITUTE FOR DIGITAL INTERMEDIA ARTS

COLLEGE OF ARCHITECTURE AND PLANNING

2021.1

UPCOMING

IDIA Lab is designing an immersive multi-player virtual world for Lumberyard, the new open-source game engine by Amazon. <https://aws.amazon.com/lumberyard/>.

The avatar-based world is centered around wellness and allows participants from across the globe to collaboratively learn and explore nutritional, physical and mental wellbeing in this cloud-based social experience.

IDIA Lab is under contract with the Department of the Interior to design augmented and virtual reality experiences for [Mesa Verde National Park](#). The Lab is developing AR solutions to bring traditional museum dioramas to life with fully animated and interactive immersive experience. Preview some of our prototypes here: <http://bit.ly/MesaVerdeIDIA>

College of Architecture and Planning's IDIA Lab creates technological innovation in the arts, sciences, and humanities. The Lab engages students, staff, scholars and clients in collaborative projects including 3D, virtual reality and mobile applications. This newsletter includes updates on current IDIA Lab projects including an artificial intelligence virtual patient for a healthcare simulation for the University of Washington, a permanent virtual reality exhibition including celestial alignments of virtually restored ancient Mounds culture for the Ohio History Connection, a multi-user simulation for the International MoonBase Alliance in Amazon's new open-source Lumberyard game engine, and our online learning and collaboration product - Meet 3D - which allows remote, shared 3D experiences.



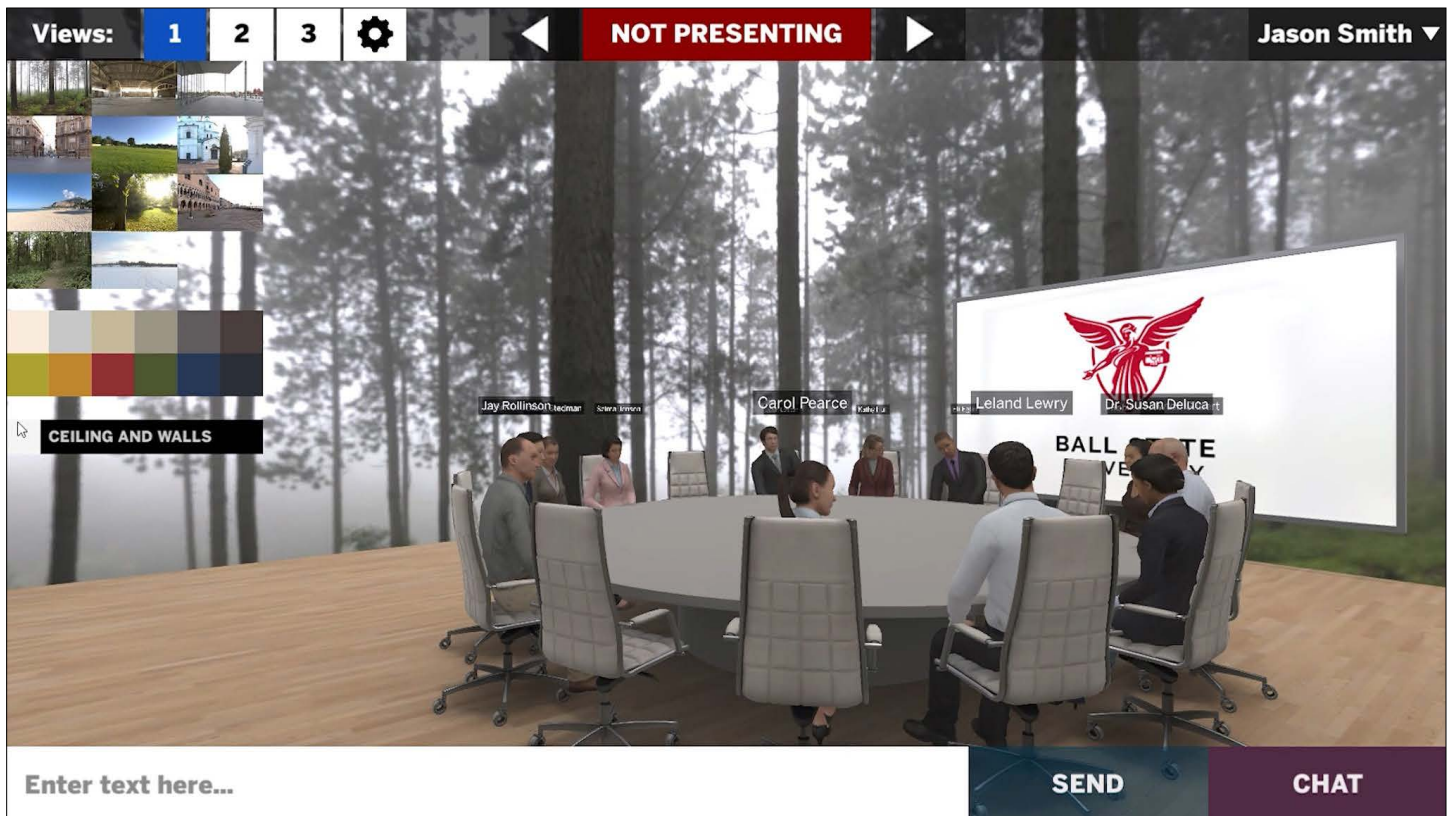
Meet3D

Virtual Conference Room

Your next online meeting or class could take place in a virtual forest or on the virtual surface of the moon thanks to a new collaboration platform developed at Ball State University.

Much like a video game, Meet3D allows users to choose avatars and interact with a shared digital environment, all while conducting business or learning. Meet3D is the brainchild of John Fillwalk, director of the Institute for Digital Intermedia Arts at Ball State, also called the IDIA Lab.

"I think people are getting Zoom fatigue," Fillwalk said. "Meet3D makes online meetings fun. It gamifies it a bit. The platform provides rich learning environments with a sense of play and collaboration."



Holodeck Meeting Environment

Research into human behavior indicates that people retain information more when they can interact with a space, whether in real life or in a virtual environment, Fillwalk said.

In Meet3D, the meeting administrator chooses the virtual environment. There are about 10 that come prepackaged, such as a Paris street scene, classrooms, conference centers and customizable meeting spaces.

Clients can customize prepackaged spaces with a company logo on the wall, for example. Or, they can have the IDIA crew build an entirely new personalized environment.

This Fall, the IDIA Lab used Meet3D technology to develop a Virtual Teaching Simulator (VTS) for Indiana University's School of Education. VTS allows preservice teachers (also called student teachers) to gain practical classroom experience at a time when many K-12 classrooms are empty and real-world opportunities are limited because of the COVID-19 pandemic.

The project is funded by a \$3 million grant from the National Science Foundation and is aimed primarily at pre-service math and science teachers.

Other partners in the IU project developed an online suite of practice-based teaching activities that take place inside VTS. Preservice teachers from IU can move around the classroom and engage with virtual student avatars, all while receiving feedback from a coach, according to IU associate professor of education Meredith Park Rogers.

"We must find a way to continue to prepare high-quality math and science teachers through this pandemic and beyond," Park Rogers said.

Meet3D participants pick from dozens of diverse avatars and can choose to interact with the virtual environment through the eyes of the avatar or from behind the avatar in a "third-person omniscient perspective."

Administrators even have the option of starting meetings with fun icebreakers, like exploring a Holodeck type

environment. The IDIA team is even working on a virtual escape room for remote team-building exercises.

Meet3D is available as an application or in a web browser. It also works with both desktop and mobile technologies.

“Meet 3D provides robust collaboration tools with a sense of play to augment the world of online meetings,” Fillwalk said. “This is something different and a new way to connect with people.”

By Nick Werner

<https://meet3d.online>



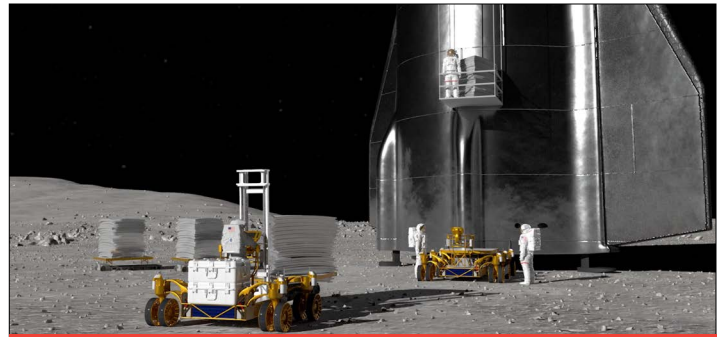
Fifteen years of teaching what we know, learning as we go, rebuilding the long-forgotten, and imagining what has yet to be seen. Thank you to all who have partnered with us as we explore the intersection of the arts, sciences and humanities. Here's to the next 15 years!

SIDES

- Check out the new work reel trailer of some of our latest work! Projects include the Virtual Broad Art Museum, Virtual Moon Base, History Channel Stonehenge and Ancient Rome!
<https://www.youtube.com/watch?v=SrfBdVqoeyY>
- IDIA Lab is revising our *Wishing Well AI* project that exhibited in Beijing at the [National Museum of China](#). The new version, which uses IBM's Watson and Amazon's Polly AI technologies is being updated and converted from Mandarin to English for exhibition in North America and English-speaking countries.



VIRTUAL NEWARK EARTHWORKS



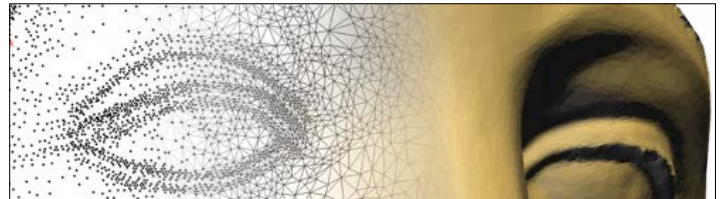
INTERNATIONAL MOONBASE

The Ohio History Connection and the Institute for Digital Intermedia Arts at Ball State University will collaborate in the creation of a new virtual reality exhibit for the upcoming Hopewell Ceremonial Earthworks: Wonders of the Ancient World exhibit at the Ohio History Center in Columbus, Ohio. Pictured is a small desktop prototype of the larger permanent immersive exhibition based on a four-sided virtual reality theater, or CAVE.

IDIA Lab is developing a multiplayer virtual world for the International MoonBase Alliance a consortium comprised of leading scientists, educators, and entrepreneurs from space agencies worldwide to advance the development of an international base on the Moon. The virtual moon base is being developed in Amazon's new game engine, Lumberyard and will represent past and future moon exploration and settlement.



UNIVERSITY OF WASHINGTON AI BOT



Studies in Digital Heritage

a peer reviewed, open-access journal



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The University of Washington has contracted with IDIA Lab to further enhance one of our interactive patient simulators through artificial intelligence. Using IBM's Watson AI and Amazon's Polly voice synthesis, students will be able to interact naturally with automated patients while employing the communication standard of TeamSTEPPS, developed by the Agency for Healthcare Research and Quality. http://bit.ly/AI_UW

John Fillwalk is serving on the editorial board for the open-access journal, Studies in Digital Heritage published by Indiana University ScholarWorks. The journal promotes the open exchange of information and knowledge among researchers, practitioners, and policy makers who strive to improve the collection, use, management, preservation and dissemination of Digitized Cultural Heritage. http://bit.ly/SDH_IDIA

ABOUT IDIA

The Institute for Digital Intermedia Arts at Ball State University explores the intersections between the arts, sciences and technology. Scholarly, creative and pedagogical projects investigate virtual reality, Human Computer Interface, augmented reality, mobile apps, visualization and 3D simulation. The lab's staff, faculty and students develop collaborations in partnership with a host of international clients in this innovative studio initiative developing projects at the forefront of emergent media design.