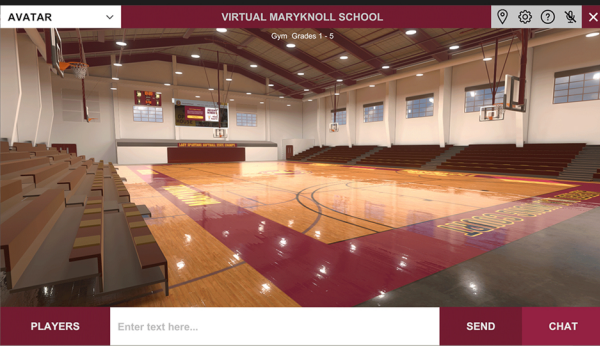


IDIA LAB 2024 HIGHLIGHTS



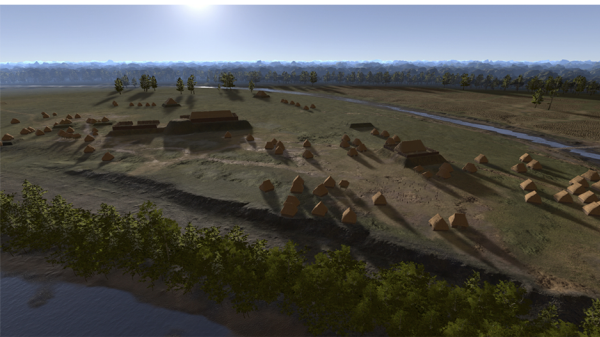
Virtual Elementary School

IDIA Lab's Maryknoll Virtual School is a digital twin simulation of an elementary school in Honolulu, HI. The virtual school provides an environment for students and teachers to remotely engage in collaborative real-time lectures and conversations in a multi-player, avatar-based teaching environment. The application also provides administrators the ability to monitor admission, registration, class assignments, and grading through an extensive management portal. The application allows for communication via chat, voice, whiteboard, screen share, in-world video conferencing, and file sharing.



BSU Hosts National XR Conference

Ball State University's IDIA Lab hosted the Campus Alliance for Advanced Visualization's annual conference (CAAV) at the Estopinal College of Architecture and Planning. The CAAV is a nonprofit organization that promotes the capabilities for use of extended reality technologies, such as CAVE-style immersive VR systems, video walls, head-mounted displays, and advanced visualization software employed in research, learning and public engagement.



Indiana University Museum Exhibition

BSU IDIA Lab recently launched its virtual reality exhibition interpreting the Angel Mounds heritage site at the Indiana University Museum of Archaeology and Anthropology (IUMAA). The gala ribbon cutting event opened a portion of the collections of the former Glenn Black Laboratory of Archaeology and the Mathers Museum of World Cultures. The virtual exhibit, entitled *City on the River*, is a large scale immersive 360 degree VR CAVE experience which place viewers in the community on the Ohio river over 900 years ago.



National Award: Virtual Escape Room

The BSU College of Health and ECAP's IDIA Lab were honored with a national award for their collaborative virtual escape room project. The serious game, "The Case of the Kidnapped Healthcare Professionals: Virtual Escape Room" was selected to receive the Creativity in Practice and Education Award from the National Academies of Practice (NAP). BSU's Lori Porter accepted the award on behalf of the project team Karrie Osborne, PhD, RN, Blair Mattern, John Fillwalk, IDIA staff and Katherine Berryhill for their work in developing the project.



Rutgers Healthcare Simulation

IDIA has designed a virtual training simulator for Rutgers University's School of Health Professions. The project immerses students within TeamSTEPPS, Team Strategies and Tools to Enhance Performance and Patient Safety. Students learn best practice inter-professional communication strategies and apply them in lab-based scenarios in a single-player simulator created in the 3D game engine of Unity. The experience is designed with branched dialogue trees to provide decision making opportunities to assess learned concepts as they are applied to various healthcare scenarios.

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IDIA LAB 2024 HIGHLIGHTS



Pumapunku Eastern Plaza West

BSU IDIA Lab on History Channel

Ball State University faculty John Fillwalk, senior director of the Institute for Digital Intermedia Arts (IDIA Lab) and professor of electronic art, is merging cutting-edge digital technology with archaeological research. His latest project involves bringing Pumapunku, an ancient temple in the pre-Incan city of Tiwanaku, to life through digital modeling, offering new perspectives on one of the world's most mysterious archaeological sites. IDIA Lab's virtual interpretation of this significant site in modern day Bolivia, was highlighted in a recent series produced by the History Channel.



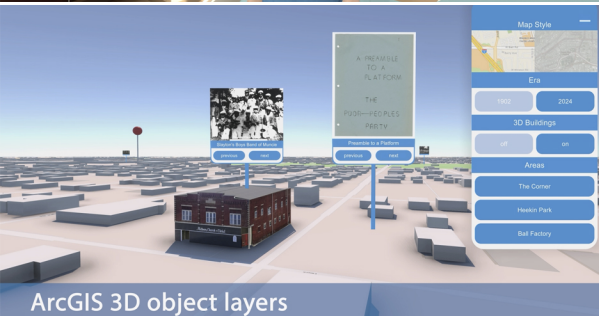
National Space Settlement Summit

The National Space Settlement Summit sponsored by NSS brings together scientists, companies and organizations that are making space settlement a reality. Participation in this event is for participants who will set the cultural message of near term space settlement and those who will build and finance it. IDIA Lab exhibited a series of virtual space simulations in Phoenix, AZ that facilitated next-generation concepts for international lunar habitat design for the International MoonBase Alliance (IMA) - an association of leading space scientists, educators, and space agencies.



Artificial Intelligence ChatBots

IDIA Lab's AI chatbots provide interactions with 3D animated non-player characters (NPC) that are created with customized AI persona profiles. Users can converse with NPCs via voice or text input, where the virtual characters use AI to assess the tone of the conversation - simulating responses complete with facial animation, gesture, and vocal intonation. The lab engages ChatGPT and other AI software to assemble an integrated experience within the game engine of Unity to offer robust real time user engagement. The platform provides an infinite variety of customized NPC profile modeling - from historical characters to highly specific interactions.



ArcGIS 3D object layers

Deep Mapping Middletown

IDIA Lab collaborated with BSU's Center for Middletown Studies to create Deep Mapping Middletown. The simulation connects archival data, ArcGIS, and the web to create an immersive and spatialized representation of data. The project was presented in Bamberg, Germany at the Spatial Humanities 2024 Conference. The Middletown Study is among the most influential interpretations of twentieth-century American life, inaugurated a tradition of using this small Midwestern city as a barometer for assessing broader social and cultural trends in the United States.



Virtual Courtroom Simulator

IDIA Lab collaborated with BSU faculty Brandy and Greg Rocheleau from the Department of Criminal Justice and Criminology on the production of a Virtual Courtroom. The project, funded by BSU's Women of Beneficence, is a program designed to allow students in designated criminal justice classrooms to participate in courtroom simulations through the use of avatars to facilitate knowledge and empathy as well as practice decision-making skills in a courtroom setting.

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