iUniverse: Creating a Collaborative Information Universe for Indiana University

Katy Börner <katy@indiana.edu>
User Interface Design Class at SLIS, IUB
... Uses Active Worlds Technology and ...
... Offers “Design Deal” to Interested Faculty ...

You could teach your class right here!
Just send us a project specification that contains:

- Title of the project.
- Name of main contact person.
- Description of learning content & objectives in lay terms (what skills physical or cognitive are required).
- Explanation of why 3D is required/advantageous.
- A vision of how the 3D world should look like and a short story of what visitors will experience.
- A list of all material (text, images, 3D objects, audio files) that can be used to design the environment.
- Number of users that will potentially use this environment in the next 2 years.

And we may build this virtual environment for you!
Why Collaborative 3D VE’s?

- Provide access to multi-modal data anywhere and at any time.
- Support distributed collaboration of people with different skills and expertise spread out in space and time zones.
- Interpretive spaces and objects improve information navigation, management, and learning.
- Realtime, object-based construction.
- Artificial intelligence robots for interaction.
Current Projects:

- Natural Disaster Area
- Science House
- Quest Atlantis - Educational theme park for the Boys & Girls Club in BL
- Virtual Collaboration Area
- Art Cafe
Come Visit the iUniverse!

Download the free Eduverse 3-D browser from
http://objects.activeworlds.com/browsers/eduverse.exe

Install it by double clicking the eduverse.exe file,
launch the browser, and visit us in the world ‘iUni’.

More information is available at
http://ella.slis.indiana.edu/~katy/iUni
Map of iUni

- Residences
- Object Yard
- Meeting Place
- Virtual Collaboration
- Library
- Art Cafe
- Natural Disasters
- Science House
- Ground Zero
- Quest Atlantis
Development of iUni
iUni Today
Go !
Tue, 16 Jan 2001 03:30:20 Demo building in AW to Min Xiao then everything freezes.

Tue, 16 Jan 2001 19:48:26 Just a quick note to let you all know that due to a technical issue the AWEDU universe will be offline for the next 48 hours while we resolve the problem. I apologize for the inconvenience this may cause your projects or schedules. Mandee

Thu, 18 Jan 2001 13:02:07 Any prediction on when we will be up again? Thanks, Margaret

Thu, 18 Jan 2001 15:24:01 Sorry to hear that you are having a technical glitch, We have all been there. So what broke? Margaret

Sat, 20 Jan 2001 22:48:09 Just to let everyone know what's up. It seems that earlier in the week the server that hosts the AWEDU suffered a "catastrophic disk failure" - unfortunately I've no additional details. I've been told this morning that we should be back up and running by Wednesday. Again, my apologies for the inconvenience. Mandee
Fri, 26 Jan 2001 20:38:29 ... last week the server upon which the AWEDU is hosted and the data is stored, suffered a "catastrophic" disk failure. If this was not bad enough it was during a back-up and upgrade of both the system and the power supply. As a result the data, and the back-ups of that data, have been rendered inaccessible for the time being. Rick Noll

Sat, 27 Jan 2001 14:52:36.. I only have a pretty old propdump of my world, so if you can get it from the cache it'll be just wonderful... Cinzia, Vetunimi World

Mon, 29 Jan 2001 13:27:53 Yes I agree ... you don't know what you've got until you lose it, this is my second experience...so I knew exactly what I had got Cinzia, Vetunimi World

Mon, 29 Jan 2001 07:50:59 All of the data that actually makes the universe relevant and functional is part of what's inaccessible. However, we did get a message from the second data recovery firm saying that they've gotten access to everything and it looks like we should be back up and running on Tuesday. Mandee
Dear AWEDU Participants
I am very happy to be able to send out this email . We have been able to recover all the data on the drives involved in the crash. AWEDU is intact and running and Nelson and Bill are performing an upgrade to the 3.1 software upgrade. All the projects and SDK apps should be intact and running this evening. If anyone has any problems with their world please do not hesitate to contact us for help. Thank you for all the patient and kind responses over the weekend. It was very distressing to have a failure on a flagship project like AWEDU. The EduVerse now has a dedicated backup machine and UPS. I hope that you all feel comfortable that AW will continue to offer even better service for all your projects. Please feel free to contact Mandee or myself if you have any additional questions or I can assist in any way. Thank you for your patience.

Rick Noll, CEO, Activeworlds.com, Inc. (978) 499 0222
Let’s have a look at the different Learning Environments ...
Natural Disaster Area

- Designer: Maggie Swan
- Collaborator: Professor Bill Harwood, School of Education
- Intended User Group: Youths at Boys & Girls Club in BL. (Coordinated with Quest Atlantis)
- Purpose:
  Users will learn about natural disasters and the different levels of damage they can do by interacting with various types of buildings/structures in a realistic setting.
Sights & Highlights

- 4 different types of realistic structures:
  - Skyscrapers
  - Wood cabin
  - Metal shelter
  - Brick house:
Sights & Highlights

- Images, sounds, video of tornadoes in action

Bank One Building

South Side

Photographs by: Jesse Rangel, USACE
Sights & Highlights

- Accompanying web site at:
  http://vws3.avl.indiana.edu/team2/home.html

- Learning lesson web pages for educational value:
  http://vws3.avl.indiana.edu/team2/lesson1.html
Go ΨΗΠΙ!
Science House

- **Designer:** Kent Holaday, MIS Student
  School of Library and Information Science
- **Collaborator:** Bill Harwood, Professor
  School of Education
- **Intended User Group:** General Public, Science Students, and Science Educators
- **Purpose:** 3D Virtual Science Dictionary
Sights & Highlights

- Objects linked to web pages or virtual worlds describing science of how object works.
- Computer in Office links to UCBCOB world ‘Virtual Computer’.
- AC unit in back of Science House links to web page describing air conditioning.
Go  "ψην" !
Quest Atlantis:
Educational Theme Parks for Kids

- Designers: Hakan Tuzun & Mark Dial
- Collaborator: Dr. Sasha Barab
- Intended User Group: Children, Ages 6-14 at the Bloomington Boys & Girls Club
- Purpose:
  Provide a collaborative 3-D learning environment. A place where children can view their earned Power Points in Quest Atlantis.
Sights & Highlights

Quest Atlantis Entrance
Web page & Virtual tour links

Teleports to other Learning Environments

Quest Atlantis Courtyard
Go ΨΗΗ !
Art Cafe

- Designers: Lilly Lu, Gertrud Peters, & Sy-Miaw Lin
- Collaborator: Lilly Lu
- Intended User Group: those who are interested in art appreciation
- Purpose:
  - Sharpen viewers' sensibility & perception to artworks.
  - Build viewers' visual vocabulary & their visual concepts.
  - Enhance viewers' understanding & appreciation about works.
  - Assist viewers in organizing & verbalizing their aesthetic experience.
Sights & Highlights

- The Garden Area of Art Coffee
Sights & Highlights

- Café House
Go ḟәәη !
Virtual Collaboration

- Designers: Randy Fisher & Tim Bowman
- Collaborator: Allan Dennis, Kelley School of Business
- Intended User Group: Business Professionals
- Purpose:
  Virtual meeting space for business persons that could incorporate streaming video, streaming audio, and the 3D environment offered through Eduverse. This meeting space would allow people around the world to go online and conduct a business meeting, keep meeting minutes through real-time chat, while "building" diagrams or flowcharts in a 3D environment.
Sights & Highlights

At the Sign-In Booth, users will be able to view events, examine previous minutes from other meetings, sign-in, and see who is in the world currently by clicking on the main screen and viewing the Webpage.

The Social Lounge area is designed to facilitate interaction among users when there is no speaker or during a meeting break. Soft, party noise can be heard in the background and couches and tables are used to set an informal atmosphere.
The Speaking/Building Area is designed to facilitate meetings from anywhere in the world. Here, a user can park their avatar and watch the big screen for real-time streaming video of the person heading the meeting and listen to streaming audio piped through the audio speakers while inside the speaker/building area.

The Speaking/Building Area on Level 2 is also designed to facilitate meetings from anywhere in the world.
Go ΨΗΠΙ!
Future Plans

ITR/PE: The Quest Atlantis Project: Building a Sustainable Socio-Technical Community.

grant proposal by Sasha Barab, Katy Borner and Bill Harwood
Lessons Learned (I)

- Students designed multi-modal, collaborative learning environments. Connected 2-D and 3-D space.
- Design of learning environments requires knowledge about instructional techniques.
- Final projects enable IU faculty to check-out AW technology for their teaching needs. However, students need their advise to design good projects.
Lessons Learned (II)

- Interaction in 3-D is valuable for remote collaborations but inefficient.
- Persistent conversation space is needed.
- Purchase of AW universe server for IU should be considered.
- User tracking tools that could be used to optimize world, assess learners, etc. are missing.
Outlook

- Refinement of Learning Environments.
- Design of Collaborative Information Spaces.
- Usability Tests.

- July 2001: Workshop “Using 3-D technology to develop innovative approaches to education”

- Fall 2001: L578 course on ‘Collaborative Information Spaces’ will be taught again (educational & e-commerce projects)
Investment firm pours $21 million into iUniverse ... a leading provider of digital publishing devices.

Library Journal Academic News Wire, Jan 18th, 2001
iUni is supported by Indiana University's High Performance Network Applications Program (2000/2001).

I would like to thank Mandee Tatum and Lucrezia Borgia, Active Worlds for their advise, Rick McMullen for his technical support, and to Brian Horvitz and students taking the User Interface Design class in Fall 2000 for filling iUni with content and life.
Interested to join the interdisciplinary design team?

Contact katy@indiana.edu!