

# Introduction to Virtual Environments - A Collaborated Classroom Offering between PU and IU

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# Course Background

- Introduction to Virtual Reality/Virtual Environments
  - What is VR?
  - How/why to use VR?
  - Hardware and software for VR
- Grad level class
  - PU TECH 519V
  - IU I590

# Course Format

- Joint Lectures
  - 2 per week, each 75min
  - Concentrate on theory, background
  - Instructors alternate lectures
- Independent Labs
  - 1 per week, approx 1 hour
- Student presentations
  - Each student gives one 20 min paper presentation during a lecture

# Access Grid

- [www.accessgrid.org](http://www.accessgrid.org)
- Collection of resources to support group-to-group interactions such as teleconferencing
- Software created at Futures Lab at Argonne National Labs. Runs over Internet2.



Images from  
AGFocus, Fall  
2003.



# WebCT

- Web-based software to create on-line courses or complement traditional classrooms
- [www.webct.com](http://www.webct.com)
- Lecture notes and other materials
- Discussion boards, email, etc
- Grades and assignments (PU only)
- Need guest accounts for IU

# Similar Course Offerings

- Previous “Intro to VR” at both IU and PU
- Other distance learning/collaborative VR courses such as Iowa State University “Virtual Environments and Applications”
  - Some offerings included multiple sites such as Virginia Tech and Old Dominion
  - Did not use AG, much more expensive

# Advantages

- Less expensive
- AG can run on PC, more students from remote locations
- Larger class size
- Less instructor overhead
- Students hear from multiple instructors
- Opportunities to bring in experts with less expense
- Projection-based allows VR demos in class
- VHS/DVD to make up missed class
- Occasional remote teaching

# Advertisement

- Today 2:30-3:45
- PIG in the exhibits/demos
- Join in the class



# Student Response

- Independent of technology, course has lots of good info. Wide variety of areas for VR use.
- Course materials very interesting.
- One of my favorite classes.
- Like having 2 instructors with real experience to cover more topics.
- Glad I'm finally getting to take a class that actually uses technology instead of old boring classroom.

# Student Response-2

- Audio problems are very annoying
- More difficult to pay attention to non-local lectures.  
Audio related?

# Techie Complications

- Multicast problems
- Choppy audio
- Video codecs
- Slow VNC update
- No back of room screen

# Lessons Learned

- Scheduling difficult
  - Time zones will be worse
- Have tech backup (polycom, distribute PPT) & node operator
- Make students introduce themselves first day
- Remind students of microphones
- Having 1 outgoing student helps a lot!
- Extra pauses for questions
- Check “special stuff” in advance (video)
- Have time for short local discussion before or after

# Lessons Learned -2

- Department/School support important
- Instructors must work well together & be flexible
  - Realize course content must meet many different guidelines/standards/desires
- Technical content may need adjustment for students of different backgrounds and different access to technology. Must be more general but still practical.
- Choose the right class
  - Not an important prerequisite for other classes
  - Technology related helpful

# Future Courses

- Fall 2004
  - PU
  - IU
  - Iowa State
  - Others?

## References & Contact Info

- Course website: [www.avl.iu.edu/I590\\_VR/](http://www.avl.iu.edu/I590_VR/)
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