CS-525V: Building Effective Virtual Worlds

VR as a Medium

Robert W. Lindeman
Worcester Polytechnic Institute
Department of Computer Science
gogo@wpi.edu
Plan for Tonight

- VR as a medium
- What is a survey paper
The VR Medium

- We use media to communicate ideas
  - Film
  - Books
  - Paintings

- The message travels through several hands
  - Composer/writer/designer
  - Tools
  - Presentation materials (performers, gallery)
  - Transport medium
  - Viewer/player
The VR Medium (cont.)

- Each step changes the message somewhat
  - E.g., bad/good actors, picture vs. chapter books

- What is received is rarely what was originally intended
  - Is this bad?
Balancing User Control and Story

- Storytelling in VR and games requires
  - Putting together interesting content
  - Making sure the user experiences the content

- How can we balance the desire for control by the user with the need to tell the story?

- How can the technology be used as an asset rather than a liability?
User Sophistication

- Movies were very simple at first
  - Train entering a station, factory workers leaving for the day
  - Fixed camera view

- Audiences became more sophisticated/jaded

- Film makers became more artistic

- Trying to get at viewer's head, rather than just the senses
  - VR and gaming are not there yet!
The VR Interface

- The user only gets what we give
- How can we effectively use VR interfaces?
- Control of time and space
  - Should the user have to traverse a large space at 1-to-1 speed?
  - Should the user be allowed to replay events?
  - How should these controls be provided?
Representation of Self

- How should the user "look" in VR?
- Is a hand enough?
- Do they need feet?
- How should others look?
- Is "perfect" fidelity necessary (desirable)?
Goal of the Application

- Inform
  - Transfer some knowledge to the user

- Persuade
  - Change the user's mind

- Entertain
  - Have fun!

- Escape
  - Simulate something impossible

- Experience
  - Have the user experience something the author has experienced