IRPO 329: Health Physics

May 2nd, 2008

Health Physics

- **Health physics** is a field of science concerned with the evaluation and control of health hazards and is focused on the safe use of radiation

images' source: http://www.ansto.gov.au/

Problem

- How do we train a health physics professional?
- Self-administering a practice oral exam requires an entire board to carefully prepare and deliver a scenario
  - This is time-consuming and difficult

IPRO 329's Solution

- Develop an innovative health physics training simulation for Radiological Control Technicians (RCT)

Priorities

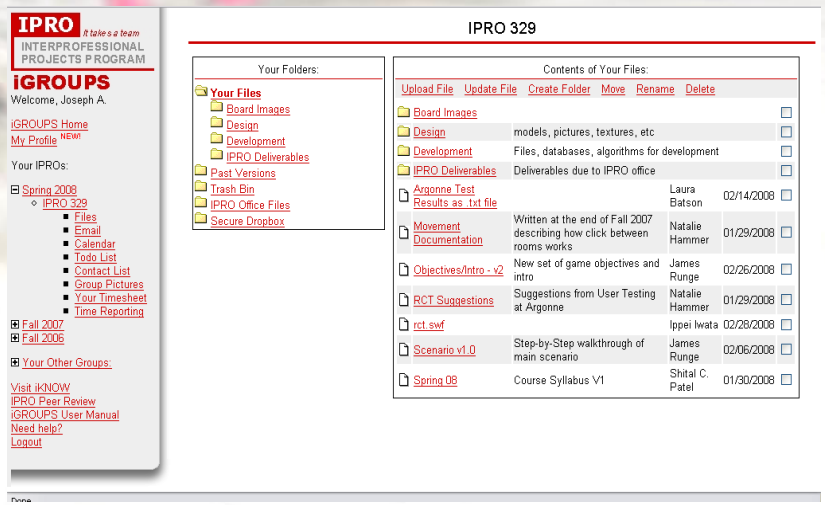
- Priorities for Spring 2008:
  - Modernize existing Graphical Display
  - Enhance realism of scenario
  - Ensure usability of the simulation
  - Produce a shippable product

Team Structure

- Project Management
  - Natalie Hammer, Electrical Engineering
  - James Runge, Physics
  - Mickal Kaska, Mechanical Engineering
- Design
  - Shubhi Sharma, Biomedical Engineering
  - Asad Akram, Electrical Engineering
  - Joel Huish, Electrical Engineering
  - Jeff Rebacz, Computer Engineering
  - Heajin Lee, Professional and Technical Communication
  - Ippei Iwata, Architecture/Structural Engineering
- Development
  - Joseph Lloyd, Computer Science
  - Mikhail Zaturenskiy, Computer Science
  - Daniel Rutherford, Computer Science

Project Management

- Information and task management
- IPRO deliverables
- Design/Development supervision
- RCT scenario

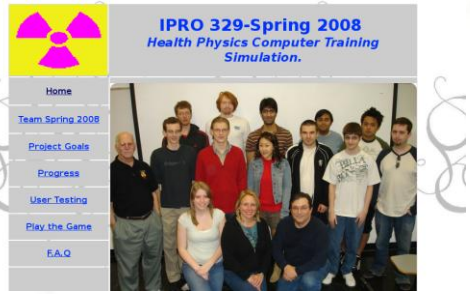


Design

- Scenes

- Inventory items

- IPRO 329 Website



http://www.iit.edu/~ipro329s08/

Design

- A total of 21 scenes were created

Before

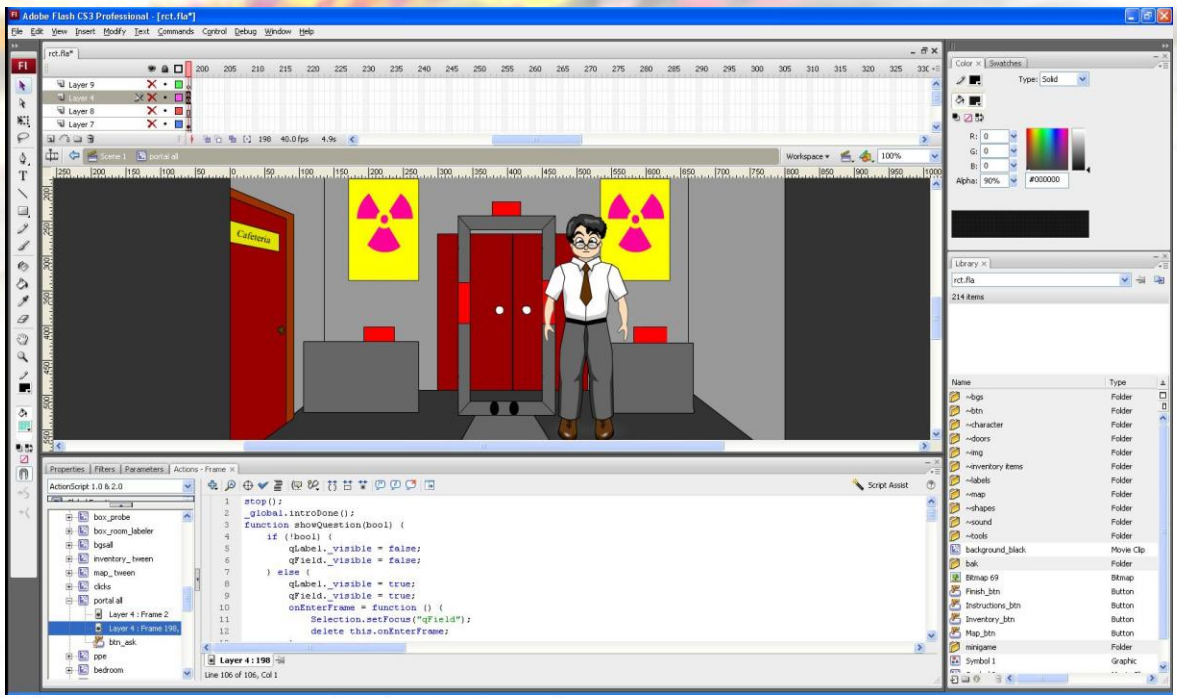
Construction site scene created last semester

After

Construction site scene created this semester using Blender

Development

- User interface
- Item functionality
- Worker AI



Usability

- Usability testing was conducted at Argonne National Laboratory on April 11th
- 6 Health Physics Professionals reviewed the work to date
- Data was gathered and analyzed
- Product enhancements were made based on gathered data

The Product

- **The RCT Training Simulation** is a deliverable product based on the progress of IPRO 329 for Spring 2008

Product Demonstration

Questions?

IPRO 329 Team

- Natalie Hammer, Electrical Engineering
- James Runge, Physics
- Mickal Kaska, Mechanical Engineering
- Shubhi Sharma, Biomedical Engineering
- Asad Akram, Electrical Engineering
- Joel Huish, Electrical Engineering
- Jeff Rebacz, Computer Engineering
- Heajin Lee, Professional and Technical Communication
- Ippei Iwata, Architecture/Structural Engineering
- Joseph Lloyd, Computer Science
- Mikhail Zaturenskiy, Computer Science
- Daniel Rutherford, Computer Science

Advisors

- Laura Batson
- Laurence Friedman
- Anthony Mcfadden
- Greg Pulliam