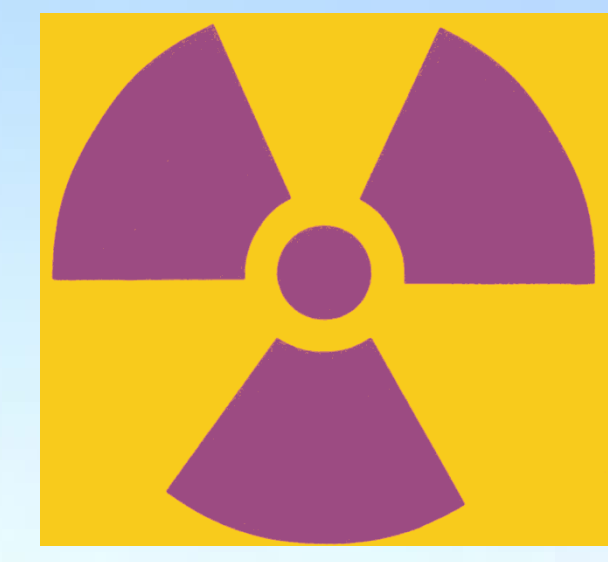# IPRO 329 – Health Physics Computer Training Simulation

HEALTH PHYSICS TECHNICIAN

A Health Physics Technician (HPT) controls the beneficial use of radiation while protecting workers and public from potential hazards.

OBJECTIVE

To create an interactive visual experience that is informational and self-administrable using computer software. The final result should be a game that can be used as a training exercise or as oral examination practice for HPT's.

TEAMS

Three teams were created in order to complete the objectives:

Project Management:
- Keep track of IPRO deliverables
- Explore external sources of funding
- Facilitate team communication

Design:
- Create 3-D environment accurately portraying the scenario
- Provide development with rendered images of the 3-D environment

Development:
- Write game code
- Incorporate images and various tools to create a coherent simulation

SCREENSHOTS

Left column: Images created using 3-D rendering program Blender.

Right column: Incorporation of images into simulation utilizing Flash.

GAME PLAY

The user determines the proper steps that should be taken when inspecting incoming radioactive packages. They should know proper procedures and be familiar with the tools presented in order to accurately react to any situation presented.

ACCOMPLISHMENTS

- Creation of 3-D environments for scenario
- New game engine that can easily incorporate new images and accommodate new tools.
- Implementation of "in-field" tools
- Both the environments and game engine can easily be manipulated by future teams.

USABILITY TESTING

Although the game is under development, usability testing was conducted with multiple Health Physics Professionals. This was accomplished using a "Wizard of Oz" fashion of testing, where the user is told what will fill in the gaps of the simulation from behind the scenes.
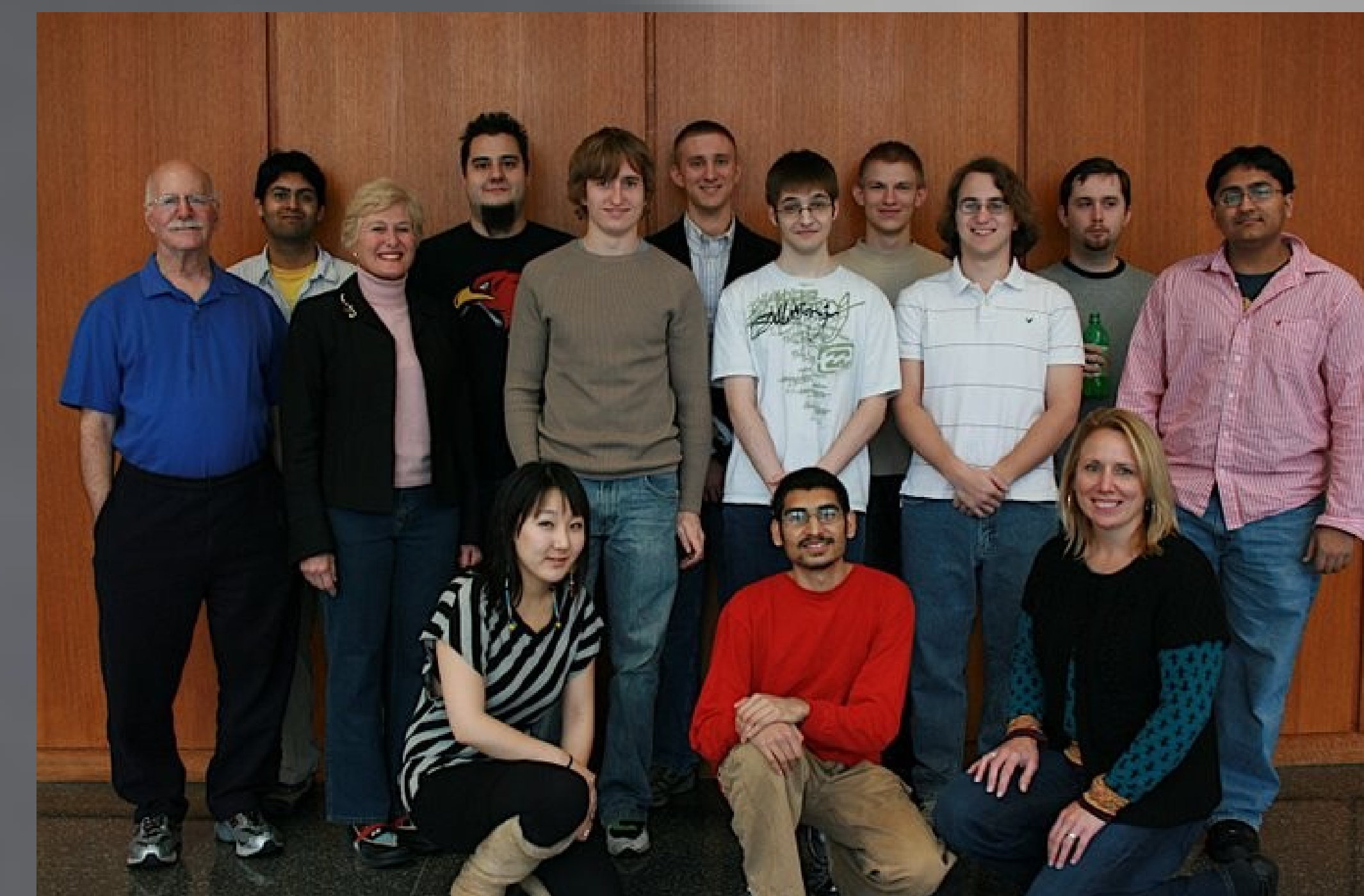
FUTURE GOALS

- Build upon successes of this semester
- Make improvements based upon feedback from usability testing
- Incorporate more tools
- Further extend scenario to include more packages and possible contamination

Front Row (left to right): Heajin Lee, Amit Patel, Laura Batson

Middle Row (left to right): Laurence Friedman, Susan Feinberg, John Dominski, James Runge, Jay Taggart, Vaiibhav Patel

Back Row (left to right): Victor Guharoy, David Olichwier, Jeffrey Engel, Mikhail Zaturenskiy, Daniel Rutherford