Presentation Outline

• Introduction
• Design & Development
• Demonstration
• User Experience
IPRO 329 Overview

• Mission Statement:
  – “To develop computer games that educate as well as entertain”

• Past Games:
  – Credit Safe
  – College Pursuit
  – Scholars of the Lost Exhibit
Current Game

**RCT Training Simulator**

- **Background**
  - RCTs must pass an oral certification
- **Problem**
  - Preparation is limited to a mock board
  - Logistically and man-power intensive
- **Solution**
  - Computer animated simulation
- **Objective**
  - Develop and test an alternative to oral boards
Project Planning

• Work Organized into Subteams
  – Management
    • Oversee IPRO deliverables
    • Schedule deadlines and organize team tasks
  – Design & User Experience
    • Create backgrounds and sounds for game
    • Design usability testing packet
    • Develop IPRO day presentation
  – Development (Programming)
    • Design game structure and interface
    • Implement scenarios and debug
Game Structure and Purpose

• Sample Plot Components
  – Radiation alarm
  – RCT investigates incident and those involved
  – Source of problem is found and neutralized

• RCT Tools
  – Actual tool skills are tested in-game
  – Radiation probe and protective gear
Advantages Final Product

• Portable Game
  – Installs from CD
  – Hosted on a web server

• Comprehensive Training
  – Alternative to practice oral board
  – Covers complete skill set

• Entertaining
  – Holds interest while educating
  – Randomized scenarios increase replayability
Usability Testing

• Usability Testing
  – Beta test conducted at Argonne National Labs
  – n=6
  – Users were certified RCT who are involved in oral certification
Testing Insights: Strengths

• All users appreciated sound effects
• 4 out of 6 felt scenarios were realistic
• 5 out of 6 agreed testing the individuals knowledge was an efficient alternative to practice oral boards
• All users felt game was worth further development
Testing Insights: Weaknesses

- Game unable to understand user input
- User expected wider variety of tools
- User unsure about his/her location
- User found navigation difficult
Future

• Further development
  – Apply user feedback to enhance the simulation
  – Develop more scenarios
  – Increase the complexity of problems

• Transition to an EnPRO
  – Develop a fully-functional product
  – Add-site specific backgrounds and scenarios
  – Market to other organizations that require radiation protection workers
Acknowledgements

• Advisors
  – Susan Feinberg, PhD.
  – Laurence Friedman, PhD.

• IIT Faculty
  – Andrew Howard, PhD.
  – Carlo Segre, PhD.

• Argonne Nation Laboratory
  – Stephen Batala, CHP
Questions?