“Savior”

*a virtual team collaboration platform*

*BY*

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Team Members

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Introduction

- Project Definition
- Game Scenario

to develop a virtual team collaboration platform with following properties:

- 3D computer graphics,
- online,
- audio communication,
- first person viewing.
Introduction

- Project Definition
- Game Scenario

  a simulation based on evacuation after a disaster.

  3 units assigned to take control of disaster area.
Introduction

Search & Rescue

Firefighter  Medical
Introduction

- Firefighter Unit
- Medical Unit
- Search and Rescue Unit
Introduction

- Firefighter Unit
- Medical Unit
- Search and Rescue Unit
Introduction

- Firefighter Unit
- Medical Unit
- Search and Rescue Unit
Requirements & Features

- Educating
- Realistic
- Interactive & Dynamic Environment
- Easy-to-Use
Requirements & Features

- Educating
  - not a game; a simulation
- Realistic
  - evaluate ability & civil defense knowledge
- Interactive & Dynamic Environment
  - increase situational awareness
- Easy-to-Use
Requirements & Features

- Educating
- Realistic
- Interactive & Dynamic Environment
- Easy-to-Use

- provide valid civil defense rules
- simulate real disaster situations
- give the illusion of real world
- emphasize the criticalness of the situation
Requirements & Features

- Educating
- Realistic
- Interactive & Dynamic Environment
- Easy-to-Use

- provide dynamic responses according to trainee’s actions
- give active feedback to user according to performance
- every trainee is responsible to each other
Requirements & Features

- Educating
- Realistic
- Interactive & Dynamic Environment
- Easy-to-Use
  - simple & clear user interface
  - provide signposts & hints to trainee
Overall Architecture

- Graphics Engine
- Audio Engine
- Network Engine
- Input Controller
- Game Engine
Overall Architecture

- Graphics Engine
  - Ogre engine will be used
- Audio Engine
  - each trainee’s own area will be rendered
- Network Engine
- Input Controller
- Game Engine
  - rendering loop will be as frequent as possible
Overall Architecture

- Graphics Engine
- Audio Engine
- Network Engine
- Input Controller
- Game Engine

- record the trainee’s sound & send to network module
- get sound from network module and play it
- play sound files saved in the repository
Overall Architecture

- Graphics Engine
- Audio Engine
- Network Engine - maintain synchronization
- Input Controller - prevent loss of data
- Game Engine - send relevant data to each client
Overall Architecture

- Graphics Engine
- Audio Engine
- Network Engine - maintain synchronization
- Input Controller - prevent loss of data
- Game Engine - send relevant data to each client
Overall Architecture

- Graphics Engine
- Audio Engine
- Network Engine
- Input Controller
  - get input from mouse, keyboard & microphone
- Game Engine
  - convert raw input data to application data
Overall Architecture

- Graphics Engine
- Audio Engine
- Network Engine
- Input Controller
- Game Engine
  - apply game logic
  - manage game state
  - maintain coordination of other engines
Overall Architecture

- **Game Logic Loop:**
  - get user input
  - evaluate world data
  - generate world-level response
  - update the user data (client)
  - update the world data (server)
Development Process

- Tools, resources
- Where are we?
- What is next?

- **OGRE**: Open Source Graphics Engine
- **RakNet**: Open Source Network Library
- **OpenAL**: Open Source Audio Library
- **3ds Max**: Modeling Tool
- **Visual Studio**: Developing IDE
Development Process

- Tools, resources
- Where are we? - Development Tools Analysis
- What is next? - Game Concept Development
- - Initial Prototype
Development Process

- Tools, resources
- Where are we?
- What is next?
  - Prototype: sound implementation & debugging
  - Network Development
  - Final Data Design
“In times of crisis, our greatest enemy is rarely the storm, the quake or the surge itself. More often, it is ourselves.”
Conclusion

Contact Info

Questions

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• Conclusion
• Contact Info
• Questions
Thank you!

“GOTTA SAVE ‘EM ALL!”