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Team #7: Pez

Project: Empty Clip

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Document: SRS

1. Introduction

Purpose of this section: General background and reference information

1.1 Purpose of this Document

This document is the Software Requirements Specification that describes the functionality and requirements for Empty Clip, a standalone computer game.

1.2 Scope of the Development Project

Empty Clip is an Action RPG whose purpose is to entertain. The game allows upgrading and customization of characters and weapons. Mind-boggling puzzles will be key to keep the gamer entertained and engaged. Multi-player networking will add collaboration and teamwork.

1.3 Definitions, Acronyms, and Abbreviations

Action RPG – Role-playing Game with action elements.

A.I. - Artificial Intelligence.

GUI – Graphical User Interface

LAN – Local Area Network

MB – Megabytes

Mbps – Megabits per second

MHZ – Megahertz

RAM – Random access memory

1.4 References

Davis, T., Jackie, N., Shreiner, D., and Woo, M. *OpenGL Programming Guide*, Pearson Education, Boston, MA, 2004

NeHe Productions. "NeHe Productions: OpenGL Lessons", 8 December 2001. Online. Internet [25 January 2006]. Available WWW: <http://nehe.gamedev.net/>

Norvig, Peter and Stuart J. Russell. *Artificial Intelligence*, Pearson Education, Inc., Upper Saddle River, NJ, 2003

1.5 Overview of Document

In Section 2 we will give an “executive overview” that is very client-oriented.

In Section 3 we give technical information for designing the game.

2. General Description

Purpose of this section: an "executive overview" but very client-oriented

2.1 User Personas and Characteristics

- Gamer

A gamer is a person who enjoys playing video games. Gamers typically have short attention spans, so getting their attention and keeping it is important. This can be done with interesting puzzles, difficult monsters, and good graphics. The game needs to be stable and as bug-free as possible in order to ensure that the gamer doesn't become agitated or annoyed while playing.

2.2 Product Perspective

- The product is standalone, but relies on functionality provided by a Windows or Linux operating system.
- The external interfaces include a keyboard, mouse, monitor, and optionally speakers.
- A standard PC with a OpenGL graphics card and optional sound card.

2.3 Overview of Functional Requirements

1. The game should entertain and be fun.
2. The game characters should be easy to control.
3. The interfaces should be intuitive, and provide easy access to all options.
4. Gamers should be able to enjoy the game together across a network.

2.4 Overview of Data Requirements

All needed files will be included in the installation package. We assume that the user has updated drivers for their specific hardware.

2.5 General Constraints, Assumptions, Dependencies, Guidelines

- Windows XP Operating System
- 500 MHZ Pentium or equivalent
- GeForce 2 equivalent video card with 32 MB of memory.
- 20 MB Hard Drive space
- 128 MB RAM
- 10 Mbps Ethernet Card (optional)

2.6 User View of Product Use

You and your friends find yourselves deserted in a haunted mansion, with only your pistol and sharp wit. As you explore your surroundings, you realize this is no ordinary mansion. You become swarmed by endless amounts of zombies, werewolves, aliens, spiders, skeletons, mercenaries, and demons. Lucky for you, these ghoulish monsters happen to drop ammunition and health packs when killed. To overcome the thousands of threats before you, your team must gain experience and advance in levels to use better equipment. To complete each level, you must solve puzzles and defeat a boss enemy.

3. Specific Requirements

3.1 External Interface Requirements

The user will need the following system specifications

Windows XP Operating System

500 MHZ Pentium or equivalent

GeForce 2 equivalent video card with 32 MB of memory.

20 MB Hard Drive space

128 MB RAM

10 Mbps Ethernet Card (optional)

3.2 Detailed Description of Functional Requirements

3.2.1 Template for describing functional requirements

purpose	a description of the functional requirement and its reason(s)
inputs	which inputs; in what form/format will inputs arrive; from what sources input will be derived, legal domains of each input element
processing	describes the <i>outcome</i> rather than the <i>implementation</i> ; include any validity checks on the data, exact timing of each operation (if needed), how to handle unexpected or abnormal situations
outputs	the form, shape, destination, and volume of the output; output timing; range of parameters in the output; unit measure of the output; process by which the output is stored or destroyed; process for handling error messages produced as output

3.2.2 Game function

purpose	The game's function is to entertain.
inputs	Keyboard and mouse.
processing	The character in the game will react to input, and will be

	guided by rules of the game.
outputs	Character, monster, and object graphics will appear on the screen according to the processing.

3.2.3 Game control

purpose	The game should be easy to control.
inputs	Keyboard and input.
processing	The character will always face the mouse cursor. The keyboard will always move the character up, down, left, and right.
outputs	The screen will display the character's direction and position that resulted from the input.

3.2.4 User interface

purpose	The user interface should be intuitive and easily accessible.
inputs	The mouse will control the interface.
processing	The interface will react to the mouse's input.
outputs	The screen will show the interaction between the mouse and the interface.

3.2.5 Networking

purpose	Users will be able to enjoy the game together over a LAN.
inputs	The networking interface.
processing	The game will process all user's input on the main game server.
outputs	The game server will output the game's state to everyone's computer via a network card.

3.3 Performance Requirements

- Allows up to four connections at a time to the game server.
- The game will run at 60 FPS and not any less than 30 FPS.

3.4 Quality Attributes

- There will be security in networking when the player sends data to the server. This will be quantifiable by the amount of security loopholes users find.
- The game will be available to Windows XP and Linux machines.
- The game will run reliably enough to play through the entire game.
- The game will be easily maintainable due to external map editors and file structures.

3.5 Other requirements

None at this time.