AETD - Arch-Enemy Tower Defense
Group 6

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1 Project Overview Document (POD)

1.1 Who are the users and what problem does it solve for them?

The users are mainly males between the age of 18 and 25. They are used to playing games, but don't necessarily need to have extraordinary computer skills. This game is meant to be fun and therefore it solves the problem of boredom for the users.

1.2 The main uses of the system

AETD is a multiplayer game where players battle each other and computer creeps by building towers to defend themselves. Each player will have a playing field through which creeps will pass. The main goal of the game is to stop them from reaching the opposite side of the field. To succeed in this the player has a variety of towers in their arsenal which he may build on the playing field. The towers are stationary and have different abilities such as slowing, high rate of fire etc. The players are supposed to collect gold which he can use to build or upgrade towers and send more creeps to his adversaries.

1.2.1 First usage narrative

Bill and Bob are sitting in school, studying for the big exam. They are tired and need a break. They decide to play a game of AETD. Both start the game and since Bob got the best computer he host the game, allowing Bill to join his server. When both players are ready the game starts. Bill builds his towers and they kill the creeps very fast. From the gold he earns he sends extra creeps to Bob, which already have problems killing his own creeps. With the extra amount Bob can't handle them and he let too many through to the other side of his playing field. Bill leaves the fight in victory and they both shut down the game to continue with their studying.

1.2.2 Second usage narrative

Ben is at home, watching TV, and are really bored. He finds the idea of playing AETD more than appealing, and therefore he walks all the long way to the computer, let it take it's time to start up, and double-click the AETD-icon. He finds that none of his friends are playing right now, so he starts up the single player mode. This is the first time that he has ever tried the single mode, but he finds it rather interesting, even though it lacks the

'send creeps'-function. He builds his towers in the usual way, and defeats the creeps, because he choose the easy-mode at the beginning of the game.

1.2.3 Third usage narrative

Bart and Burt are at home on a Saturday, and they really want to play some cooperative game. They find AETD on our webpage and download it, because they find that AETD has a cooperative mode, where the playing field are divided into two areas, one where Bart can build and one where Burt can build. They like this mode because it really challenge their cooperative skills. To build the perfect defense they really need to know what strategy the other one is going to use, and this really make them use the chat to the maximum.

1.3 The context/environment in which the system is to be used

The game is to be used whenever you want. The only restriction is that you need a computer, and the game. The game will be available from our web page for free, so it will not be a problem to get this into your computer. The only thing necessary is therefore a computer with an Internet connection. Actually, not even the Internet connection is really necessary, because you can get it on a portable disc from a friend with Internet and play it in single player mode.

We also intend to write the game so that it's not depending on what operating system the user have. This means that the user will be able to play it against players that might run Linux, Windows or even Mac OS X.

The game will be divided into a graphic system, network system, logic system and a thread system.

1.4 The scope of the system

Topic	In	Out
Multiplayer on same computer		X
Multiplayer over network	X	
Singleplayer	X	
Cooperative mode	X	
Play from homepage		X
Campaign		X
Upgradable towers	X	
High-score	X	
Map editor		X
Player retaliation	X	
AI player		X
Different types of towers	X	
Different types of creeps	X	
3D graphics		X
Full screen mode	X	
Windowed mode	X	
Saveable		X
Pauseable	X	
Player chat	X	

1.5 Main factors to be taken into account when designing and building the system

- When a number of players are fighting each other and one of them looses the game has to continue for the rest of the players.

- If a client player disconnects the game has to keep going for the other players.

- When designing this game with all its different game modes, we need to keep in mind to have a flexible design base.

- When communicating between different computers over the network it's important to check the package deliveries to make sure that the server and the clients are at the same stage of the game.

- The graphical interface has to be intuitive because it's important that the user never ens up in a graphical dead end.

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1.6 Technologies and Risks

In our project we are going to use the programming language C++ in order to build our system. We will make an object oriented system where every class is specified individually and have dedicated tasks.

We are going to use the predefined library for networking included in C++ in order to host and join games.

For our graphical engine we have decided to use OpenGL. Even though OpenGL supports 3D we are only going to use 2D.

One of the main risks with the project can be the lack of familiarity with the networking function as well as the graphical engine. A possible risk could be how to divide the work effort and we might end up working too much together. Another possible risk that code might to slow in comparison to our computers.