Settle And Destroy (SAD)
Group 13
Jonas Wikberg
Christofer Hjalmarsson
Daniel Westerberg
Saul Amram
André Sikborn Erixon

Functional requirements

One village per player

Each player shall own exactly one village.

Rationale: It's much easier for the player to control and maintain one village. Due to time limitations this will be a good choice of implementation.

Build and expand villages

The village shall be expandable with a set of buildings to choose from to build at the possible building slots of the village.

Rationale: It is up to the user to decide which buildings to build and in what order. Making this a user decision promotes players strategical thinking.

Train troops

It shall be possible to train different types of troops to form armies.

Rationale: The user can decide which type of troops that are the correct decision to train depending on what troops his opponents are using. This will introduce a physiological aspect to the game: one type of troop could be strong in comparison to another while weak against a third kind of troop. When a troop has been built it is positioned on the village location on the map.

Move and attack using troops.

Each player shall control their own troops and use them to move around the map and to attack other troops and/or villages.

Rationale: The player will build and use the troops to defeat other troops and destroy villages. The troops are moved as armies and different troops that have different moving speeds still move as one army.

Game speed

The games runs in real-time and the speed should be variable and gain during a game.

Rationale: A game speed that increases in a multiplayer game often creates stressful and very funny situations between friends. You avoid very long games that risks to get boring and since the game lacks pause function long games can be troublesome if you need to go to the toilet for instance.

Game map

The game shall have a map that describes the game field. The map contains many small squares and each of them can hold troops and/or a village. Each square is of a certain

environment type (empty, mountain, river, gold mine) that can affect e.g. movement speed, resource income and defense bonus.

> **Rationale**: Dividing the map into squares simplifies collision detecting between troops/villages so it is easier to determine whether a battle should commence or not. It also simplifies path finding around obstacles so that troops can find a way to their destination. Since each square is of a certain type, it gives the players chance to be flexible in their strategical decisions.

Different playable races

There shall be different playable races with unique attributes. Each race corresponds to a different social class (homeless, brats). The race specific attributes will during the game round affect e.g. building construction times, cost of troops and strength of troops.

> **Rationale:** Several races make the game more enjoyable. At the same time it does not mean much extra work during the development process than only having one race. On the other hand it could result in an unbalanced game, but it does not matter in our game, - the level of entertainment comes first.

Player specific colors

Each player shall have a specific color that distinguishes them from every other player.

> **Rationale:** Every player will have different colors that everything on the map will be drawn with. This will distinguish the troops and villages on the map so that every player can see what items belong to what team.

Simple game chat

Each player shall be able to send text messages that will be broadcasted to every other player.

> **Rationale:** The game will provide a simple chat feature where each player can write and send messages that every other player will see. This will provide a communication interface for every player.

Fog of war

When the game starts the map shall be totally unrevealed. Each village and troop will reveal parts of the map around them.

> **Rationale:** Each player can use their troops to move around the map, thus revealing the map piece by piece. This will make it more exciting in the beginning because no player will know anything about where the other players are.

Observer mode

When a player is killed during a multiplayer game, he looses his game control and is asked whether he wants to quit or stay to watch the end of the game round not being able to participate. The latter is called being in observer mode.

> **Rationale:** The possibility of being able to follow the last events of the game is needed to make lower skilled players learn from more skilled ones, and to reduce boredom when waiting for the next game round.

One type of resource

There shall be only one type of resource that each player can collect and gain. This resource will be used to build and expand the village and/or troops.

> **Rationale:** We thought about having many types of resources but using only one resource will make it easier and it will give the player a better overview. This will also require less time when we develop the game.

Non-functional requirements

2D graphical view of the game

The game shall provide a simple 2D graphical view. The graphical interface will not be resizable.

> **Rationale:** Simple 2D graphics will force us to put more focus on the game feeling instead of the visual representation, compared with more advanced 3D graphics. 2D graphics will be faster to implement, the game will run smoother and will be playable on slower machines. It will also provide a better game overview and enhance the games strategical characteristics. Further on the graphical overview will not be resizable to make game overview clear and game control fast. This will eliminate scrolling of the game map.

Multiplayer functionality

The multiplayer part of the game shall be playable for two to six players who can connect to a game host via IP addresses. Each player will need a player name.

> **Rationale:** The limitations of participants are set to enable fast game rounds. To enter a multiplayer session a player alias needs to be specified to separate players within the game. The player alias will be chosen via the multiplayer login screen.

Real time

The game shall run in real time; run continuously independently of player's activity.

> **Rationale:** Real time will provide action, zero waiting time and is more or less the only option since the main functionality of the game is provided in the multiplayer mode.

Game length

Average game length should be between 10-30 minutes.

> **Rationale:** Game length is an important factor since people will likely play the game during breaks or as a brake and needs to know in advance approximately how long a game takes and gets even more importer since the game lacks pause function. Very long games can also tends to be boring if not new factor is introduces during the game and that won't be the case here.

Training mode

The game shall provide a training mode where a player can play the game as the only team on the map. This will be the only single player mode in the game.

> **Rationale:** The training mode will provide a way for the player to play the game without connecting to another player. The player will be alone on the map and will not be able to defeat anyone or anything. The sole purpose of the training mode is to provide a way for the player to train and master his techniques in the game, i.e. build and expand the village in the best way.

Game overview

The game window shall provide an overview of the game where the player can see his/hers village, the map and an extra window showing the currently selected item (building, troop, etc).

> **Rationale:** The game window will be fixed and provide a constant view showing the map and the player's village. In the lower left corner there will be a frame showing whatever is currently selected. If a building is selected it will show the upgrade options and other functionality assigned with that building. Above the map the player will see its resources, the current time and other important things. Below the map the chat will be located.

Keyboard & mouse control

Keyboard control will be used to choose name communicate via the game chat and to use keyboard short cuts. Mouse control will control other interaction.

> Rationale: All computers have mouse and keyboard and it is the best control method in strategic gaming.

Use cases

Use Case A – Bill and his friends

Bill, a 16-year old high school student, comes home from school fairly early in the evening. After having spent several hours on studying for his next exam, he feels bored and is longing for something different and entertaining to do. He realizes to his surprise that he hasn't had time to play on his computer for several days. Therefore he turns on his computer and starts searching the Internet for a game to play. He finds a strategy war-game on a web site, downloads it and realizes that it supports multiplayer mode! So he calls five of his friends that also likes computer games and helps them download the game as well. He tells them to all get on MSN, a messenger service they usually use when communicating to each other over the Internet. He starts the game and tells his friends to do the same.

In the game he sees, that to start a multiplayer game, somebody has to be the host. As he was the one to find the game in the first place, he naturally chooses the role of host. He chooses an alias, configures the specific game settings and opens up a pre-game screen which his friends can join before actually starting the game. Since his friends are starting the game in client mode, he gives them his IP to connect to, which is showed on his current game screen. He can see the player slots filling up on his pre-game screen, and when everybody are connected and have pushed "Ready", he starts the new game session.

The game round is up and running and everybody are competing as opponents against each other. He notices that he has one village to control, and that his opponents seem to have one as well. He builds up his village with new buildings, choosing strategically which ones to build first. Exploring the map he sees that his opponents do not seem to have any military strength, so he starts producing soldiers. He then attacks his friends one by one, destroying their villages, making each of them lose the game when their village is lost. They are not kicked out of the game but can stay in "Observe Mode", seeing what takes place with the remaining players but not actually doing any useful. When he has conquered all of his friends' villages, the game ends, leaving him as the sole winner.

He then shuts down the game and turns off the computer, tired but with a wicked smile on his face.

Use Case B – Lasse comes home from work

Lasse, a 28-year old software developer with interests in computer games and strategic board games, is at home after a tedious and stressful day at work. The whole day he has been thinking about the best way to beat his friends in the strategic war-game they tried last week.

Having his computer already on as usual, he sits down at it and starts up the same strategic game. At the main menu he has to choose if he wants to play the game in single –or multiplayer mode. He doesn't want to call his friends to start up a multiplayer game since he first wants to try out the new buildings tactic he has planned throughout the day. This is easier done because there are no opponents that can disturb you or any time constraints that limits the game length. Therefore, he chooses to play the game in "Single player – training mode".

The game loads a map and starts the main interface. Lasse chooses a place to settle his village and can then start to play. Lasse learns tries out his new building tactics to see how much time it takes, how much his resource income is and how many troops he can have ready until a certain point he has estimated that his opponents might have a sizeable army to attack him with. He feels confident about his new tactic, looking at the size his own army he was able to produce during the span of time. He then quits the game by clicking the exit button first in the game and then in the game menu. He just can't stop thinking about trying of the new tactic in a multiplayer game against his friends. He is confident it will rock their earth.

Use Case C – Peter and Lars

Peter receives a phone call from his friend Lars. Lars is very excited over a new strategy game he has found on the web. Lars wants Peter to join in to try the multiplayer functionality. Lars and his other friend Gunnar is at Lars place with their computers and are connected via LAN. Lars tells Peter to check is email, where he will find the download location of the game and Lars' IP address to connect to when in the game. Peter who likes a strategical challenge every now and then decides to join in. He downloads the game and is at the same time informed that he needs the Java Runtime Environment which also downloads. He then starts the game choosing to join a multiplayer session. He enters a player alias and is then asked to enter the host IP which he had got from Lars. Doing that he finds himself in at the multiplayer game start up screen, where he chooses ready. As he hits the ready-button, the game starts right away, probably since Lars and Gunnar has been waiting already pressing their ready-buttons.

Peter finds himself with an overview screen with a map to the right. A text message from Lars says: "Put your village somewhere on the map". Peter randomly moves the mouse pointer over the map area and presses the left mouse button where he finds an appropriate for his village. A millisecond later his little sister pulls the ADSL-modem wire out of the wall. Peter's game client is terminated and his on going game round quits and the startup screen is displayed. The multiplayer game continues without Peter's participation and his village is destroyed.