

# Game Design Document

## Deforce



New Meta Games

Niclas Pinkepank	reckonatic@gmail.com
Lennart Keller	Lennart.keller@t-online.de
Finn Petersen	Finnpascal@yahoo.de
Les-Lee Dams	les.dams96@gmail.com

# Table of contents

<b>Game Charter</b>	<b>6</b>
Mission Statement	6
Meeting Schedule	6
Hours Worked per Week	6
Code Review Process	7
When Things Go Wrong	7
Inform the teammates about errors	7
How do we inform members about an emergency?	7
What steps will be taken to reduce risks involved with an emergency?	7
Decision-Making Process	7
Rules of Conduct	7
Team Roles	8
Administrative Roles	8
Technical Roles	8
Design Risks and Backup Plans	8
Integration Schedule	8
<b>Executive Summary</b>	<b>9</b>
High Concept	9
Locale	9
Genre	9
Basic Controls	9
Game Goal	9
Target Platform	9
Target Audience	10
Front End Flow Chart	10
Game Walkthrough	10
Game Flow Chart	11
Key Features	11
Comparative Products	11
How this Product Stacks up	12
Follow-up Products	12
Monetization	12
<b>Treatment</b>	<b>13</b>
Dust Jacket Story	13
Game Story	13
<b>Characters</b>	<b>14</b>
Wizard	14
Physical Description	14

Character Description	14
Advantages	14
Disadvantages	14
Playstyle	14
Wizard Skills	15
The Priestess	16
Physical Description	16
Character Description	16
Advantages	16
Disadvantages	16
Priestess Skills	16
Rogue	17
Physical Description	17
Character Description	17
Advantages	18
Disadvantages	18
Play Style	18
Rogue Skills	18
Warrior	19
Physical Description	19
Character Description	19
Skills	20
The Peasants (NPC)	20
Weapons	20
<b>Map</b>	<b>20</b>
Hansestadt Bad Acringentenhäusen/Burg an der Nordsee bei Westerland	21
Map Design	21
Base Element Design	21
Citadel Element Design	21
Level Travel	21
Scale	22
Time	22
Objects	22
Map Sketch	22
<b>General Game Definition</b>	<b>23</b>
Combat System	23
Experience System	23
Base Capture System	24
Charts and Tables	24
Miscellaneous Times	24
Capture Times	24

Experience needed per level to reach the next level	25
Experience points	25
Starting Stats per Class	26
<b>Interactivity</b>	<b>27</b>
Goal	27
Interface	27
Main Menu	28
Game Menu	28
Communication	28
Control Scheme	28
Movement	28
Combat Skills	29
Additional Skills	29
Menu	29
Stats Menu	29
Chat	29
Player Experience	30
Interactive Rhythm	30
How the Player Marks Progress	30
<b>Game Logic, Algorithms, and Rules</b>	<b>31</b>
Interaction Component Matrix	31
Key Game Algorithms	31
Base Capture	31
Character Interaction / Combat	31
Character Leveling	32
Peasant AI	32
Game Rules	32
Health regeneration	32
Mana regeneration	32
Respawn	32
Experience	32
Leveling stats	32
Teleporting	33
Roll forward	33
Minimap	33
<b>Reference of Key Elements</b>	<b>34</b>
Scoring	34
Winning/Losing	34
Transitions	34
Map transition	34

Rewards	34
<b>Art and Production Design</b>	<b>35</b>
Art & Animation Style	35
Sound Effects Style	35
Music Style	35
<b>Storyboards and Sample Art</b>	<b>35</b>
Storyboards	35
Sample Art	35

# Game Charter

## Mission Statement

Four young enthusiasts share the same passion for games and want to create a new game. New Meta Games will refresh the boring MOBA market with their latest game "Deforce". It is important to always have fun developing the project. This will ensure the players fun!

## Meeting Schedule

Every Friday and Monday the members of the team "New Meta Games" meet online at 14 o'clock on Monday and at 12 o'clock on Friday via Discord on our New Meta Games Server ( <https://discord.gg/gfVfqpT> ).

There can be meetings outside of the schedule, in case of emergency.

When the team members join the Discord voice channel, they wait until everybody is present. The meetings starts with the exchange of progress of the work by each team member. Team members tell what they did after the last meeting. This summary should be as short and informative as possible, so that others can follow easily. Others can ask questions about the topic. It's important that the member can provide a solid explanation, why he chose his work process. If needed, we discuss about occurred problems and work out solutions for it. The website 'Twiddla' ( <https://www.twiddla.com/a04vnk> ) helps visualizing certain solutions and supports by that the decision making process a lot.

Afterwards the team plans next work steps according to that and will be updated inside our Trello ( <https://trello.com/b/xtSuFCvN/deforce> ).

Files are shared via Google Drive in the 'Moba Project' folder, so that everyone can access them easily.

There's no maximum time limit for a team meeting, but generally it does not last longer than 3 hours.

Every participant has to be fully concentrated and not get distracted by telephone calls or other disruptions, so an efficient work flow is assured.

## Hours Worked per Week

Minimum is 10h lab time. If the member has finished his assigned task, he can find a new task.

There's no limit. Everyone is free to work as much as he wants, if it's longer than the mentioned minimum.

The progress of each member's task should be documented inside the trello board, where the tasks are listed

## Code Review Process

Code reviews happen when a new merge request is created. Every merge request needs to be posted in our WhatsApp group and approved from at least 3 people to prevent merging a broken feature into the main codebase and causing problems later on.

Once a merge request receives the needed amount of approvals it can be accepted by anyone preferable by whoever gave the third approval to save time.

After getting accepted the merge will happen automatically as long as there are no merge conflicts.

In case of merge conflicts please notify the person your code conflicts with to find a solution.

If you can't find a solution together please contact everyone else on the team and resolve the merge conflict together either by rewriting part of the code or discarding some new of the changes.

## When Things Go Wrong

### Inform the teammates about errors

Our emergency indicators are errors or crashes from unreal engine 4. Also the game status is checked every meeting and we check if we have to do extra sessions.

### How do we inform members about an emergency?

In case of a huge emergency, we can rollback our version to the previous one from the git lab repository. Every Team Member will be informed via WhatsApp.

### What steps will be taken to reduce risks involved with an emergency?

Every member has to ensure that his feature merge has no big errors.

## Decision-Making Process

On every team meeting decisions regarding game design, technical design and implementation are discussed between every present team member. If somebody is missing unexcused, his opinion can't be recognized in the decision-making process for a topic discussed in that meeting.

The time limit for coming to a decision depends on the relevance of the topic for the progress. If progress is possible without a fixed decision on a specific topic, making a decision will be tried in the next meeting. Otherwise the decision has to be made in the current meeting.

## Rules of Conduct

Every team member has to arrive on time, otherwise he should inform the other team members in time via WhatsApp or sms, so that they can adapt to it.

If someone doesn't show up, and didn't mention it, more than 3 times, we kick him out of the team. Reliability is important to progress in the project.

# Team Roles

## Administrative Roles

- Project Lead: Niclas Pinkepank
- Asset Lead: Finn Petersen
- Technical Lead: Lennart Keller
- Communication Lead: Les-Lee Dams

## Technical Roles

- Map-Design, AI: Niclas Pinkepank
- Combat System and Classes: Lennart Keller
- HUD: Les-Lee Dams
- Lobby, Networking: Finn Petersen

## Design Risks and Backup Plans

- No specific ideas, where to get servers for multiplayer
  - Build knowledge to make a solid client / server game
- No professional Artists/Animators etc. in the team
  - Ask artists or friends for help or make our own art assets
- Limited opportunities to test a 5v5 game mode -> not enough players
  - Friends and Family will help to test the game
- To avoid conflicts within the team, we keep communicating with each other

## Integration Schedule

Code will be integrated once a feature is programmed and it is deemed to be working without any obvious bugs. To make sure only working code gets integrated it has to be reviewed by at least two other team members. After the last member reviewed the code he can approve the merge within gitlab and the code will be integrated.

# Executive Summary

## High Concept

**“Deforce refreshes the old idea of a traditional MOBA with a new action based competitive concept!”**

## Locale

Deforce plays in a fantasy medieval world. There are no guns or vehicles, but there is magic.

The map is set in a forest between mountain range and the sea.

## Genre

Third Person Multiplayer Online Battle Arena.

It has aspects of the normal MOBAs like League of Legends, Dota 2, Paragon.

There are gameplay-elements of World of Warcraft, Guild Wars 2, like the camera-view and the feeling in combat.

The skill-system implements some aspects of the pen and paper game Dungeons and Dragons.

## Basic Controls

Deforce is a Third-person game.

You control your Character with the keyboard and the mouse.

The Menu and HUD are very intuitive.

For a better description, look at the “Control Scheme”-section.

## Game Goal

Defeat your foes by capturing bases for your team. Own a complete lane to capture the opponents' citadel. Work out a solid strategy and beat your enemies in fights to win the match. You get experience for specific objectives. You can level up until a max level. By each level you get stronger. Find your individual play style and adapt your stats on it with the earned level points in the skill tree.

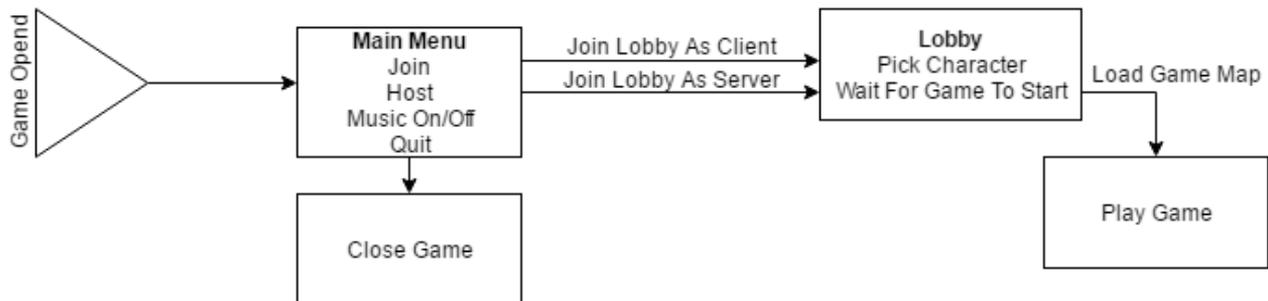
## Target Platform

Deforce requires Windows, but the game should run on anything that was decent hardware 5-6 years ago.

## Target Audience

Everyone who enjoys strategic and competitive multiplayer games, especially MOBAs and Third Person PvP Combat, will love our game. It has the competitiveness and strategic depth like a normal MOBA, but without the hard to learn camera control. Because it uses a third person camera, you are more in the game itself and have more action.

## Front End Flow Chart



## Game Walkthrough

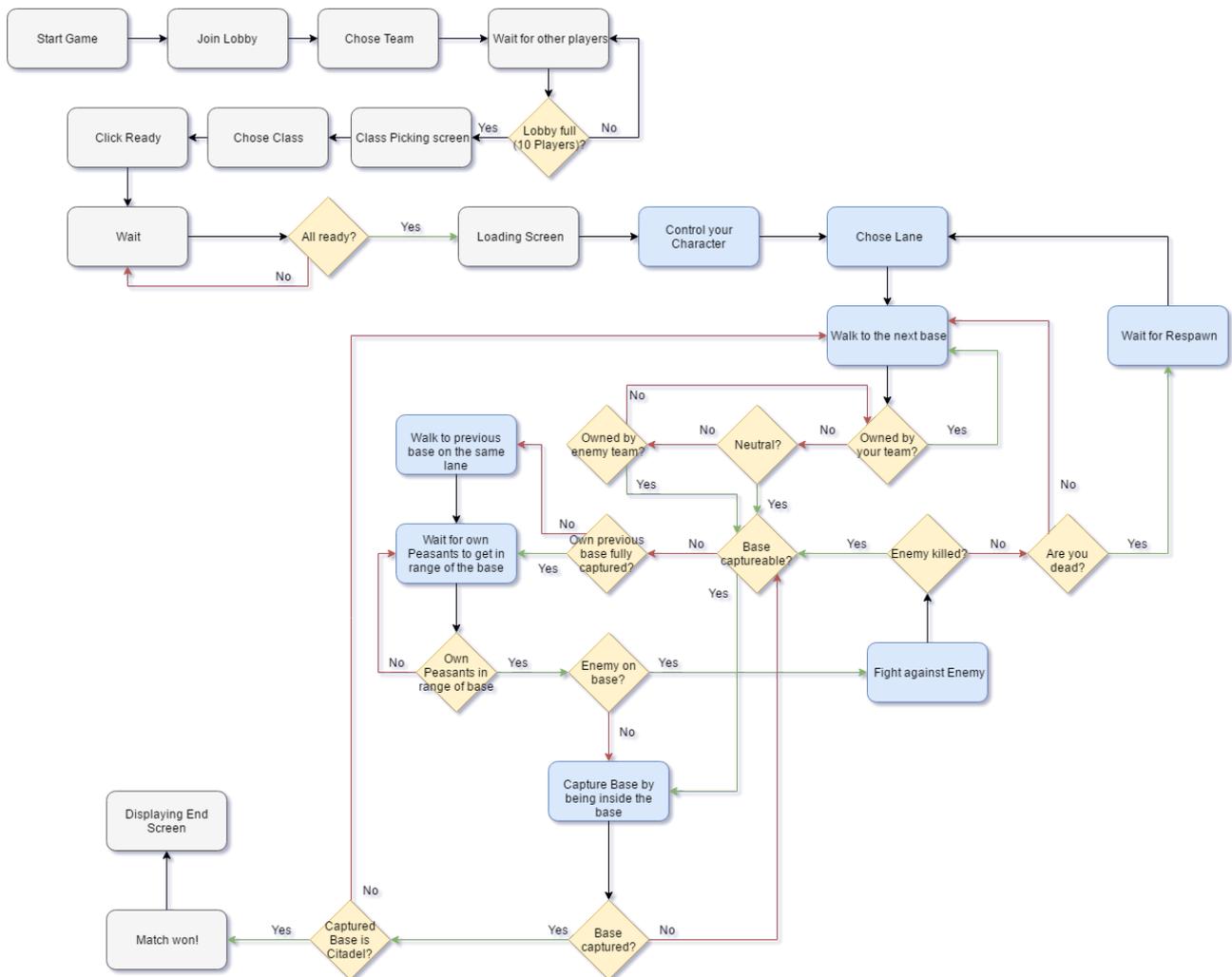
You start by joining a lobby with 9 other people. 4 of them are in your team, 5 of them are in the opposing team. Now you have to make the first choice of the game: Which class will you pick. Chose between a tanky warrior class, supportive priest, sneaky rogue or mighty wizard. When everybody picked one, the game starts and the players are gathered at their spawns. You have to level one of your stats now, because you have 1 skill point to spare. What you will pick is on you, but preferably pick one that fits to your playstyle. Now everybody have to decide on which lane they go. You will also chose one. It is recommended to chose your lane wisely, because it has a strategic value.

When you go to your lane, with your teammates or alone, follow your peasants, which will lead the way to the battle. The first objective is to capture the neutral base in the middle of your lane. You can only capture it with the help of your peasants, so make sure they live as long as possible. If you stand alone with the friendly peasants on the base, you will have no problem capturing it, but normally there will be an enemy player trying to claim it as well! Use your skills to fight him and avoid getting hit by his abilities. Prepare for a longer fight than you think. It is important to always be aware of your position and the position of others. If you are alone and the enemy gets help by a friend, ask your team to help or try to focus on one enemy at a time and stay defensive. If you win a fight, capture the base and proceed to the next area, or maybe you want to help other lanes to push. If you lose however you have to wait a little bit and after that you can walk back to a lane. Hopefully with better success this time!

When you pushed to the enemy citadel, try to capture it, but have an eye on your own citadel. It is recommended to fight as a team and to watch other friendly players movements and targets to have a slide advantage in fights!

If you captured the enemy citadel you win the game! Congratulations!

# Game Flow Chart



[Bigger View!](#)

## Key Features

- At least 4 unique classes
- Endless skill-combinations with huge skill tree, make every game different
- Non-stop action through innovative base domination system
- Third person combat system

## Comparative Products

Paragon, Defence of the Ancients, League of Legends, Smite, World of Warcraft and Guild Wars 2.

Every game has something in common with our game. The most accurate is Paragon, because it has the typical MOBA style gameplay and the same camera view (Third person).

## **How this Product Stacks up**

Defence of the Ancients and League of Legends, because of the similar map, playstyle and 5on5 multiplayer. Smite, Paragon, because they are mobas with a third person camera behind the character.

Deforce is using the Unreal Engine 4 which is also used by the multiplayer game Paragon. There are certain similarities to MMORPG PvP games like World of Warcraft and Guild Wars 2.

## **Follow-up Products**

The idea is to implement new character classes. Maybe add a customizable character for individual look and feel.

## **Monetization**

A possible monetization would be to implement customizable character items like hats! Every player has the ability to buy a hat inside a shop, which makes his character like he wants it. He can pose with his purchase and show the other players how cool he actually is 8-)

# **Treatment**

## **Dust Jacket Story**

Deforce is a multiplayer online battle arena game for 10 players. You can pick one out of 4 unique classes: A tanky warrior class, supportive priest, sneaky rogue or mighty wizard. Experience a new concept within a Moba and enjoy its competitive game play.

## **Game Story**

Every player who enjoys the strategical scene of a MOBA, but is bored of playing the same game over and over again, will love Deforce with its completely new idea in the play style, without a loss in strategy but also improving the competitiveness.

# Characters

## Wizard

Name: Caroline „Caro“ the crazy wizard

Age: 26

### Physical Description

Dark Brown haired female, with a very good looking body, golden earrings on both sides, one blue (ice) and one red (fire), with matching amulet around her neck. Her robe is long and reaches her feet. The color of her robe is blue and red. She has a staff in her hand with a white crystal on the top. The crystal changes color when she performs magic.

### Character Description

Arrogant, thinks she knows everything better than anybody else, because she studied mage science in the best school in the world. Her father was one of the famous seven Archmages, and that's what her goal is. She always adored her father and looked up to him. When he died in the great war, she told herself that she will follow in her father's footsteps. When she first visited the school of wizards she was told about arcane magic, but she failed to use it. She tried to learn it but it never got on the level as the other students. One day, while she tried her arcane spells, she got so angry that she accidentally produced a frostfire bolt with a lot of power. The teachers then send her abroad to the great cathedral of knowledge where she met her mentor. He was also a frostfire mage and trained her. She learned fast and joined the force as a mage at a very young age.

### Advantages

Has high range damage output, and high attack power. Because she is good with any kind of magic she has a lot of knowledge. This provides her with a high mana pool for casting skills.

### Disadvantages

She walks slow and has not so much life in general, which makes her very squishy in combat and requires a lot of good movement

### Playstyle

The wizard is a range fighter, which makes her hard to catch in the first place.

## Wizard Skills

Primary skill

### **"FIREBOLT"**

Little red orbs, normal attack

cd -> 1,5 sec

„Caro produces a firebolt, which moves in a direction. It deals damage when it hit another character.“

Skill 1

### **"FIREBREATH"**

Coneform direct AoE, stun

cd -> high

mana -> low

damage -> mid

„A huge cone of fire streams out of Caros mouth which immediately sets all targets on fire and stuns them for a period of time.“

Skill 2

### **"BLIZZARD"**

circle AoE, slow

cd -> mid

mana -> mid

damage -> mid

„Caro change the weather to her advantages and calls a blizzard which slows all enemies inside the area, they also get damaged“

Skill 3

### **"ICE BARRIER"**

single target ability

cd -> mid

mana -> low

damage -> none

„Protected by an ice barrier, it absorbs an amount of incoming damage for an amount of time.“

Skill 4

### **"FROSTFIRE BOLT"**

single target burst

cd -> high

mana -> high

damage -> high

„Caro uses her anger and creates an enormous frostfire bolt, which deals high damage on impact“

# The Priestess

Name: Thea

Age: 25

## Physical Description

The Priestess is very elegant and pure looking with long straight blonde hair and a soft and loving facial expression. She is very slender in her mid-twenties and slightly shorter than average.

## Character Description

Ever since her birth people around her never got sick and injuries seemed to heal faster as well if the injured person was close to her. Convinced that she had to be blessed by god her parents gave her to the church where she was trained to use her powers for good. Besides her Healing Aura she also learned to produce the Orb of Healing a green glowing orb that heals everyone that touches it.

Now that a war has started she was ordered to support the allied troops by healing them. While healing her allies she also learned a how to create a Divine Shield for herself or another person that reflects any attack back to its origin.

Since she worked for the church her entire life she never learned any advanced combat skills and relies on her allies to help her out but if push comes to shove she can always throw the empty glass bottles she is stuck with after using her other spells against the heads of her enemies in hope of repelling them or summon Beams of Holy Light a very basic self defense spell that isn't very damaging but still hurts when one gets hit by it.

## Advantages

Can heal allies

## Disadvantages

Low damage

## Priestess Skills

Healing Aura: All allies in a specific radius get healed over time.

Costs mana over time while active. Grants one empty bottle every couple of seconds while active.

Orb of Healing: Summons a green glowing orb that can be placed on the map and can be picked up by allies healing them.  
Costs medium amount of mana.  
Grants one empty bottle per orb placed.

Bottle Throw: Throws the empty bottles gained by using the healing spells at the enemy doing a low amount of damage if an enemy gets hit by it with a low chance to cause bleeding.  
Doesn't cost mana but requires empty bottles. Will consume one empty bottle per throw.

Divine Shield: Grants herself or an ally a shield that reflects taken damage back to the attacker.  
High mana costs.

Beams of Holy Light: Will shoot beams of golden glowing light doing a small amount of damage if it hits an enemy.

## **Rogue**

Name: Colin Reth

Age: 23

### Physical Description

Colin Reth is a young, muscular man. He's wearing black trousers, a black coat and black shoes as well. His face is hidden in the dark by the cap of his coat. It's nearly impossible to see him at night, especially if he's hiding in the shadows. The only thing, that's flashy on him, are the two silver daggers in his hands. Nobody does exactly know how his face looks like, but people, who could escape his deadly attack tell, that he has completely black eyes and sharp teeth. The demonic blood mixed up with his human blood, give him superhuman speed and strength.

### Character Description

Nobody really knows, what's the story of Colin Reth. It's even not sure, if Colin Reth is his real name, because he never say any word to anyone. But people call him like this, according to some rumors: More than 20 years ago, there was a man called Arlon Reth, that lived alone with his wife Sara Reth in the countryside, isolated from the rest of the population. People were afraid of him, because he conjured demons. His wife, was worked as his assistant. One day Mrs Reth became pregnant. The father of the child injected the woman regularly with demonic blood, without the knowledge of the mother. It seemed like it had no effect on the woman, but on the child, as it should turn out later. When their son Colin was born, he did not cried, like newborn usually do. And when he opened his eyes, they sparkled out of pure malice. Officially the couple Reth told, that their child was a stillbirth, but people did not believed them. They think, the mysterious man, killing people with superhuman promptness, is Colin Reth.

## Advantages

Quick Attacks. High Melee Damage. High Mobility. Access to Gap Closers

## Disadvantages

Lacking in Range Damage. Low Sustain.

## Play Style

the Rouge is a very offensive Class, that depends on high mobility and stealth to survive, because it has no other defensive Skills. It can kill foes quickly, but has difficulties to defend bases. If you damage a foe, with any of your skills during stealth, you will be revealed.

## Rogue Skills

### **'Slice'** (Primary Attack)

Slice up to 2 foes in front of you twice with your main hand dagger. This skill turns into 'Backstab' while you are stealthed.

### **'Backstab'**

You stab your main hand dagger into the Heart of your foe, dealing massive damage.

### **'Whirling Daggers'** (Skill 1)

Leap forward while spinning around, so up to 2 foes are hit by your daggers. If you inscribed demonic characters on the weapons, you will steal life from every foe you hit.

### **'Stealth'** (Skill 2)

Vanish in stealth for 3 seconds. If you inscribed demonic characters on the weapons, you will vanish in stealth for 8 seconds.

### **'Throwing Dagger'** (Skill 3)

Throw your off hand dagger towards one foe, that deals damage if it hits. If you inscribed demonic characters on the weapons, you will be teleported to that enemy.

### **'Demonic Inscription'** (Skill 4)

Inscribe your weapons with a demonic inscription

# Warrior

Name: Tragoro

Age: 36

## Physical Description

I. STATURE            wide, well built, muscular  
II. AGE                36, marked by life  
III. BODY             Long dark hair tied to braid, weathered skin, scar on the left cheek  
IV. CLOTHING        Simple dark brown leather clothing, sword and sheath, hip belt with various small knives, simple dirty white sleeveless shirt, sleeveless frayed leather jacket open over it, necklace around the neck (hanging to the chest), thin knife with a leather strap attached to the upper arm

## Character Description

Tragoro is an experienced fighter, fast and skilled. His specialty is melee attack, with his steel sword. He can kill enemies with a sweeping swipe or inflict a bloody wound on them. His ace in the sleeve is, on the one hand, his magical ability to heal the worst wounds himself and to make himself stronger and faster at short time, on the other hand to block attacks with a magic shield.

Tragoro comes from the realm of the South Isles, a small almost forgotten part of KALÛRIENS. For seven years he grew up in his small village, Yersinia, together with his mother. But his childhood did not last for long. In the summer of 1548 his mother fell ill at the Black Death. No one in Yersinia knew how to combat this omnipotent disease, and so it happened that she died within a few hours. She left him nothing but a scanty hut and the sword of his grandfather.

No one from the village took care of him or that he was completely self-centered. So Tragoro moved alone into the wilderness, away from the sick village and his deceased mother. Years had elapsed, in which he wandered through forests and laboriously killed his food. He taught himself to fight and survival.

One day, cold and snow had already covered the ground for a long time, and Tragoro's supplies were coming to an end. He slowly grew weak, not a single animal had crossed his path in the last days, and pure water could not keep him alive forever. He dragged himself through the forest, his pants and boots soaked in the snow as he suddenly broke through the thicket and found himself at the edge of the forest. In front of him was a large castle, with a single dark tower in the middle, and a narrow stone bridge leading to the entrance. Smoke rose from a hole further up. With renewed hope he approached the gate and knocked. No one responded. Tragoro struggled with himself, but his hunger was too great. Above the gate was a window. It was small, but it was slightly open. He climbed the archway and pushed himself through. Inside it was dark and it smelled moldy. Uncertainly, he pulled himself up and stepped through the door. Something moved in the darkness. Shapes behind bars twitched as he passed them. He ran along a long corridor, rustling noises accompanied him all the way. When his eyes had become accustomed to the darkness, Tragoro realized that there were people behind the bars. He tried to get farther, but the figures turned him away. The more rooms he came, the more he saw. Rats were walking around in small cages, and here and there glasses were sitting around with

innards. He approached a room from which the light beamed. Then he realized that the people behind the bars were all infested with the Black Death, like his mother all the years before. He squinted through the crack of the door. Behind him stood the infamous and feared magician Zambiruga, and then Tragoro understood. Anger rose in him. He gathered all his strength, drew his sword, and stormed through the door. A brief bitter fight broke out between the two, but Zambiruga was not prepared for the attack. Tragoro caught him with the sword and stabbed him deeply in the chest. By winning over Zambiruga, his power was no longer tied to him. Tragoro snatched the magician's heart from stone in which the magic was bundled and carried it from then on as a talisman around his neck. He brought him strength and speed when he needed it. Whenever he touched him, he formed a shield in front of him, which denied anything that would damage Tragoro.

Since then, he has taken upon himself the task of tracking down all the magicians of his country, who had devoted themselves to the dark side of magic, in order to eradicate the disease of his country. Other people joined him, but the wizards were powerful. Shortly before a war broke out between the two parties, KALÛRIEN was attacked by the great power from the north - and after a short violent resistance. KALÛRIEN had no chance against the superiority of the Nordic power.

## Skills

1. 4 sec. active shield. (a half round shield in front of the player. Can be destroyed by enemy player)
2. Sweeping swipe. (360° strike.)
3. Bleeding hit.
4. 15 sec. 15% speed, strength Buff. + 10% instant HP refill.

50 Max Mana

1. 5 Mana / 8 sec. Cooldown
2. 3 Mana / 4 sec. Cooldown
3. 5 Mana / 5 Cooldown
4. 20 Mana / 25 Cooldown

## **The Peasants (NPC)**

The peasants are sent out by the lord of each country as a last-ditch effort to prevent the enemy from taking over the country. Armed only with pitchforks and no previous combat experience the peasants don't really pose a threat against the brave heroes fighting for their countries but can aide them in taking over the enemy's land and can be a useful annoyance to the enemy by doing so. There is also a constant stream of new peasants enlisting since the lord promised big rewards for every peasant that manages to achieve something of importance in the war knowing very well that most if not all of the peasants are going to die in combat.

## Weapons

Pitchfork: Used only by peasants the pitchfork does a small amount of damage against players and other peasants.

# Map

## “Acrin”

Acrin is a huge landscape between the blue and the red citadel. It has a lot of strategic value. There has been a long fight about it, because both sides want to own Acrin.

## Map Design

When you first join the game, you are in your home, which is a little bit in the back behind your own citadel. It should be small area with some weapons and armor lying around. And a table with a strategic map. A little bit like a preparing area for a big war.

The citadel looks like a little part of a castle.

Lanes are out of stones, sand and earth. there is gras next to the lanes.

The top lane is near to a forest in front of a big mountain group. The middle neutral base is in an area next to a mine, which is inside a mountain. You can't go into the mine. There is a card standing next to it.

In the center of the mid lane is a graveyard with a base on it. It has small gravestones and a little tomb, which is not accessible.

In the center of the bot lane is a lighthouse on underground out of rocks near the water. Next to the lane is water and a small beach. You can not go to the beach because of blocking fences.

The first bases on each side lane have a little tower next to them, the first bases in the mid lane have a big gate or a tower.

## Base Element Design

A base is a circle element inside the map. It can be captured by any team. The base is marked by a shining outer border which is the color of the current owning team (Blue or Red). If a base is neutral or being captured the color is white.

Inside the base is a medium sized round circular progress bar, which shows the current state.

## Citadel Element Design

The Citadel has the same attributes as the base, but is much bigger and has a higher time to capture.

## Level Travel

The player has to walk on the lanes to get to the other bases. He can also use shortcuts between the lanes.

He can travel back to his spawn by using his teleport skill.

## Scale

1 unit in Unreal Engine 4 equals 1 cm.

Player characters have the height of a realistic human, so around 180 units. Every other object in the level, for example trees, scales according to that. Just the Peasants have a smaller, less realistic scale. Their height is around 100 units.

## Time

It takes 1 minute to walk from one side of the map to the other side.

For more time information look at the section: General Game Definition -> Charts and Tables

## Objects

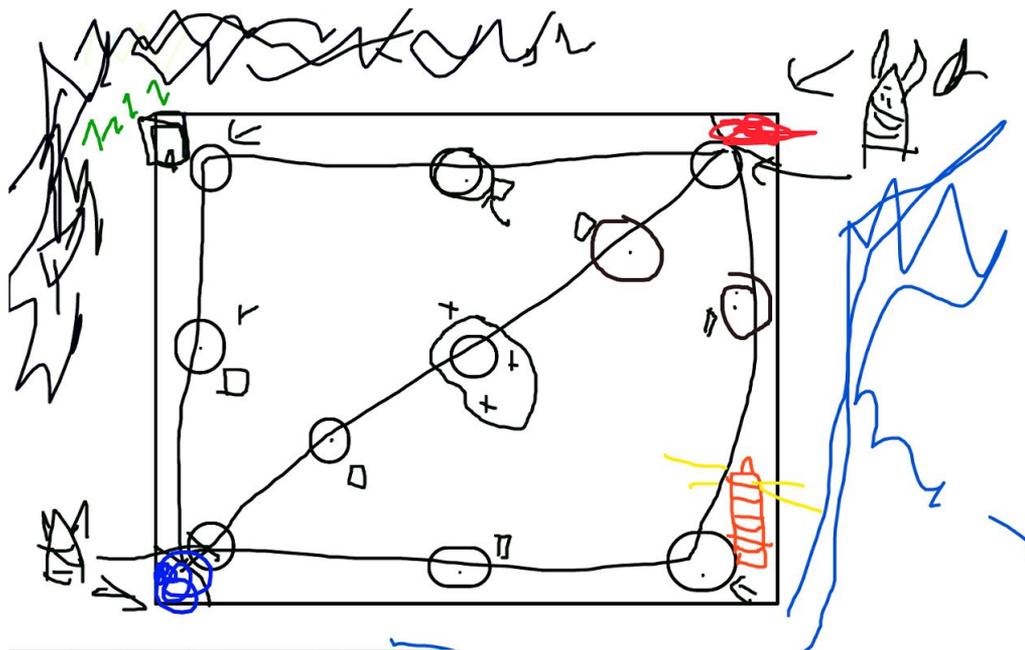
There are many objects for every specific locations.

For example dark stones, sand stones, moss stones, pine trees, normal trees, palms. A lighthouse, a mausoleum, a mine.

Mountains, rocks, water, fences.

Towers, spawn location items.

## Map Sketch



Sketch of the Map, with the bases, border and spawn points.

# General Game Definition

## Combat System

A fight can happen between 2 players, up to 10 player max. Every player has his own skills and stats, which effect the fight. He also has a life pool and a mana pool for skills. A player can use his skills to attack other player characters or help friendly player characters. There are projectile based skills, area of effect skills and melee skills and buffs.

Every player has 1 primary attack and 4 class based skills. The primary attack has a low cooldown and costs no mana. The 4 class based skills cost mana or another resource and might have bigger cooldowns. When a player uses a damage skill and hits one or more enemies, each of the hit players life will be reduced by the amount of damage taken. If a players life is reduced under 0 he will die.

The mobility can be affected by skills, such as movement slow or stuns. You can also run away from another player and eventually outrun him to survive.

Each player character has an invisible hitbox, which can be hit by the skills. A projectile or AoE does not affect friendly player characters. A projectile goes through friendly players and peasants and only hits on enemy characters, enemy peasants or level objects. A player can also kill enemy peasants. He can also use skills while jumping. Characters can jump on objects in the level and on friendly peasants.

## Experience System

A player character can level inside the game. His start level is 1 and he can level up until a max level 10. To level up he has to gain experience points, which he gets for killing enemies, killing enemy peasants and by capturing enemy or neutral bases. Every time an enemy player dies in range of the player he will get a specific amount of experience points, which is calculated by the following facts: When a friendly character is also inside the xp range of the dying player, the amount of xp will share between all friendly players inside the range. Killing peasants will act similarly, although the amount of experience gained is much lower per kill.

When a team captures a base the whole team will get experience, regardless of the player's position or if they are alive or dead.

Every level of the characters has a certain amount of experience points. If a player gathered enough points, he will reach the next level and the leftover points will add to the new level. He will get an available skill point, which he can use to level up his stats. When this event happens the player will be notified on the screen and he can open a new window inside the player's hud to manage his skill points, he will also be able to open it up any time he wants to look at it. If the player used his free skill point, it will be looked inside the stats level. He can not use a skill point twice. If a player has reached the maximum level of 10, he won't get any experience anymore, but if he captures a base completely or kills an enemy player or peasant, the team will.

The kill or die event triggers an event which gives all enemy players shared experience points in a certain range. This range is larger for enemy players and smaller for enemy peasants.

## Base Capture System

A neutral or enemy base can be captured under following requirements:

- The player has to be inside the base area
- A friendly peasant is in range around the base or even inside the base
- The previous friendly base has to be 100% captured
- No enemy player is inside the base

The base has a variable which has a range from -100 to 100. If the variable is -100, the base is fully captured by team blue and the border of the base has a blue color. If the variable is 100 the base is captured by team red and the border is red. In between the base state is neutral and the border is white.

In the middle of the base is a medium sized circle as an indicator of which team is progressing the capture. It looks like a pie chart. Every 0.1 seconds the pie chart will be updated. Every 0.1 second capturing the value will be changed by 1. The server sends the update variable also every 0.1 second to the clients. When a base is captured a specific sound is played and the team who captured the base gets experience.

## **Charts and Tables**

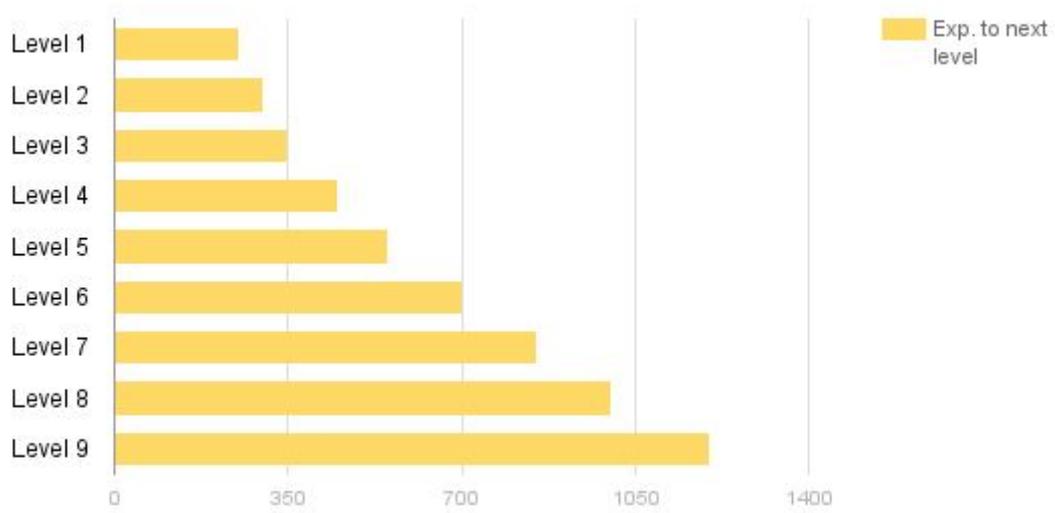
### Miscellaneous Times

First time peasants spawn	00:00
Delay between spawn of peasants	30s
Player respawn time after death	10s + 2* (Player Level)
Duration enemy player shown on map after last dealt / received damage	10s

### Capture Times

	<b>Time needed</b>
Time to capture a neutral base completely	10s
Time to capture an enemy base completely	20s
Time to neutralize an enemy base completely	10s
Time to capture the enemy citadel completely	30s

## Experience needed per level to reach the next level



## Experience points

<b>Exp you get from...</b>	<b>Amount of Exp you get</b>
...killing an enemy player	100
...killing an enemy peasant	15
...capturing a base completely	450



# Interactivity

## Goal

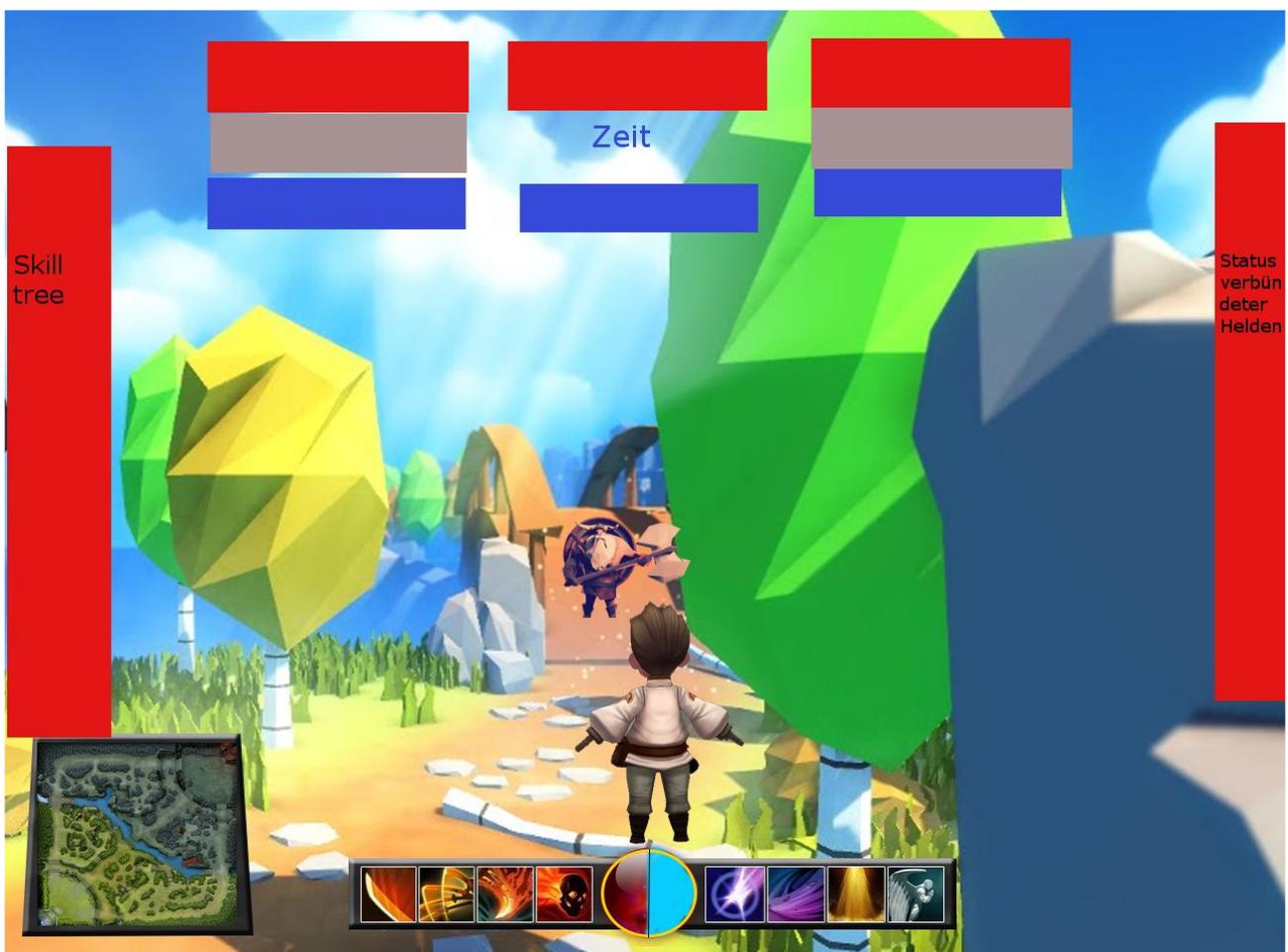
The final goal of the game is to capture the enemy citadel at the end of the 3 lanes.

You get access to the enemy citadel, when you capture a base before it.

You have to prevent the enemy team from capturing your bases and of course your citadel.

## Interface

In the lower left corner will be a minimap, where the player can see the other friendly players and their current position and if a base is captured by a player, his icon will be transparent. On the left side of the HUD will be a status bar, where the player can see if the team members are dead or alive. The skills, live and mana bar will be on the bottom of the HUD. On the top of the screen will be a timer, the player should be able to know how long they currently play.



## Main Menu

The main menu structure:

- [ Join Lobby ]
- [ Host ]
- [ Music on / off ]
- [ Quit ]

## Game Menu

The game menu structure:

- [ Resume ]
- [ Music on / off ]
- [ Help ]
- [ Quit to Main Menu ]

## Communication

Players can communicate via a chat tool, which is implemented in the game.

## Control Scheme

The following tables contain lists of the standard key assignments and accompanying actions. All keys are visible in game in the game menu within the tab 'Help'.

### Movement

Key	Action performed
W	Move forward
A	Move left
S	Move backward
D	Move right
Space	Jump

## Combat Skills

Key	Action performed
Left Mouse Button	Use Primary Attack
1	Use Skill 1
2	Use Skill 2
3	Use Skill 3
4	Use Skill 4
Left Mouse Button	Confirm Spawn Location for AoE
Right Mouse Button	Refuse Spawn Location for AoE

## Additional Skills

Key	Action performed
Q	Use Dodge Skill (Roll)
E	Use Heal Skill
R	Activate / Deactivate Sprint
B	Teleport to own Spawn

## Menu

Key	Action performed
Escape	Open / Close Menu
F10	Open / Close Menu

## Stats Menu

Key	Action performed
G	Open / Close Stats Menu
Escape	Close Stats Menu
Left Mouse Button	Place Level-up-point on Stat

## Chat

Key	Action performed
Enter	Open Chat
Enter	Send your Message

## **Player Experience**

Playing the game can be quite stressful, so you have to be very patient. The skill of the player will improve with every time he plays, because he will be punished for a death by a certain amount of time.

## **Interactive Rhythm**

A game should last around 30 min, at least 20 min and max 60 min

## **How the Player Marks Progress**

The player will gather level points by killing peasants or enemy players and by capturing bases and will level up, if he has enough points. The player has to capture bases to destroy the citadel at the end. The peasants go farther of the bases are captured.

# Game Logic, Algorithms, and Rules

## Interaction Component Matrix

player action	damage projectile	area of effect damage	melee attack
on teammate	no damage (projectile flies through)	no damage	no damage
on enemy	damage (projectile disappears)	damage	damage
on friendly peasant	no damage	no damage	no damage
on enemy peasant	damage (projectile disappears)	damage	damage

## Key Game Algorithms

### Base Capture

```
WHILE Player Is On Base
  IF Peasant Is Close To Base
    TRUE: IF Last Friendly Base Is At 100
      TRUE: IF Enemy Is Not On Base
        TRUE: Capture Base
```

### Character Interaction / Combat

```
WHILE Alive
  IF Hit By Skill
    TRUE: Apply Skill Effect To Player
  IF Skill Used
    TRUE: Decrease Player Mana By Used Amount
    IF Skill Hit Target
      TRUE: Apply Skill Effect To Target
    Put Skill on Cooldown
```

## Character Leveling

IF Player Xp GREATER Xp Needed To Level Up

TRUE: Give Player One Point To Spend

Notify Player

IF Player Spends Point

TRUE: Apply The New Values Of The Attribute To The Player

Decrease Points To Spend By One

## Peasant AI

While Alive

IF Peasant Sees Enemy Peasant

TRUE: Attack Enemy Peasant

FALSE: IF Sees Enemy Player

TRUE: Attack Enemy Player

IF Player Is Attacked By Enemy Player

TRUE: Attack Enemy Player

Move To Enemy Citadel

## **Game Rules**

### Health regeneration

Every player has his own health regeneration, which he can skill in his stats. When the player is in his own spawn area, the health regeneration increases by 100%.

### Mana regeneration

Every player has his own mana regeneration, which he can skill in his stats. When the player is in his own spawn area, the mana regeneration increases by 100%.

### Respawn

When a player dies, he will respawn after a certain amount of time in his spawn area.

### Experience

A player gets experience by killing enemy players, enemy peasants and fully capturing bases.

### Leveling stats

A player can reach his max level 10. When a player reaches a new level he can skill one stat in his skill tree.

## Teleporting

Every player can use his teleportation ability, which then goes on a cooldown for a certain amount of time. Use this ability careful, because damage will interrupt it.

## Roll forward

Every player has the ability to roll forward. This ability goes on cool down after use. It costs no mana. During this roll, you dodge every incoming attacks.

## **Minimap**

The map will show the player his and the other friendly player position. Enemy player will not be shown on the map. When a player is capturing a point his icon will be transparent on the map, that makes it easier for the other player to see which color the base has. Enemy players will only be shown on map, when they are fighting a team member somewhere. The will disappear again, if they did not deal or receive damage for 10 seconds.

# Reference of Key Elements

## Scoring

1. When you capture a base, you progress forward to the enemy citadel, which is the main goal of the game.
2. Your character levels up, when he gets experience, which is achieved by killing enemy players or peasants and by capturing bases.

## Winning/Losing

- Capture bases until you are able to capture enemy citadel
  - Win game: Capture enemy citadel
  - Lose game: Enemy captured friendly citadel

## Transitions

### Map transition

Main Menu -> Lobby -> Game Map -> End screen

## Rewards

You get character experience by killing enemy players, enemy peasants and capturing bases. You get a skill point every new level you reach.

# Art and Production Design

## Art & Animation Style

The world artstyle is the typical low poly style with good shaders and lightning. The objects are all minimalistic but recognizable. You won't stop at a certain object and look at the details. But it looks nice and works well together with all other objects. The shadows are not so heavy. There are no translucent actors.

The color of the world and characters can be very colorful.

## Sound Effects Style

Like in other MOBAs, f.e. Dota 2 ([http://dota2.gamepedia.com/Item\\_sounds](http://dota2.gamepedia.com/Item_sounds))

Every skill has at least two sounds, when casted and on impact.

- Player skills
- Peasant skills

Other sounds:

- You capture a base completely
- One of your bases has been captured
- An enemy gets killed
- An ally has been killed
- Level up
- Game is over: You won
- Game is over: You lost

## Music Style

main menu: epic battle prepare music (crusader kings 2)

inside game: epic battle music

## Storyboards and Sample Art

Samples and art sketches can be found in the Google Drive:

### Storyboards

"\Moba Projekt"

### Sample Art

"\Moba Projekt\Sketches"