

Iron and Feather

(Working title)

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Contents

1	Game Description	2
1.1	Story	2
1.2	Gameplay	2
1.2.1	Single player	2
1.2.2	Multiplayer	3
1.2.3	Weapons	3
1.3	Concept Art	4
1.3.1	Drawings	4
1.3.2	Submarines	5
1.3.3	Gameplay maps	6
2	Development Schedule	7
2.1	Functional Requirements	7
2.1.1	Functional minimum	7
2.1.2	Low target	7
2.1.3	Desireable target	7
2.1.4	High target	7
2.1.5	Extras	7
2.2	Tasks	8
2.3	Timeline	9
3	Assesment	10

1 Game Description

1.1 Story

It is the year 742 of the fifth age. Peace and wealth are upon the lands of the north, none living remember the days of war. Tales of past battles are only told by the old ones.

In this year, the two great kings of the north met in the land of Roden, as they did every seven years since the beginning of the new age. None of them however, had anything interesting to share. Their people thought that kings were not needed anymore. So in their boredom, they looked for something they could spend their time on.

After three days of intense discussion, they agreed on the following: They would build boats that could dive deep into the water. Down their, they would have glorious tournaments, where they would fight against each other for glory. One year from now, the tournament should take place in the waters between their kingdoms.

So they both returned to their lands and instructed their best engineers to start with building the boats. Also they were looking for the bravest men which would fight for the glory of their kingdom in the tournament.

It is the year 743 of the fifth age. Let the tournament begin!

1.2 Gameplay

The game is a fun action game featuring submarines. The player controls one submarine in a playfield and can shoot and drop bombs. The goal is to be the last man standing. There are walls in the play field through which neither shots nor the submarines can go. Some of the walls can be destroyed however. Because the game is set under water, there are currents influencing the movement of the shots and the submarines. Explosions on the other hand will induce new currents. Elements like turbines will also cause currents in the game.

The players watch the playfield from the bird's eye perspective, all movement happens in 2D. The playfield is so small that it fits on a single screen and is bordered by indestructible walls. One level is generally played really fast. Estimated playing times for a level are 10 seconds to 2 minutes. For this reason, there will be many levels with different difficulties.

There are different types of enemies: Immobile enemies attached to the ground and submarines that can move around freely and shoot at the player with different weapons.

1.2.1 Single player

In single player mode, the player chooses one of the two kings as the side he fights for. The tournament begins and the player has to win against increasingly difficult and numerous enemies. For winning a round, the player earns points. With these points, the ship can be repaired and better weapons and bombs can be purchased.

1.2.2 Multiplayer

There are several multiplayer modes:

- **One on one:** Two players play against each other, each choosing one of the two factions.
- **Cooperative:** Two players play together in the same faction against the computer.
- **Free for all:** Multiple players play against each other.

1.2.3 Weapons

The game features several different weapons. They break down into three categories:

- **Small:** Small guns are weak but have a high firing frequency. They are movable and can thus fire in all directions.
- **Big:** Big guns are stronger but have a low firing frequency. They are fixed and can only fire in the ships forward direction.
- **Bombs:** Bombs can be dropped at the current ship location.

For the small and big guns, different kind of weapons are possible:

- **Standard:** Standard weapons have no special properties.
- **Bouncing:** Bouncing weapons bounce of walls.
- **Propelled:** Propelled projectiles accelerate and gain in speed.
- **Aiming:** Aiming projectiles can steer towards an enemy.
- **Special:** Special weapons can influence the flow of the water.

Also the bombs can have different properties:

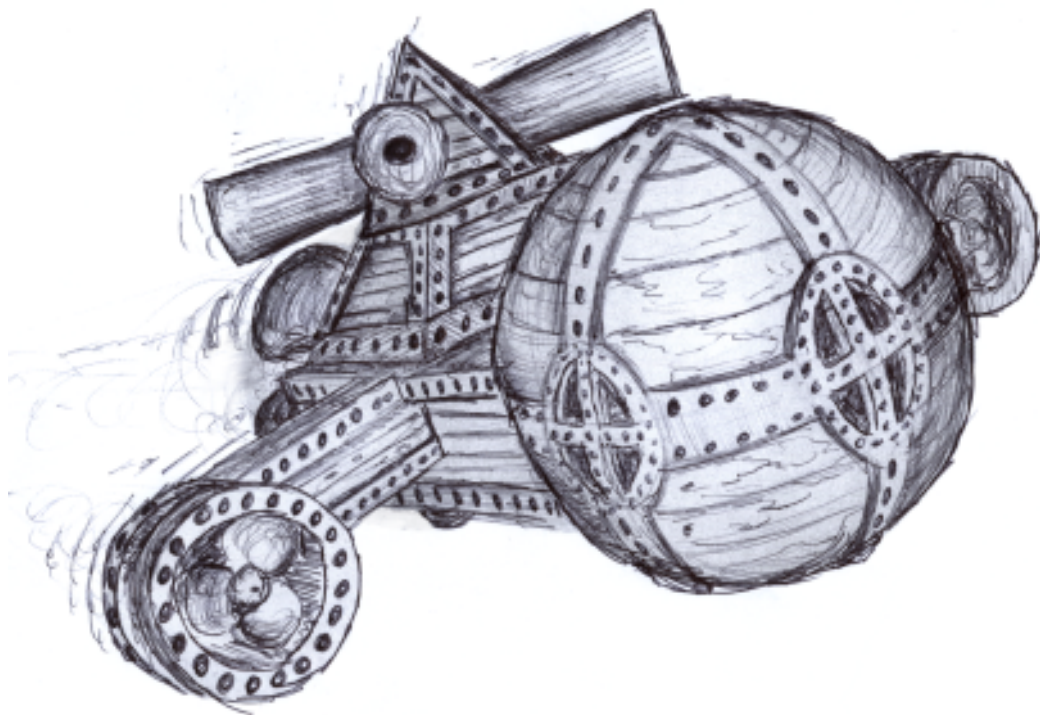
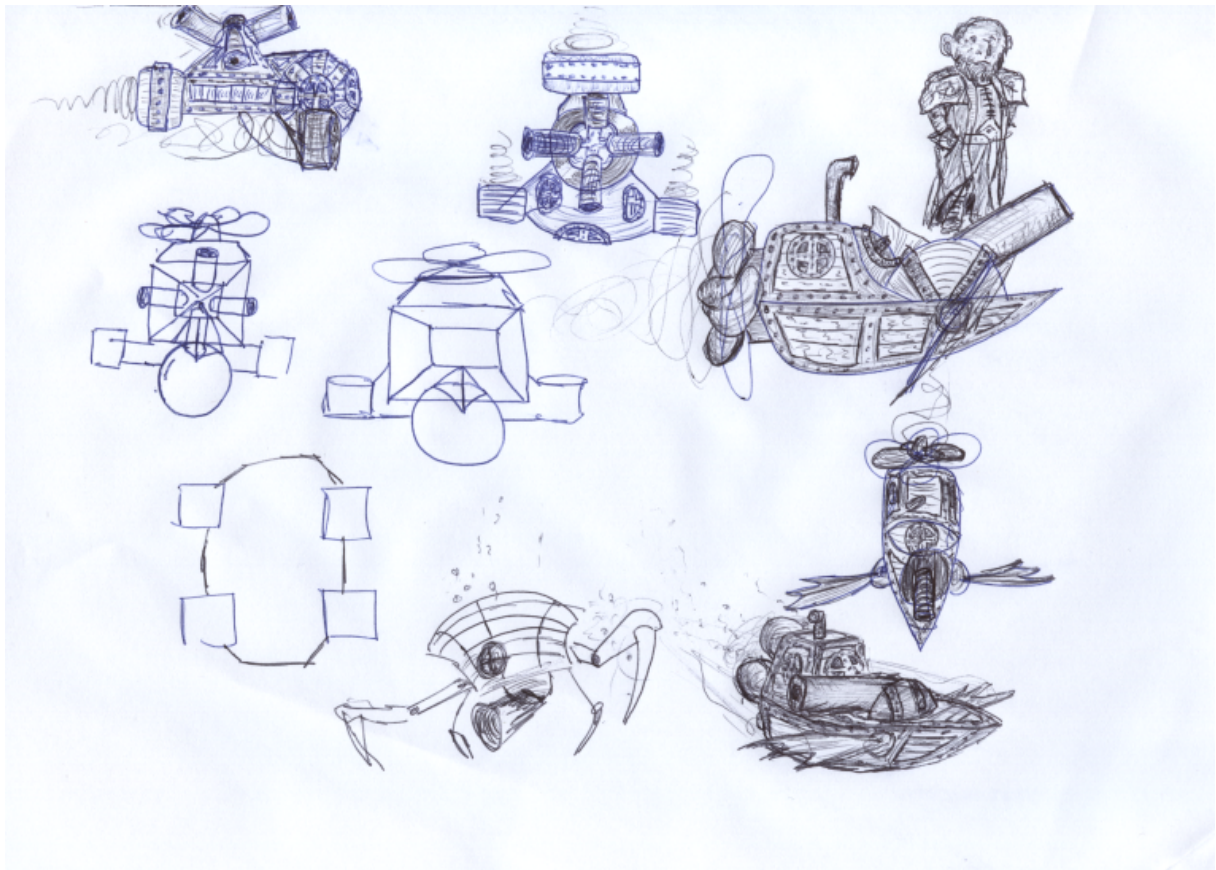
- **Anchored:** Anchored bombs stay more or less at the same position.
- **Floating:** Floating bombs follow the current of the water.
- **Timed:** Timed bombs explode after a fixed amount of time.
- **Impact:** Impact bombs explode on contact with a vessel or the environment.
- **Maelstrom:** These bombs create a maelstrom and influence the flow of the water.

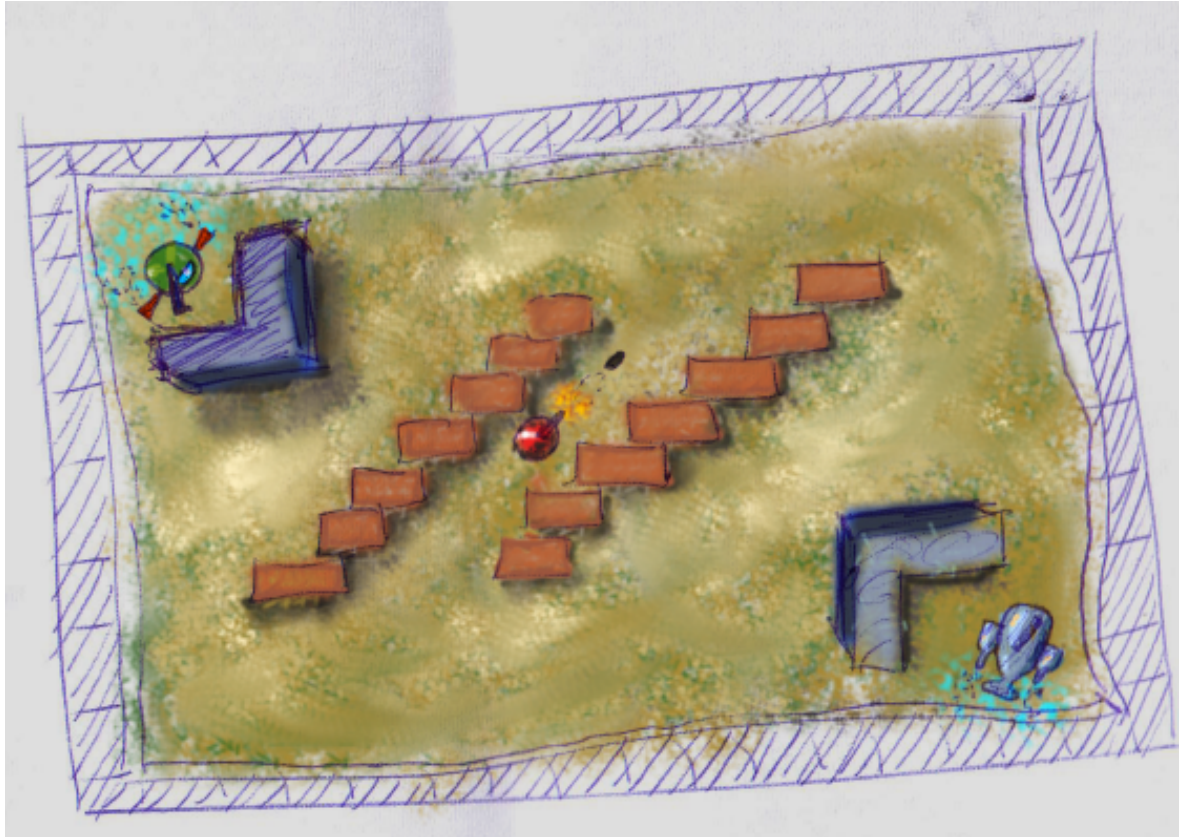
1.3 Concept Art

1.3.1 Drawings



1.3.2 Submarines





2 Development Schedule

2.1 Functional Requirements

2.1.1 Functional minimum

- Gameplay: The player can move around and shoot.
- Graphics: Submarines are represented by spheres, walls with cubes.
- AI: The only enemies are static and shoot in random directions.

2.1.2 Low target

- Gameplay: Submarines and shots are influenced by fluid dynamics.
- Gameplay: Up to 4 players can play on one XBox.
- AI: Enemies can move around and shoot the player.

2.1.3 Desireable target

- Gameplay: Multiple levels can be played.
- Gameplay: The ship can be upgraded with weapons and items.
- Graphics: The playfield looks nice. There are models for the submarines and other objects.
- Sound: There are basic sound effects and background music.
- AI: Enemies evade shots.

2.1.4 High target

- Graphics: Improved graphic effects.
- Sound: Better/more sound effects and background music.
- AI: Enemies work together.

2.1.5 Extras

- Gameplay: The game can be played over the network.

2.2 Tasks

Functional minimum				
Task	Description	Responsible	Support	Hours
11	Basic game engine	Julian	Martin	20
12	Basic graphics	Julian	Martin	10
13	Input handling	Julian	Martin	10
14	Level loader	Julian	Urs	10
Low target				
Task	Description	Responsible	Support	Hours
21	Fluid dynamics	Urs	Martin	50
22	Basic AI	Julian	Urs	15
23	Multiplayer	Julian	Urs	10
24	Menu screen	Urs	Martin	10
Desireable target				
Task	Description	Responsible	Support	Hours
31	Advanced graphics (Shaders, Particles)	Martin	Urs	50
32	Models/Textures	Martin	Urs	60
33	Different weapons / enemies	Julian	Martin	30
34	Different levels	Urs	Julian	20
35	Level editor	Julian	Urs	30
36	Sound effects	Urs	Martin	40
High target				
Task	Description	Responsible	Support	Hours
41	Fancy graphics (Shaders)	Urs	Martin	40
42	Background Music	Martin	Julian	30
43	Improved AI	Julian	Martin	40
Other				
Task	Description	Responsible	Support	Hours
51	Prototype chapter	all		5
52	Prototype presentation	all		2
53	Interim chapter	all		5
54	Interim demo	all		2
55	Alpha release	all		5
56	Playtesting	all		20
57	Playtest chapter	all		5
58	Playtest presentation	all		2
59	Debriefing presentation	all		2
60	Public presentation	all		5
61	Polishing	all		30

2.3 Timeline

Task	10.03-16.03	17.03-23.03	24.03-30.03	31.03-06.04	07.04-13.04	14.04-20.04	21.04-27.04	28.04-04.05	05.05-11.05	12.05-18.05	19.05-25.05	26.05-01.06
	critique	prototype	easter holiday			interim report			alpha release	play-testing	de-briefing	public presentation
11	J	J										
12	J	J										
13	J	J										
14	J	J										
21	U	U	U	U								
22			J	J								
23			J	J								
24		U	U	U								
31	M	M	M	M	M	M	M					
32	M	M	M	M	M	M	M					
33					J	J	J					
34					U	U	U					
35					U	U	U					
36					U	U	U					
41								U	U	U		
42								M	M	M		
43								J	J	J		
51	A											
52		A										
53					A							
54						A						
55								A				
56										A		
57										A		
58										A		
59											A	
60												A
61											A	A

Legend: U=Urs, M=Martin, J=Julian, A=All

3 Assessment

Our game is fun because it is very easy to play and gives a player very often a lot of success. The first few levels will be really easy, so the player can get used to playing the game. After that, enemies will get stronger and the game gets more challenging.

The coolest part of the game will be the multiplayer mode. In this mode, several players can either play against each other or they can work in cooperative mode.

The game is a success if it is fun and if the fluids interact with the world in a convincing way that helps the players and doesn't frustrate them.