

# MicroWar

*Prototype Chapter*

*Team 4*

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# 1. Introduction

Since the interim report we managed to finish the desirable target.

As far as we can see right now, we should have enough time to finish a few more targets and then polish the game, including the different parameters of the units and graphics (more particle systems, etc).

## 2. Current situation

The current development schedule below is without functional minimum and low target, because we finished this part already in the interims report.

Legend:

achieved, in progress, added

*Desirable target:*

- extendable DNA sequence (costs a bit more/or other resource)
- some lifepoint system (protein lifetime)
- some more units: DNA-attacker vs protein-attacker; ranged attack protein; per resource type gatherer; area damage, healer etc
- resources flow through the map along some paths
- sound (+ fun sounds)
- single DNA slots are destructible
- resource display
- Units move along different paths on the map

*High target:*

- DNA translation “scanning” animation
- even more units / building-like units, e.g. resource producing units: produce resources which have to be gathered or directly add to resource pool of player or delivery point for gatherers
- resource: fluid simulation
- more modularity for units

*Extras:*

- more than 2 players
- players have cells instead of just one DNA. Those can split and multiply
- the DNA creates viruses that can dock on the enemies cells but not on their own
- animations like attacking proteins devouring enemies like macrophages, e.g. particle explosions

- fog of war
- multiplayer different screens, **split screen**
- AI enemy, which changes DNA (with free camera)
- single player with waves
- **finite resources**
- DNA movement

## Some details to changes and achievements

### New units and units configurations:

#### Heavy Attacker

This unit has a higher attack power, but it is also slower.

#### Level Upgrade

The units can have some upgrades and each resource gives another upgrade. The level upgrades are:

- higher speed
- more hitpoints against units
- more hitpoints against DNA
- more lifepoints

But for the number of upgrades is a limitation implemented:

$$\text{newValue} = \text{oldValue} + \text{oldValue}/\text{upgradeLevel}^2$$

### Abilities:

#### Trading

Players can now trade resources with special DNA codes: three times the same resource gets traded to one of each other resource.

#### Defending spike explosion

With a certain DNA code, it is possible to spawn an explosion of spikes in front of the own DNA, which damages enemy units. This is useful for defending big waves of units.

### New map configuration:

#### Sounds

The background music and the sounds of the different units were implemented.

### Player color

We changed the colors of the players back to green and red with a bluish background, because the units are better visible.

### Players:

### Split Screen

We have implemented a split screen for the players, so they can adapt their view.

## 3. Strategic concept

The strategic concept builds on “rock, paper, scissors” principle. So we have 5 attack units and 2 supply units, each of the attack units is strong against some unit/s and weak against other units (see picture 1). This is achieved with different movement speeds, hit points and attacking styles. All attack units can attack the DNA, but do not deal much damage. The DNA Attacker is the only unit which does more damage against DNA, but it does not attack other units.

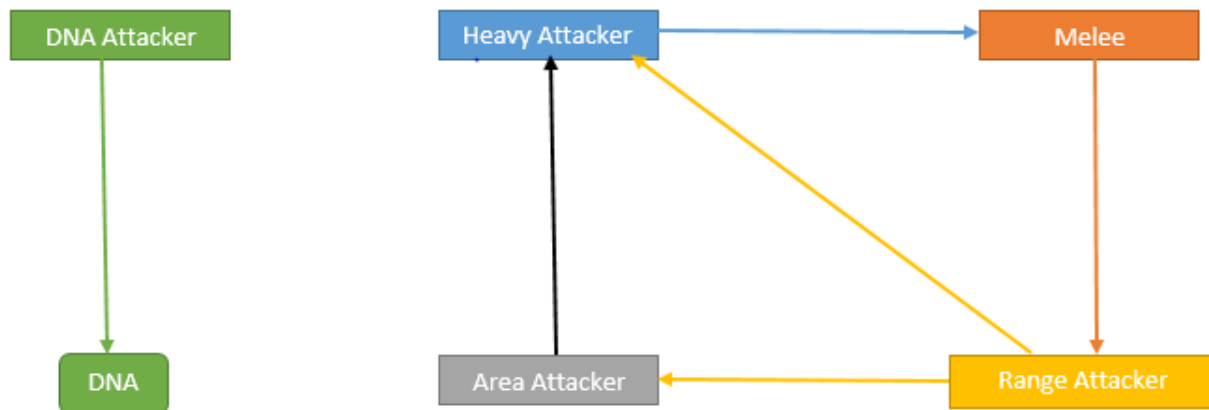


Figure 1: The “rock, paper, scissors” principle for the attacker units.