

Survival of the CARROT PEOPLE



Physical Prototype

Introduction

Because a main part of our game is that the trees grow dynamically, we quickly came up with the idea to create a physical prototype with LEGOs.

Functionality

One person has to play the computer, by constantly moving the monsters, shooting at the monsters and growing the trees (see Figure 1-2).

- The monsters move one step each tick.
- Each tree grows every ten ticks and after the tree kills a monster.
- The trees shoot every 3 ticks.
- Each shot removes one piece of the monster.
- After 3 killed monster the player gets a star.

The other person play the player (see figure 3).

- At the start of the game he can place one tree somewhere on the field, but not on the path.
- During the game he can split of pieces of the trees and place them somewhere else.
- With a earned star he can control the DNA of a tree, to grow different branches.

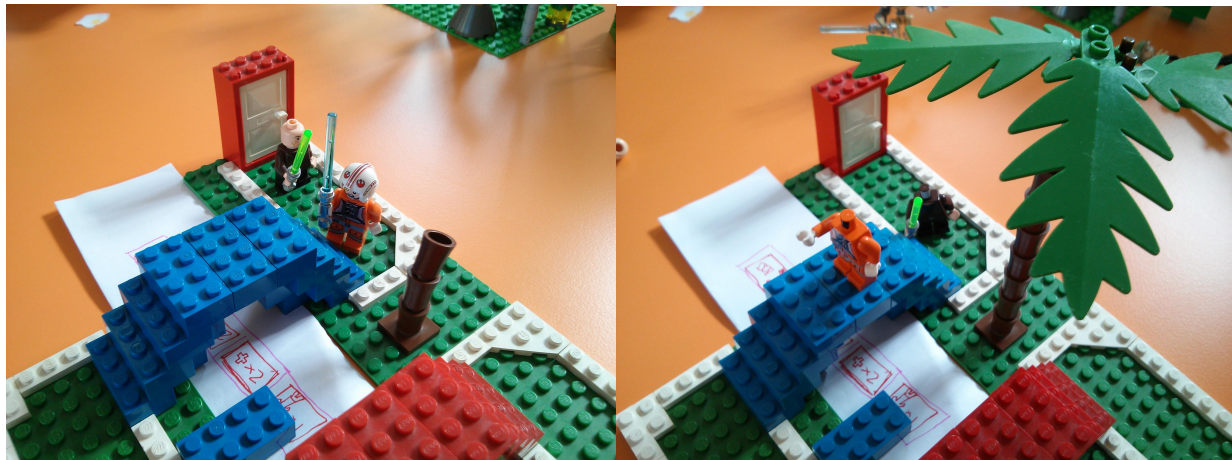


Figure 1-2: Moving of and damaging of monsters and growing of tree

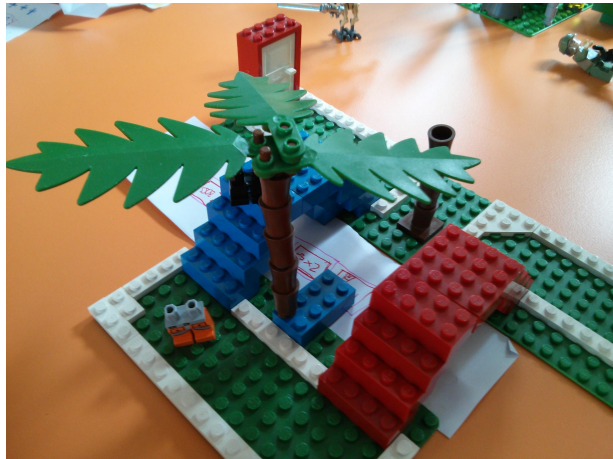


Figure 3: Splitting of branch and placing as new tree

Experience

The game is fun to play so far. However, one of the most fun part should be to watch the tree growing (and the tree should grow different, which is hard to implement / simulate - watching how we tried to simulate that certainly is fun).

Learnings

Game Objective

Before creating the prototype, the goal was that the player has to overgrow the enemy's castle. The idea was that the first tree can be planted freely, while new trees must be planted in range of other trees. However, during the time playing, it was possible to plant the first tree at the enemy's castle right away, and thus win the game without effort. Furthermore, when limiting the first tree to be built in front of the garden to protect, the player could not choose the strategically ideal position for the first tree and it would take a long time for the monsters to reach the tree.

To solve this problem, the new game objective (to win the game) is to create a path from the garden to the enemy by connecting them by planting trees.

Game Level Layout

The maze layout seems to be quite important. To increase the value of the trees, the enemies should come across the trees multiple times. This means that the maze has to be layouted such that it is possible to grow trees at places where the enemy units pass multiple times.

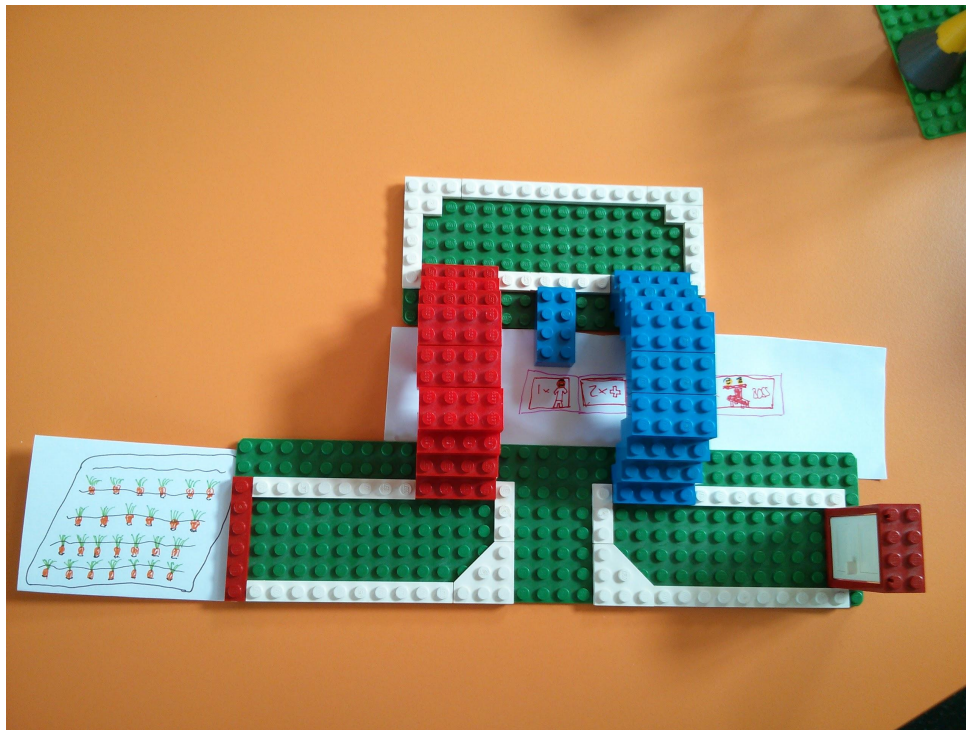


Figure 4: Example of a good layout.

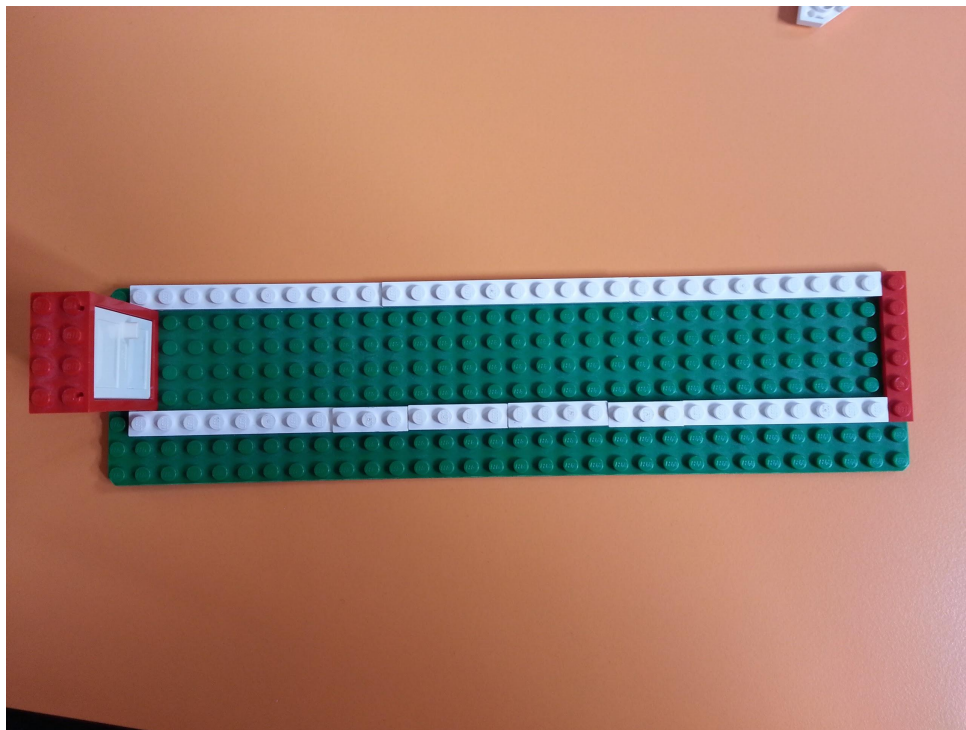


Figure 5: Example of a bad layout

Growth Speed

Until now it is difficult to say how fast the trees should grow, and when they are ready to be upgraded. This has to be tested and figured out.

Tree Upgrades

In the prototype, the following tree upgrades were discovered:

- Attack Range
- Attack Strength
- Attack Speed
- Specials
 - Roots
 - Poison
 - ...

Enemies

In the prototype, we implemented different enemies:

- Normal enemies (3 HP)
- Stronger enemies (4 HP)
- Boss enemies (more HP, special Power)
- Fast enemies (2 Steps per tick)