

Alpha Release Report

1. **Functional minimum**
2. **Low target**
 - a. Structures (houses, trees, etc.) can be destroyed
 - b. The destruction is controllable in such a way that the path the enemies take to the center can be shaped by the players will
 - c. Level/City design
 - d. Smart enemies (path planning)
 - e. ~~Score system~~
3. **Desirable target**
 - a. More possibilities of shaping the path of the enemies by placing oil traps, spikes etc.
 - b. ~~Some functional buildings (like factories)~~
 - c. Enemies with different priorities (destroy buildings or find path to center)
4. **High target**
 - a. Different enemy types (Fighter/Destroyer)
 - b. ~~Controllable minions fighting on your side~~
 - c. Additional spells (AOE and healing spell)
 - d. ~~Blow up the bridge~~
 - e. ~~Let lava flow from the mountain into the city~~
5. **Extras**

The Layer 1 (Functional minimum), Layer 2 (Low target) and most features of Layer 3 (Desirable target) are finished and implemented. We are thinking about changing the level/city design a little and we still have some bugs with the shaping of the enemies' path by the debris. Our top priority is to fix the bugs. Therefore, we prioritized down or cut some of the desirable target and high target features, which we found to be not that important for the general game flow. These features can be implemented in a later stage of development.

Progress Report

Traps

We made good progress and finished with the implementation of the traps. The implemented oil field now slows enemies, which are walking on it, and when ignited with a fireball, applies a burn effect on them and deals continuous fire damage. Also, the explosive barrels have been added to the game. When the barrel is shot by a fireball, it explodes and deals area of effect damage around it to the enemies. Finally, the spike walls are added, which prevent the enemies of walking certain paths. The enemies are able to attack the spike walls and destroy them to free up the path again. All the traps can be placed by selecting the "trap placement spell" and clicking the left

mouse button to spawn the trap. The trap type can be selected by clicking the middle mouse button, which opens a ring menu.

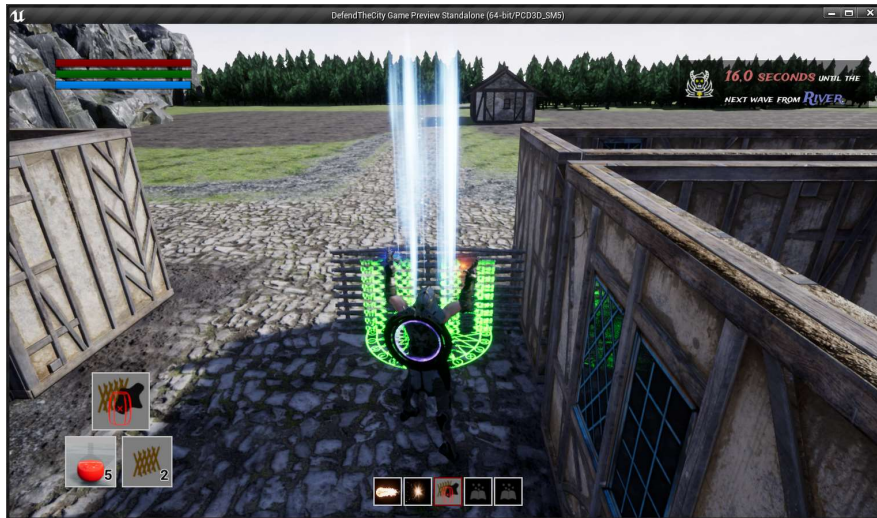


Figure 14: Placement of a trap.

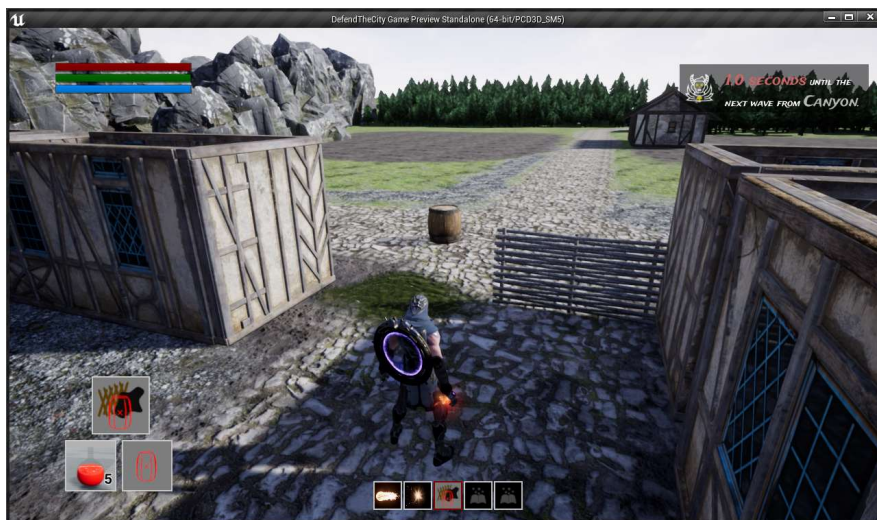


Figure 15: Example of all traps placed.

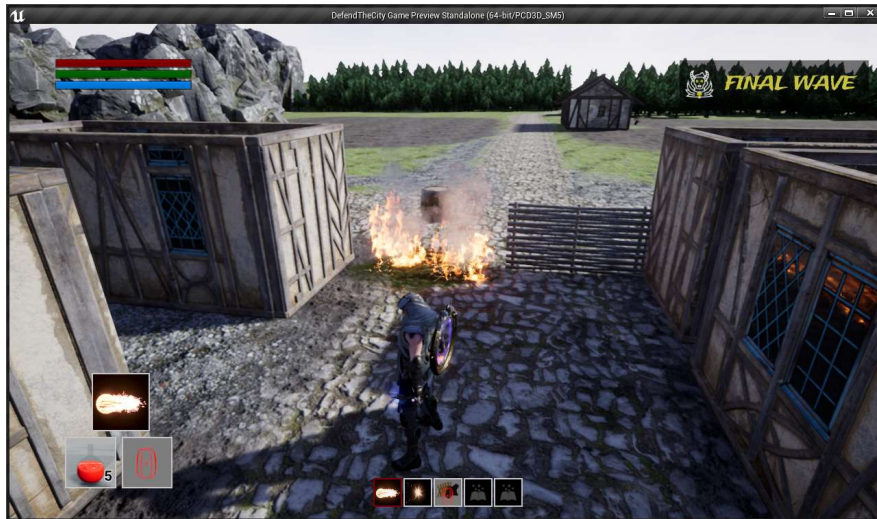


Figure 16: Example of all traps placed with burning oil field.

UI

For playtesting and for general understanding of the game, a basic tutorial with popups has been implemented to show the player the controls and the goals of the game. Additionally, if needed, the key bindings can be shown by holding the letter 'K'. Also, a very basic menu has been added to start and quit the game, as well as some icons for the traps and a logo for the game. To provide the player with more information, an UI element has been added to inform the player of the next enemy wave and the direction from which it is coming. We decided for now to keep it simple for the player to find out from which angle the enemies will attack. Our initial idea to have a tower at the mystical power source or a mage vision spell has been changed in favor of simplicity and practicability. Also, if the core is attacked, it will now show a health bar underneath the mystical power source. That way the player is able to see the remaining health of the main structure.

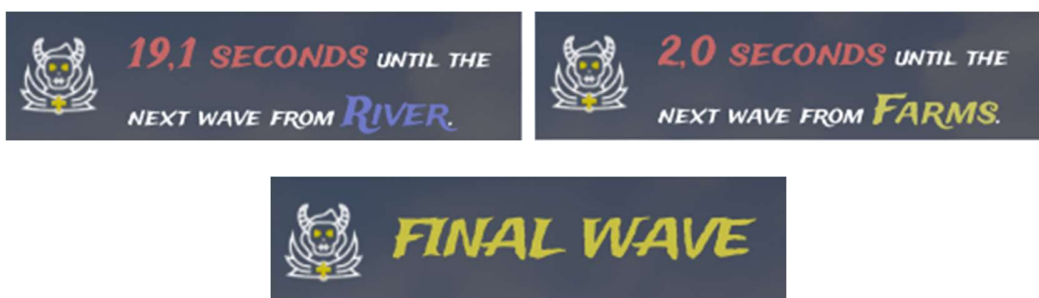


Figure 17: Information about next wave shown in the upper right corner.

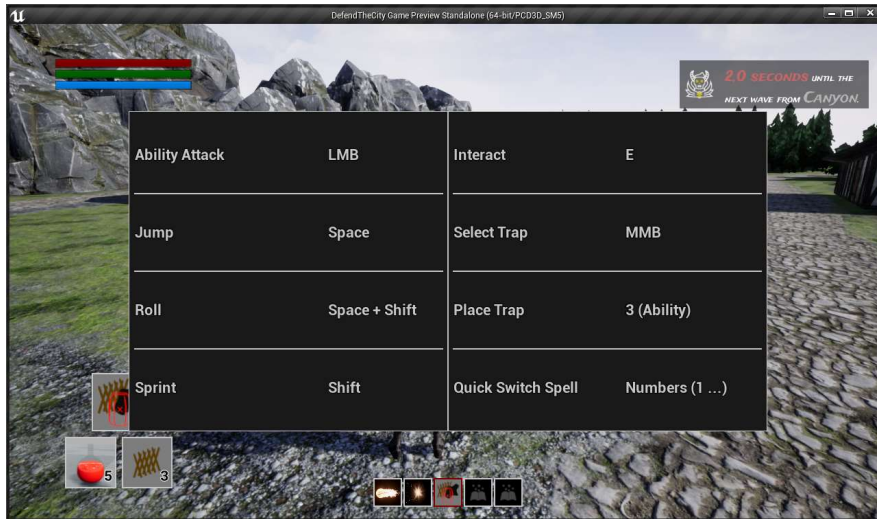


Figure 18: On pressing 'K' the player gets all the key bindings information.

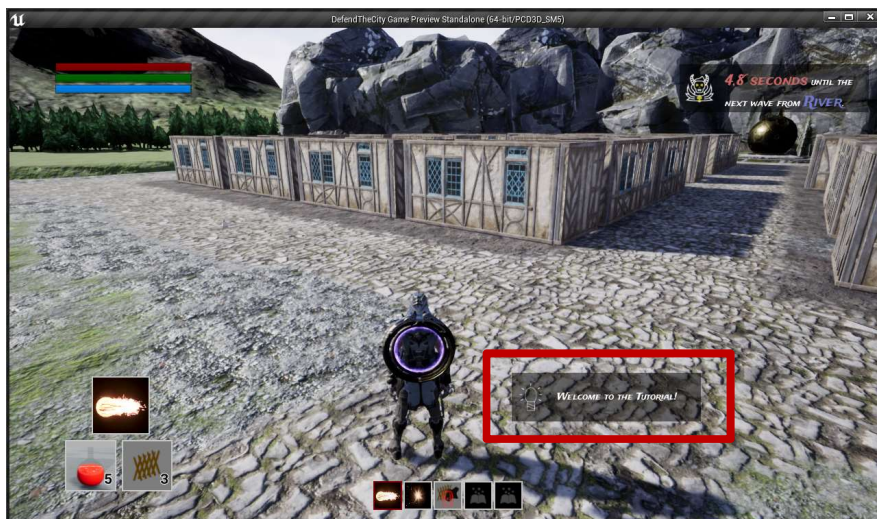


Figure 19: Tutorial shown on the right side of the character.

AI

We implemented some fixes for the AI, so that it won't walk into a wall. Also, we now have three different enemy types (the gruntlings, dinosaurs and big spiders). The dinosaurs are the small and fast enemies, the gruntlings are the medium type enemies and the spiders are our big tank enemies. All missing animations have been created and added to the game.



Figure 20: An enemy wave with all three types.

Destructible Environment

The main feature that has been implemented in this milestone is the collision damage of the falling structures. The enemies now take damage from crashing debris parts. This means that the player now can use the environment to his advantage and hold off the waves by destroying the buildings and houses around him. The mystical power source asset has also been changed and is now much more visible and prominent in the world.

Challenges and Problems

Unfortunately, we are currently using beta features in a prerelease version of the editor, that leads to a really unstable editor (the editor crashes very often). The current stable releases of unreal are extremely unstable in combination with the chaos features we use for our game due to a complete rework of their physics system. Therefore, we have to implement many features in an alternative way, which makes the destruction, collision damage calculation of falling debris, and path blocking of destructed structures not as pretty as it could be. The better solution, which we know works quite well, can't be implemented in the unreal version we are using (next version is very buggy). This is also a reason we are not implementing the feature, that the enemy AI can destroy houses or clean up destroyed buildings.

ToDos for next Milestone

The key thing we still need to implement is the path blocking of the destructed structures. Like earlier mentioned we have some issues with the engine to completely

incorporate the feature into our game. We will try to come up with a solution before the playtesting. During the playtesting we hope to get valuable feedback and include the proposed changes afterwards into the game. Some key aspects we want to get feedback on, is the difficulty of the game (if need to change some parameters to make it easier), the UI and controls, and the level design. Additionally, we still need to do some fine-tuning and final touches (e.g. adding roofs to the buildings).