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**Fire Will Kill Us All**

Iteration 2 Plan

Created by:

Atanas Marchev

Filippo Nardocci

Nikolay Ganev

Yosif Kiradzhiev

Stef van den Tempel

**Table of Contents**

Abstract 3

Tasks 3

Week 1 3

Week 2 3

Week 3 3

**Abstract:**

After the calibration week when everything is drawn out and planned, we will to start working on further stabilizing the application – bug hunting, user experience, realism improvements and visualizing the simulation with Unity.

**Tasks:**

* Further developing the communication and functionality between Unity and our C# application.
* Extending the people’s behavior.
* Improving on fire mechanism and realism.
* Improving the statistical output.
* Cleaning up the code

These are the main tasks of Iteration 2. We will finish them to an acceptable extend and leave Iteration 3 for polishing and perfecting the application.

The tasks will be split into issues like in Iteration 1. We will use git for the purpose, and we will assign group members for each task.

**Week 1**

Nikolay will work on people locating the nearest extinguisher and getting it, if possible. Also, if the path is blocked the person will either check for other extinguishers, other escapes, and then panic if no other option is available.

Atanas and Filippo will work on fire’s realism – Implementing air flow with outermost rooms and having the fire spawn on random positions.

Stef will have a more detailed statistics overlay – sending a copy of the map to the statistics.

Yosif will work on Unity’s side – models for the map construction and Atanas will help him out with the instantiation of the layout – sending over the grid and constructing the floor from the data.

**Week 2**

Nikolay will work on implementation of the rest of the personalities – The Hero who will try to extinguish the fire. And the selfish person who will run for the door if possible and if the way is blocked – go for an extinguisher.

Atanas and Filippo will work on the fire spreading algorithm – making it spread more logically (for example: the fire will spread out more into the open spaces where there is more air)

Stef will continue to work on the statistic overlay – displaying events on the floor overlay of the statistics – who has died where on the map.

Yosif and Atanas will work on getting all methods required for a proper visualization on Unity. They will make the Unity application work in a standalone version and show a default simulation. Yosif will also do animations for the models.

**Week 3**

Nikolay will create the option to select a given amount of people who will be randomly spawned somewhere on the floor.

Atanas and Filippo will work out bugs with the fire and destroy them.

Stef will have the statistics show detailed data of what the simulation output. He will work with Nikolay’s new personas to create that data.

Yosif and Atanas will work on finalizing the Unity visualizer by having the simulations run with data sent from the C# application.