## <https://github.com/OnCodeDeny/Emma-Unity>

## This technical document explains 5 unity analytics events we plan to track in *Emma!*, the reason we selected them and how we intend to interpret the results.

## 5 events we plan to track in the game

* How long is the dialogue on the screen?
* How long until a player clicks on the leaf litter?
* How long does it take a player to collect all the acorns?
* How long until the player hits the tree with the branch?
* How many clicks does the player make before they complete the prototype?

### **How long is the dialogue on the screen?**

A timer starts when the dialogue opens, and counts up only as long as the dialogue is open. The recorded time dispatches with this event.

### Reasoning

We thought it would be useful to know whether or not players are skipping through the dialogue. If they are, it could cause confusion about their goal, and we would need to find another way to tell them. However, if not, it could be a sign that they enjoy the characters and conversations, and we could add more going forward.

### Intended interpretation of results

If players on average spend less than 7 seconds with the dialogue box open, they are likely skimming through it or even skipping it.

### **How long until a player clicks on the leaf litter?**

This event involves a timer that starts when the game starts, and ends when the player clicks on the leaf litter object under the tree. The recorded time spent dispatches with this event.

### Reasoning

We want to know how long it takes for a player to figure out the leaf litter is an interactable object, which will take them to a minigame. We want to know if it is difficult for players to find that the leaf litter is able to interact with.

### Intended interpretation of results

If it takes them more than 15 seconds, it means they have gotten stuck, are probably asking “what am I supposed to do” and we need to make it clearer that the leaf litter is a clickable object. A way to accomplish that would be, for example, by making some aspect of the leaf litter animated, or adding particles.

### **How long does it take a player to collect all the acorns?**

A timer starts when the level starts, and ends when the 6th acorn is collected. The recorded time spent dispatches with this event.

### Reasoning

We want to know how long the player takes to collect all the acorns. This is related to the difficulty of the game. If the average time spent is too long, it means that the player encountered an obstacle that we did not know.

### Intended interpretation of results

If the player takes longer than 7 minutes, it means they are stuck in finding the 6 acorns. Most likely the player is stuck finding the acorns hidden in the leaf pile. They may be frustrated that they cannot find them. This can be fixed by having fewer leaves in the pile so that the acorns are easier to see, or smaller leaves, or leaves of different shapes.

### **How long until the player hits the tree with the branch?**

A timer starts when the game starts, and ends when the player touches the branch to the tree. The recorded time spent dispatches with this event.

### Reasoning

Players have to figure out that they can interact with the branch, and they can move the branch to the tree, and that they can get something to happen by touching the branch to the tree. If players are unable to figure out all these steps, they will not be able to complete the game. We will track how long the player takes to finish all these actions and will adjust the difficulty of this process according to the result.

### Intended interpretation of results

If players take more than 120 seconds to figure out, then they are probably going to give up. We can solve this by having the dialogue provide more hint in the second conversation with Acorner.

### **How many clicks does the player make before they complete the prototype?**

Each of the player’s clicks, with any mouse button, is recorded until the player reaches the end screen. The recorded total click number dispatches with this event.

### Reasoning

We want to see how certain the player is of what to click on. The number of mouse clicks can directly reflect the difficulty of the game. If the player spends an extraordinary amount of clicks to pass the level, it means that the player's game progress is not smooth, and there may be a problem of stuttering. Or, the game has a bug that provides a shortcut if the total number of clicks is abnormally low.

### Intended interpretation of results

If the number of clicks is very high, maybe around 100 or more, we need to make clickable objects clearer to players. The player only needs to click 12 times minimum (including the dialogue) to get into the leaf minigame, and then about 70 times if they are just rapidly clicking to finish the minigame. If they are clicking more than that, they either do not know what to look for, or they do not know what to click on. If the total click number is abnormally low (less than 12), we will debug the game.