THE FOREST

Level Design Document



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1. Quick Summary

This level was created as an experiment to observe the most effective uses of visual language to guide players through levels. The aim was to use visual language that can be used regardless of game context, can be implemented quickly, and is usable in a generic level without forcing vistas or cinematics etc.

The base-level consists of 3 main choice areas that the player must make a choice to get to the end as quickly as possible, some of these lead to the end but some are dead ends. The player can only walk at a set pace to traverse the level and the key places they travel to are tracked with triggers and a trail of their route is recorded.

The idea in each level is to observe the speed at which players reach their destination (to determine which form guided the player to the end quickest) and to understand what types of visual language is most clear to them (to determine which form was more obvious ,and in turn, more likely to ruin the state of flow).

The level was duplicated only 3 times to use 3 major types of visual language as categorized by Byrne (2006) so that the experiment could be created and implemented rapidly and did not need too great a testing base.

2. Story

The level has no real story context. A prompt when pressing start at the main menu gives the context of the level to the player. The player is made aware that they are in a experimental experience so that they do not expect to be playing a normal game. Their task is simply to reach the end of the trail.

3. Gameplay

The gameplay of the level is extremely simple. The player can only walk at a set pace and look around their surroundings. The gameplay was restricted as other mechanics were not necessary to the experiment and the level would need not to distract the player from the task at any given time. Jumping and sprinting were removed to keep the focus on walking through the level and kept players at a fair, consistent pace.

4. Visual Theme

The visuals used are a realistic woodland asset pack made by Unity for their Book of The Dead cinematic demo. The realistic woodland area is a common level in adventure games and using realistic assets will make the testers feel more like they are in a real-world than other art styles would. This again would ensure the player/tester is not too distracted by the environment and focuses with the task at hand. The assets however would not work in the updated unity engine. Therefore, changes to the materials were needed to function properly.

Extra sounds were also sourced on FreeSound and a step audio system was implemented to make a specific sound based on what the player is walking on. This adds to the realism of the game and stops the player becoming distartced by un synced footstep sounds.

5. Level Design

Layout

The level is made up essentially of three main choice areas, small areas that can be explored and pinching railroads.

The start of the level has an open area that has two clear paths ahead (Figure 1). These paths are similar in length and ultimately end up in the same place.

One option follows the critical path onto a tree trunk across the valve seen in Figure 3.



Figure 1 - Starting position/area

These paths lead to a clearing that also has two choices (Figure 2).





Figure 4 - Rock roundabout

Figure 2 - Second opening options

turn back and proceed down the critical path to continue.

The valve has been put in place to stop players from backtracking through the level and also add some height and character to the level as the goal was to make the level engaging but with no game/story context.

The other takes the player to a dead end with a large rock in the centre (Figure 4). The player would need to

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Finally, once over the valve, the player will then again have a choice, however, the choice at this junction is threefold. There are two larger obvious paths and one slightly less obvious, as giving the player too much choice may become confusing or daunting and remove their attention from looking and just guessing their direction. The three paths can be seen in figure 5.



Figure 5 - final clearing choices



The critical path seen in Figure 6 shows the correct direction that leads down towards the end. It also shows the hidden path to the Hill.

Figure 6 - Critical path

One path leads towards a cave in the mountain that is empty (Figure 7). There are also surrounding trees that have been blown over for added environmental storytelling but play no role in the level.



Figure 7 - Path to cave

If the player proceeds down the small hidden path they reach the area known as 'The Hill' (Figure 8). This small area leads the player down a steep hill into a small opening.



Figure 8 - Path to the Hill



Figure 9 - Hidden view of end area

This area does give a small hidden view to the end (Figure 9) and also leads round onto the critical path.

The ending of the level is indicated to the player with a unique wall of sticks and a doorway (Figure 10). This area is unque in the level and erouses interest in the player to search within, ultimately guiding them to the ending point.

Figure 10 - Ending area

The game end point shown in Figure 11 is a bright glowing particle effect that stands out in the level. It is almost out of place but the marker does suggest to the player that they have reached the end. Entering the marker will end the timer and generate the trail and text files into the testers local drive to be submitted in the survey.



Figure 11 - Ending marker



The 2D top down layout can be seen in Figure 12. This shows a simplified version of the level with the critical path and valve point.

Figure 12 - Base level layout

Lighting

For the lighting in the level, natural (directional) lighting was used to highlight direction and the sun position helps lead the player. Some small hidden lights were also used to highlight objects that follow the critical path such as the rock seen in Figure 13.



Figure 13 - Highlighting rock

However, due to the rest of the level being in shadow, the only way to use lighting was with hard,

visible lights such as lanterns (See Figure 14).



Figure 14 - Lantern

The positioning of the lighting and god rays are seen in Figure 15. The light was larger and more obvious and therefore required little amounts, which proved to be very quick to implement.



Textures

Regarding textures, the main method was using contrasting colours. This consisted of dominantly using orange bushes and plants to stand out amongst the green surroundings. Also, increasing the saturation of some of the props was done to make them stand out ever so slightly from the other props. This would hopefully subconsciously attract the players attention.(see Figure 16).





Figure 16 - Texture examples

This method required more amounts of usage than light due to them being more discreet and smaller. However, the colours used fitted into the environment and needed very little editing since it was simply changing the colour of the materials. The positioning can be seen in Figure 17.

Figure 17 - Texture positioning

Prop Placement

The main uses of prop placement used for this level were framing and leading lines (Example in Figure 18). Using Vistas, weenies, affordances, and other forms of prop placements proved to either be too large scale, too game context-based or too obvious to guide the player for the aim of the project. The project aims to create this visual language without the need for creating extensive assets and are applicable across all games regardless of context.



Figure 18 - Framing example

The positioning of the props being used for guidance can be seen in Figure 19. This category required more amounts of work and luckily the initial path was formed naturally with strong framing.

Figure 19 - Prop positions

Leading lines, however, are a lot more difficult to implement naturally but a mixture of fallen trees and logs (example in Figure 20) were used to create leading lines as these were props already in the asset pack.



Figure 20 - Leading logs

Boundaries

Due to the nature of the level, there were a lot of natural boundaries built into the level (Cliffs, dense trees etc). However, after playtesting, there were a few areas that the player would be able to leave the playable map area and venture into unwanted terrain. This could be due to the limitations of the fps controller since it allowed the player to walk over relatively steep hills or due to there being a gap through trees. In this case, invisible walls were implemented into the level (Figure 21). As this level is not focusing on creating great player experience but rather to be used as an experiment, the boundaries are all invisible and may not make sense in every video game and other games would need to provide logical boundaries based on the games affordances. These boundaries were placed around the level as necessary.



Figure 21 - Boundary examples

6. Implementation conclusion

Overall, the easiest visual language to implement was the textures since the assets were already in the project and were simply drag and drop with some quick alterations to colours. It also needed very few but clear uses of colour that almost breadcrumbed the player along the critical path. Light, although the most attractive/appealing and visible proved to be the simplest to implement and required extra assets due to the limitations of using lighting without context. Leading lines and framing are the most difficult to implement as it needs to appear natural whilst also befitting the environment. Also, using the assets within the project was good but you need to be careful not to overdo it with lots of fallen trees etc. Framing is also relatively complex since it needs to fit naturally in the architecture and shape of the environment whilst also being strong and visible. However, although noticeable to those in the know, it is quite a subtle form of visual language to players as it ties in with the structure and theme of the environment. A graph was made correlating the difficulty of implementation vs noticeability from the creators perspective (Figure 22).



7. Data Gathering

Throughout the level, the three main choices lead to different areas of the map. These key areas have triggers (Figure 23) to detect what directions the player travels in and whether they visited certain areas. This will be seen since it will be played over a stream, yet these triggers offer solid evidence about the directions they went.

ForestStats.txt - Notepad

File Edit Format View Help 86.53296 seconds Option1_Right Option2_Right Valve Option3_Right

The sequence of triggers that are walked into and time

taken to complete the level are saved to a text file (Figure 24) so that a list of the tirggers and their order are tracked. This provides the ability to see the paths the players chose and if they turned back on themselves etc. The sequence of events can be used as a backup in case the trail is unreadable.

Figure 24 - Text file example

An image of the players trail is also generated so the exact path can be seen and compared against the base trail. The base trail and time can be seen in Figure 25.



Figure 25 - Trail example with base map layout



Critical Path

- Triggers Hi

8. User Interface



Figure 26 - Main Menu UI

The main menu (Figure 26) is a completely different scene constructed form the main level. It is a simple title with basic function that appear as if from a basic game but fulfil the needs of the project. The main menu also tried to capture the levels experience with wind and nature being present.



Figure 27 – Info pop up UI

The pop up that appears after pressing start is a small info panel (Figure 27). This info panel reminds the tetser of the objective and the fact they are in an experiment rather than a fully fledged game. This is to not create high expectations and enjoyment from the process.



Figure 28 – End game pop-up UI

The final UI (Figure 28) operates as a way for the player to exit the test and also to remind them of where their data can be found. This is mentioned to them prior but it is done as a reminder for when they need to submit their information to the survey.

References

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