

Computer Games Laboratory

WS 2016-17

Interim Report



Team members:

Christos Koliniatis

Mina Saad

Panagiota Revithi

Abdykerim Erikov

Brief introduction

The development of Unsolved until now has been relatively smooth. This does not mean we didn't encounter a number of problems or didn't change our minds on a number of issues, but it is evident that careful planning and organizing the project beforehand has certainly helped us to achieve the satisfying results we have hoped for. We will briefly explain some of the elements we have completed that are used in the same way throughout the whole game and then we will explain with more details what has been done in each scene.

Navigation: We have completed our teleportation system. The user can change his position by clicking on the left controller's touchpad and aiming the desired location. If there is a wall or another big object in between, he will be stopped at that point.

We also had in our plans to create an FPS navigation system which we implemented but probably will remove. The reason is because of the very dark environment of our game the player can get disoriented more easily and if he/she has zero experience with VR, there is a slight chance he will feel "fatigue" a bit faster since our game runs on lower fps on some very "packed" scenes.

One final touch that we want to add to our game, but we will do so in the end, is some automated teleporting system. There is no way we can stop a player from walking through a wall in the game using the real life navigation system, but we can teleport him out of a room he was not supposed to enter.

Interaction: At this point we have everything we want as far as interaction goes. We have created a number of scripts that, when combined, allow the player to Grab/Throw/Use any item he wants in the game as long as its weight allows him to. The player can also use his own real life physical force to open/close doors and every other object that operates using hinges. The only thing we are missing here is some different hand animations for some specific objects, but this definitely belongs in the Extras workload.

Assets: As far as assets go, there is no real end on what we want to see included since we work in iterations. This means that if we have time towards the end, we will keep adding more and more. For our desirable goal though we already have all the objects we need for the environment to feel natural and give the player the dark feeling. The first scene is already complete and we now work on finishing the second scene as well.

Also a great achievement is that we have finished creating all the riddle specific objects that we need and now we wait to complete the rest of the environment in order to place them in.

Riddles: On paper we have already finished constructing the riddles and we are now in the process of creating the necessary scripts for them in order to blend with the scene.

Office Scene

Our first scene as mentioned in the previous reports is the office. This will operate as a tutorial for the player, inside there he will be able learn how to navigate and interact with the things around him. As the player explores the room, the police chief will give him simple tasks to do through the intercom, like picking up a book or opening a cabinet so that the player understands the limits & restrictions of the game. Well, the fact that there aren't any.



Tutorial mode: In this scene as the player progresses he will trigger events in a state machine. This means that each state will have a different simple task instructed by the police chief for our player to complete. Towards the end he will solve the first mini riddle where he has to find a hidden key in order to open the cabinet that hides inside the case file of the Hinterkaifeck incident.

Assets: From this perspective our office is complete. We have all the objects and sounds we need for the player to feel like he is in a realistic environment.

Difficulties: There were no real difficulties in this scene, but there was a lot more work than what we had planned in the beginning. This is only because all the scripts that handle the interactions of the player with his surroundings were created in this scene and then work for the whole game. This why we decided to spend a little more time on it , in order to save us some trouble in the near future.

Changes: The original plan was for the police chief to be presented during the whole tutorial helping you out with the movements and different tasks. But when it comes to animation we felt like this would take away some realism instead of adding more. So we decided to use some voice acting to give directions through an intercom and have the chief appear only towards the end of the scene to send the player on his/her way to Hinterkaifeck.

The Farm

The farm is the main scene of the game. As a result this where we spent most of our time.



Because only one of us owns Vive we had to split the tasks that have to be completed in this scene and then once everyone did their part we combine them.

Natural environment: The Hinterkaifeck's environment is completed. We have a farm covered in snow, a small pond near the house as well as trees surrounding the farm so that they block the player from leaving the playable part of the game. Of course, the game will take place during night time. In order to achieve that feeling as you can see from the picture above we have created the appropriate skybox as well as some moonlight reflections. The main scene will have two buildings, a barn and the main house. All the riddles and gameplay will take place among those two buildings. Though the player will find numerous objects spread in the farm to give a more realistic feeling. These assets have been found but they will be implemented in the game towards the end.

Barn: This building is also complete with appropriate materials and a bunch of objects inside. The only thing that remains to be added here is the final confrontation scene where the suspect will reveal himself and there will be a small confrontation.



The House: Most of the gameplay will take place inside the main family house. The building is ready and so are most of the objects that will go inside it. All that is left is to combine those two (populate the house) and then go through some iterations in order to perfect it.

The riddles: All the riddles are ready on paper and over half of them are already scripted and have all the objects they need created. In the next few days we will have the rest of them also ready and then we can place them inside the environment when it gets completed.



Changes: It was in this scene that we realised the dark environment and colors can have an impact on new VR users. So we had to choose between making the whole scene brighter or just not using the touchpad for moving the player. After some playtesting we decided that two navigation systems were already capturing the feel we wanted and decided to not include the third one.

This has also a domino effect in other sections of the game, especially the ending. Towards the final scene our hero will have to meet face to face with the individual that committed the crime and with quick reflexes shoot him. Though with teleportation as a navigation system this could very quickly/certainly turn into a laughable chase since the player will always be able to escape.

As a result in contrast with our initial plan the final scene will be animated and the player will only be able to move his 2 hands with which he will have to fight the enemy. This might seem as a restriction to our big idea but we are sure it will enhance the fighting sequence since it allows us to stage it in a better way and give a more authentic feeling that could otherwise be ruined by the players clumsy movements.

Overview

Overall the development of the game has been smooth. Yes there were small implications along the way but never until now did we come across an unsolvable problem. We only needed some more effort to reach a solution. A good example would be how realistically can we handle objects when they get thrown around. The system behind this has been created already but the assets needed to make it feel real, might just be too hard to find.

By that we mean that yes we can create a system that specifies when the sound “object_breaking” should be played, but when we have 300 different objects in the scene well then it can get pretty hard to find 300 different sounds. As a solution we will probably specify 4-5 different materials like wood, metal, glass etc and then specify the sounds based on those. This will mean that most wood items will make the same sound when they get dropped, but will try to even overcome this problem if we can.

Also another change that we mentioned in the previous report is that we let go of two small scenes (car scene & neighbor’s house scene) because they did not really contribute that much to the plot and they would drain too much effort that could be placed elsewhere.

In the table below you can see which tasks we have completed and which we discarded.

Completed - Developing - Discarded

	Your Low Target	Your Desired Target	Your High Target	Your Extras
Functional Minimum	Your Low Target	Your Desired Target	Your High Target	Your Extras
Interaction	Interaction	interaction	interaction	interaction
Grab And Throw	Combine tools	Use as weapons	Use object - all items	Object specific animations
Use object - item specific (Only what is in the bag + riddle specific)	Use object - more items	Use object - more items		
		Exchange items from one hand to the other		
Navigation	Navigation	Navigation	Navigation	Navigation
Vive Tracking	Vive Controller navigation		Space Rotation	
	Teleportation			
Environment	Environment	Environment	Environment	Environment
Office		Barn	Neighbor House	Hospital
	House 7 rooms	Car		
Special Effects	Special Effects	Special Effects	Special Effects	Special Effects
Dialogue/Notebook	Dialogue/Notebook	Events	Weather Effects	Fire
		Dialogue/Notebook	Dialogue/Notebook	Water
		Detective mode		
Audio	Audio	Audio	Audio	Audio
	Sounds of Items		Background music	Voice Acting
Puzzles	Puzzles	Puzzles	Puzzles	Puzzles

Single Layer	Double Layer	Triple layer		
Animation	Animation	Animation	Animation	Animation
Hands	Items	Character/Car	Decoration items	Object specific animations
Fighting Mechanism	Fighting Mechanism	Fighting Mechanism	Fighting Mechanism	Fighting Mechanism
		Punches	Guns and health system	
Modeling	Modeling	Modeling	Modeling	Modeling
Riddles only, Case file, bag, bag items	Decoration,Chief	Extra Decoration	Extra Decoration	