Computer Games Laboratory

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Playtesting

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Introduction

Having finished most of the development and moving towards the final phase of this project we need to make sure our game is moving in the right direction. We designed a playtesting sequence that will allow us to observe the players, get to understand what they like about the game and what not, what excites them when playing and what makes them struggle. After acquiring their feedback we will solve any bugs that come up and make all necessary changes, meaning our development cycle will have reached its end.

Beta Test

Since HTC Vive is required to test the game we could not openly distribute it and then collect the feedback. We managed to gather eight people, six around our age, TUM students, and two above the age of fifty. Besides two of our friends none of whom had any VR experience, which honestly made the testing even more fun for us.

First we explained to them how the Vive works and showcased all the different hardware parts. After that we also had to ask them to be careful and not to make any extremely wide movements because of our space limitation. Users were also asked to voice any of their concerns/questions or comments even though they would not get an answer. A quick explanation of their role in the game also took part and the players were asked to put on the headset and adjust it.

One of us was in the room with the player and took notes of what the subjects were doing. What they asked, where they got stuck and in general whatever we as developers observed and thought we should modify in the game based on the reactions we got. Once the session was finished, we provided our testers with a link where they had to complete a quick form that contained a number of questions which would allow them to rate different aspects of the game (from 1 to 5). The form had 4 categories:

- Virtual reality experience
- Realism of the game
- Interaction with the environment
- Gameplay experience

Once the survey was completed we had a quick discussion with the players where they told us how they liked the game, what really got under their skin and what suggestions they may had for us to improve. After the dialogue had ended we made notes of the important parts.

Results

	User1	User2	User3	User4	User5	User6	User7	User8
How comfortable did you find the controls?	4	5	5	4	4	5	5	5
How comfortable was the VR experience?	5	4	5	5	5	5	5	4
Did you find the travelling system sufficient?	5	5	4	5	4	4	5	5
Was the interaction with the environment easy?	4	4	4	4	5	4	5	5
Did you find the interaction with the environment realistic?	4	5	5	5	5	4	5	4
Did the environment feel realistic?	5	5	5	5	4	5	5	5
Did you find the tutorial helpful?	5	5	5	5	5	5	5	5
Did you enjoy the puzzles?	5	5	4	5	5	5	5	4
How hard did you find the puzzles?	4	5	4	4	4	5	4	4
How well do you believe you understood the story?	4	4	5	5	4	4	5	4
Did you find the storyline intriguing?	5	5	5	5	5	5	5	5
Rate the overall gameplay experience	5	5	4	5	4	5	5	5

Virtual reality experience

The fact that almost none of our players had any experience with VR headsets and everything they ever heard about VR either came from gadgets like Samsung VR or Oculus made them fall in love with Vive the moment they put it on. Expecting low fps, dizziness, and only head-movement tracking they were surprised and blown away.

While moving around and grabbing objects they also seemed to be in awe about how precise the tracking was and how their real life movements were translated into the game. Specially in the office scene where there is much more light and the users are excited by everything that happens around them.

Regarding Vive the only problem occured while being in a very specific location in the farm scene. The problem was that there was a high number of lights that were being calculated in runtime. This caused the framerate to drop a bit and caused the users to feel uncomfortable when making sudden movements.

Environment realism

Both in the evaluation form and in the later interview we asked questions regarding the environment, how realistic it felt and how well it blended with the background story. All users were impressed by the office scene and commented that it looked exactly like what they imagined an old police office to look like. For the second scene where the players were more focused on solving the riddles we received less excitement regarding the inside of the house but the players felt that the farm was presented in a very good way and combined with the background music enhanced the experience. There were though some remarks about some objects which felt like they had the wrong size when they were picked up and observed from up close.

Interaction with the environment

Towards the end of the tutorial our players knew the basic controls of the game. Users seemed very excited about the fact that they could touch, grab and throw all the objects they encountered and spent more time exploring the office and playing around instead of actually finishing the tutorial. This continued when the gun was introduced. It almost seemed like our players grew a desire for Hinterkaifeck to be a shooting game instead of a puzzle solving one.

All went perfect in the small office room, but a lot of unexpected behavior was encountered in the farm scene. As far as interacting with rigid objects everything went fine. The problems would start when players accidentally dropped quest related items. Because of the lighting conditions and a number of missing colliders, they often completely lost a key and we had to pause the game in order to track that object. Another bug had to do with the teleportation system and how players could cheat the game. We did not allow the user to point through walls, but there was nothing we could do to stop the player from extending his hands in real life and pass them through a wall inside the game. As a result our testers could teleport inside the locked rooms.

Another small thing that is not really an issue was that some players after discovering the matchbox thought they could do everything in the game and tried things we never predicted, like making snowballs etc..
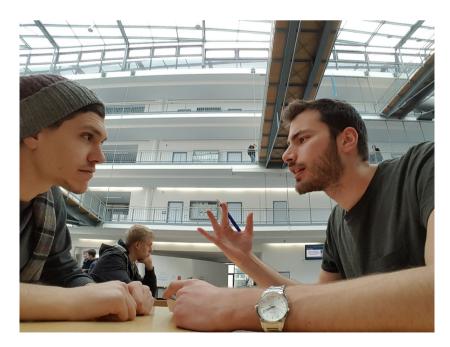
Gameplay

Not all our testers finished the game because they had limited time and depending on the person, the game can get quite long. All of them though enjoyed the gameplay with some small comments regarding the difficulty of some puzzles.

Because we asked the testers to be objective there were of course some "nasty" and funny comments regarding the voice acting and some of the animations. Besides that though we had all the users play the ending scene and they all enjoyed shooting the final enemy 1..2… 10 times.

Suggestions

Towards the end of the interview we asked if they had any suggestions to improve the game.

- Make marks on the walls when they get hit by a bullet
- Not allow the models of the hands to go through walls or other concrete objects
- Improve animations
- Hire a voice actor to improve narration
- Add more models in some specific rooms inside the house
- Make the curtains dynamic
- Reduce the size of the barrels inside the barn

Changes

After gathering and assessing all the feedback we got, we sat down and discussed which modifications would make it into the game.

- We added more detail to the police chief and final enemy animations
- Added more models to the parents bedroom
- Added more models to the storehouse
- Improved the writings on the notebook pages in order to make the storytelling more complete
- Added a system where black markings would appear on walls if they were hit by a bullet
- Added a system where locked rooms would have an event collider, which can only get triggered by the player. If that happened, the user would be teleported outside the room. If the room got unlocked, then the script would get disabled.
- For the sake of realism we dynamically connected every object to the user's hand. This means that if enough force was applied to the holding object from an outside source, then it could be knocked away. When the user teleported though this would cause the object to fall down. We had to make a trade off between realism and usability in order to improve the gameplay. Now every object is directly attached to the user's hand.

Playtesting conclusion

This part of the development cycle proved itself from the very beginning to be also the most important one. Having some experience in game development we have been lucky enough to have playtested a number of the game features among friends in the past. Because of this we were confident that we were moving towards the right direction and now that we almost reached the end, we will only have to do minor adjustments instead of a 180 degree turn.

Because all of our testers were family or friends we asked them to be objective and harsh. We knew that a lot of the feedback we would get would probably be irrelevant to our project or unrealistic in regard with our capabilities, but this would allow us to get the widest range of possible problems. From then on, after careful discussion, we could decide which changes would make the cut and improve our game.

This is not to say that some of our testers were "wrong" with their remarks. It is just that comments like "Can't your animation look more like those of Witcher 3" or "The voice acting doesn't feel professional enough" are, of course, correct, especially because we asked our users to be harsh on us, but are completely out of bounds when talking about a student project.

Developers will very often quickly lose perspective or focus on small details that might not matter at all. Playtesting is very important because of the tester's unpredictable behavior. Observing will reveal bugs you had never thought of and show you what players truly expect and are looking for in your game. This is happened quite often in our game sessions where players even managed to create some scenarios where we had to completely reset the game.

We consider our playtesting experience a success, since we found out problems we might never had encountered by ourselves and decided on changes that will definitely improve the player's experience.

Despite all the little things though, this phase of development proved to be quite the confidence boost for us. All our users seemed to enjoy the game from start to end and goals like clever puzzles, realistic interaction with the environment and an immersive gameplay seemed achieved. The next step is to make those final adjustments , review our experience and prepare ourselves to finalize this project and improve on the next semester's project.