

Experimental Game Design

Reflective Essay

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COURSE: GAME DESIGN 6 : EXPERIMENTAL GAME DESIGN

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1 Introduction

This document is a reflective essay on the activities and learning outcomes of the course GAME DESIGN 6 - EXPERIMENTAL GAME DESIGN in Campus Gotland of Uppsala University. During the course, we worked to create four prototypes, following specific themes and limited timeframes. The themes we worked with are:

1. What if Game & Watch but after '97?
2. Demonstrate Loyalty Now
3. What happens when player characters become emotional?
4. Affordance of expression

2 Purpose

The purpose of the course is to teach rapid prototyping methods, semiotics of game design and non-verbal communication methods. Rapid prototyping is a usual practice in time constrained events like game jams. Our goal was to apply and refine the skills and methods we learned from such events. Later on in the course, we also added an additional restriction on our prototypes - to make prototypes that will, in some way, benefit our portfolio. This is similar to how some game jams add additional restrictions in design or technology to make the process more challenging and fun.

3 Prototype 1

The theme for the first prototype was "What if Game & Watch but after '97?". Game & Watch games worked by enabling or disabling static entities on an LCD screen, similar to how an LCD calculator displays numbers. So, the restriction was that two different game entities cannot occupy the same screen position, since that would not be possible in a Game & Watch system.

3.1 Development Process

We did not spend too much time on design. Within the first hour, we decided on a fishing game and split the tasks. We set up a system with a grid of entities that can be enabled/disabled, so as to fit the restrictions. Other systems we implemented to improve the visual aesthetic, within the restrictions include:

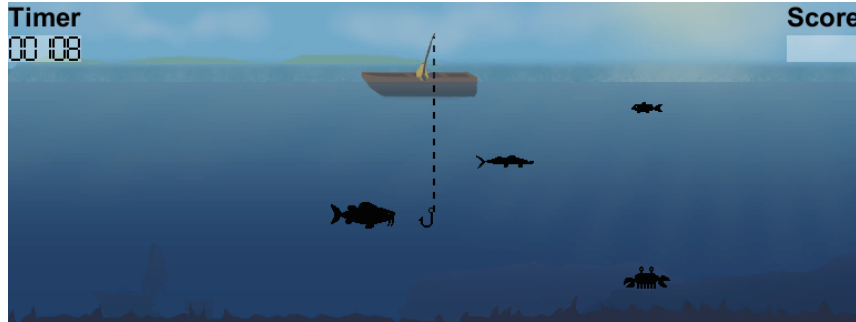
- 7-Segment display for timer and score
- Segmented hook/line/bag system
- Flipping the fish, to simulate the feel of 'fish swimming'

3.2 Intended Output

The prototype we wanted to make was a simple Game & Watch style fishing game. The W and S keys lower or raise a hook, which can then be used to catch fish at the same level if they are near the hook. Caught fish need to be raised back to the boat without colliding with other fish. Managing to do this correctly increase the score and give more time.

3.3 Actual Output

The prototype had all the necessary mechanics and functioned in the expected way. However, as with anything, there is always room for improvement. The final prototype had fish ‘existing’ in the middle position of the grid in an invisible format (so as to avoid the two objects in the same location rule) and this is where they could be caught from. This could have been better implemented so as to avoid invisible objects completely.



4 Prototype 2

The theme for the second prototype was “Demonstrate Loyalty Now”. In other words, make a game about trust with the added restriction of not relying on movement, logistics or violence. There was also the course guideline of using non-verbal communication.

4.1 Development Process

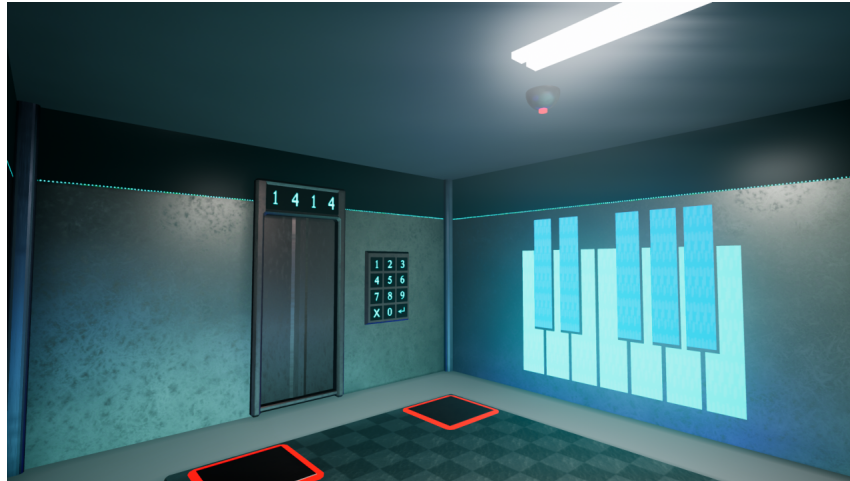
This theme was a bit harder to design around. We toyed with several ideas, including an escape room in an underground subway and multiplayer games with co-operative mechanics. We eventually settled on a game that explores trust in a computer AI, and whether the player would rather trust a more ‘human’ voice. We also wanted to experiment with voice lines as an alternate way of communication instead of text instructions.

4.2 Intended Output

We wanted to make a Virtual Reality game, where players can move around and interact with the environment more naturally. The game itself would have several tests that would either slowly build trust in the AI or throw doubt at it, while the person in the adjacent room will serve to increase the doubt in the AI system.

4.3 Actual Output

We did not succeed in making the prototype in VR. It took us a bit too long to realize that we would not be able to finish the prototype in a good way in VR. Fortunately, changing to a First Person point of view was not too hard and we managed to salvage the game into a First Person prototype. We did implement all the tests; however, they did not fully convey the buildup of trust or distrust in the AI. The reason for this is a lack of play testing and time.



5 Prototype 3

The third theme was to make an irrational player character with the restriction of not taking away control from the player. During this prototype, we also added an extra challenge for ourselves, of making something useful for our portfolio.

5.1 Development Process

By this time, we were a lot more used to rapid prototyping methods, so we did not spend as much time with design and brainstorming. We discussed a few ideas including a maze where there are objects that affect the character negatively (such as slower or unpredictable movement). Most of these ideas were scrapped because the control was taken away in a non-interesting way or because the irrationality was unobvious. The idea we settled on was a game where the main character is a zombie that needs to eat meat to survive. If the meat is not found in time, the zombie eats itself!

5.2 Intended Output

What we wanted to make was a polished fully playable game. The self-consumption mechanic was meant to add a level of irrationality as something plausible for the character to do with a slight comic element. This is so that the negative effects of losing a limb (less health gain or slower movement) remains acceptable and interesting.

5.3 Actual Output

The prototype does what we intended. It was fairly polished and had the intended mechanics. One potential problem is that the self-consumption mechanic might boil down to a 'multiple life' system and could have been better conveyed. However, given the time constraints, we probably would not have come up with a better concept, even if we had a second chance.



6 Prototype 4

The final theme was a bit different in that it was a set of instructions rather than a key sentence. Our task was to pick a song as inspiration and build a game based on it. The game should have (only) one core mechanic and it should afford self-expression.

6.1 Development Process

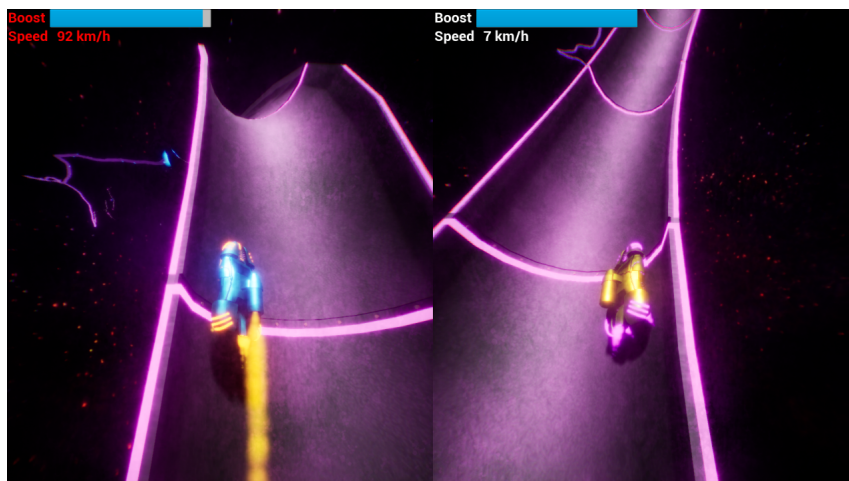
A game based on a self-expression mechanic should provide some kind of meaningful feedback for 'expression'. So, for me, the biggest design question was on how to quantify self-expression. Our solution was to broaden the definition of 'expression'. Players usually have their own unique playstyles, in games that afford it. This is a form of self-expression as well, right? With this in mind, we decided on making a racing game.

6.2 Intended Output

The idea was to create a game about going really fast without worrying about slowing down. We decided to also add split-screen multiplayer, so that players can compete against each other to see who is faster.

6.3 Actual Output

We managed to implement the intended mechanics successfully in the prototype. However, the feel of 'going fast' was not properly conveyed. This was primarily because of the camera, which should have been further refined.



7 Analysis : Rapid Prototyping

Going into this course, I thought I knew rapid prototyping methods (thanks to all the game jams). But this turned out to be more detrimental than helpful. In a game jam, the primary goal is to do whatever it takes (get external assets, find plugins etc.) to make a playable prototype game in a chosen team. The course, however, was about making a presentable, interesting mechanic. Not only that, the course had random teams and restrictions on external assets. I did not realize until the course almost ended that the game jam rapid prototyping methods no longer applied nor that the expected final product was something different.

7.1 Learning Outcomes : Boyer

In his article, Boyer [2010] suggests skipping the ‘talk’ phase of production and proceeding from idea to production directly. When I learned this concept more than an year ago, I wholeheartedly agreed. But now, I am not sure if this is entirely accurate. This is primarily because of the second production course, VERTICAL SLICE, in which we spent several months refining the design of the game before starting the actual development. This benefited the production stage greatly in that there were significantly fewer design questions during development. We all knew exactly what to make. However, it was still a long time spent on design. What I learned (and refined) during this course was to find a balance between the amount of time spent ‘talking’ and the amount of time spent ‘making’. This is especially noticeable going from the second prototype to the fourth. We managed to reduce the time spent on design discussions from several hours to several minutes! But those minutes still mattered. My main takeaway in regards to rapid prototyping is to have optimal design discussions. Decide fast, clarify immediately, start production.

7.2 Prototype Reflections : Experimentation

I misinterpreted ‘experimentation’, plain and simple. The purpose of the course was to experiment with out-of-the-box methods of game design. For me, it was an opportunity to experiment with new technology and code. I did not (and probably will not) get used to the ‘develop in a sloppy fashion’ part. To me, “you will need to develop sloppily to get it done” just meant “if it is sloppy, spend more time and make it better”. This is what I did throughout the course, spend more time to avoid sloppiness and feature cuts as much as possible. In retrospect, this is not very much in line with what the course was about. If I had known this, would I have sacrificed my sense of perfection in favor of a more relaxed development process? Probably not. As for the focus of experimentation on design as opposed to technology and code, the ironic part is that I ended up doing more of what the course intended than what I interpreted anyway! With that, I want to switch discussions to the specific experimental design aspects in our prototypes.

7.2.1 Prototype 1

The experimental aspects of the first prototype were related to the restrictions for that theme. Or specifically, the restriction of not having two objects at the same location. For example, we wanted to add a hook (connected by a line) to catch fish. When a fish was caught, a bag will be displayed. Our solution for this was to create four smaller pieces: upper line, lower line, hook and bag. The pieces were then selectively displayed, much like a 7-Segment display.

7.2.2 Prototype 2

For the second prototype, we experimented with the trust (or the lack of it) in a machine. We wanted to see if people would trust the robotic voice (made with a Text to Speech program) or a more human voice (voice recording). We attempted to make a ‘trust curve’ of sorts (trust over time) which was non-linear, so that players have a reasonable choice of trusting or not trusting the machine during the final test. However, as mentioned earlier, we did not manage to implement this in a good way. We also attempted to make the game in VR, as an experiment with technology, but this was dropped soon after, due to insufficient time.

7.2.3 Prototype 3

The third prototype was a lot more about developing a polished product rapidly than about experimenting. However, we did try out a few new design aspects. Main among them was the self-consumption system mentioned earlier. We also attempted to create a trail system to track the meat piles on the map using nav meshes and particles, but that was more on the technical side of things than the design.

7.2.4 Prototype 4

In the last prototype, we experimented with a different type of racing game. Games like Sonic or Need for Speed are about speed. But I have often felt that these games place a bigger priority on control during this fast movement than the fast movement itself. We wanted to try to make a game about going as fast as possible, without worrying about obstacles. We wanted to make a racing game with no collisions or turns that cause a slow down.

7.3 A Second Chance

In terms of rapid prototyping and experimental design, there are two (contradictory) things I would have liked to do differently. More time on designing experimental mechanics and less time on design itself. If I had a second chance at this course, I would try to find a better balance between these two.

8 Analysis : Semiotics

A question that I’ve heard multiple times over the course is what semiotics of game design means. Semiotics, as defined in Merriam-Webster [2019], is “a general philosophical theory of signs and symbols that deals especially with their function in both artificially constructed and natural languages and comprises syntactics, semantics, and pragmatics”. How this applies to game design was something I did not realize until after the prototypes were finished. However, quoting Feynman [1999], there is a difference between “knowing the name of something and knowing something”. I would like to believe that semiotics in game design is something that we, the students of game design, have come to understand (even if we are not aware of it by name), through our experiences in working with game design and playing games. In this section, I will attempt to put my thoughts on the matter in writing.

8.1 Semiotics of Game Design

To start with, how does the study of symbols and signs relate to game design? Taking into consideration that one of the course goals is to delve into non-verbal communication methods, I think that semiotics, in this context, refers to the commonly used symbols in games that convey a particular meaning through their affordances. A sign with a green directional arrow usually means: “move in the direction of the arrow”. A red bar with a plus sign usually denotes a health bar. These symbols are commonly used in games and denote a special meaning to those familiar with it. These symbols make it possible to convey messages without the need of written text.

8.2 Learning Outcomes : Boyer

Boyer [2010] is of the opinion that anything with ‘talk’, whether it be stories or narrative dialogues, is disruptive and dissonant. It could be because I am accustomed to these techniques, but I disagree with this argument. Narratives and cutscenes add more depth and purpose to the game. However, in the context of rapid prototyping and non-verbal communication, perhaps it might be better to adhere to Boyer’s suggestions. A game without narrative can be produced faster. A game without text forces designers to convey messages non-verbally, with better semiotics.

8.3 Learning Outcomes : Swink

In his book, Swink [2009;2008;] talks about game design principles for making the game ‘feel’ good. This does not directly relate to semiotics, but, a game that ‘feels’ good, could improve the perception and recognition of such symbols. For instance, the book talks about how to design the feel of speed. This could have greatly improved the sense of ‘going fast’ we attempted to communicate in our fourth prototype. What I learned from this book, I learned after the prototypes were finished. However, I think this led to a greater level of learning, by giving me an understanding of what I did incorrectly and why.

8.4 Prototype Reflections : Semiotics

As mentioned earlier, we did not put in a conscious effort to applying the semiotics of game design to our prototypes. This section is a reflection on the semiotics in the prototypes that exist regardless and on how they could have been improved with conscious effort. In addition, this section will also go through the audio visual elements and non-verbal communication methods in the game.

8.4.1 Prototype 1

In prototype 1, the main thing to be conveyed was how to catch the fish. The movement of the fish is predictable and the input for moving the hook is guessable. However, the fish going invisible in the center and catching them when this happens, is not obvious. This should have been better conveyed. One example of what we could have done, is to make the fish swim back once it nears the center while changing the catching mechanic to work on those positions instead of the center position.

8.4.2 Prototype 2

Through the cold robotic voice of the machine, we wanted to convey a sense of distrust. This was enhanced by things in the game like the blood sample being taken or the human voice telling you not to trust the machine. But, a sense of trust (in the machine) is also built by comments about making good progress or doing well with music. However, the trust and distrust could have been conveyed a lot better, as mentioned before. For example, it was not evident that a blood sample was being taken, there were neither visuals nor sounds to support it.

8.4.3 Prototype 3

The background music and the sound effects of prototype 3 convey the feel of a survival game, supplemented by the red skies and the burning building. A trail shows the location of the nearest

meat pile (at the cost of getting hungrier). What could have been better conveyed are the negative effects of losing a limb as well as the faster hunger while the trail is active.

8.4.4 Prototype 4

As mentioned before, the sense of speed could have been conveyed a lot better, through better camera angles and effects. Another aspect that should have been avoided was the procedural map. The randomness of a procedural map does increase replayability, but at the cost of mastery. Players cannot gain a deeper understanding of the map by playing the game multiple times, because the map changes every game. Because of this, the focus shifts from mastery to dexterity challenges, which moves away from the intent of the theme.

8.5 A Second Chance

Communicating different aspects of a game without using text is not an easy task. It takes time to come up with good design choices for any type of communication with the player and an even greater amount of time when that communication should be strictly non-verbal. However, the time spent designing these goes against the suggestion to avoid too much brainstorming. But as mentioned earlier, this is a matter of finding a balance. The main thing I would change, if I had a second chance, would be to conduct external play-tests. This would tell us if the desired message was communicated properly. But more importantly, it would tell us if the game ‘feels’ the way we want it to!

References

- B. Boyer. Less talk more rock, 2010. URL <https://boingboing.net/features/morerock.html>.
- R. Feynman. *The pleasure of finding things out : the best short works of Richard P. Feynman*. Perseus Books, Cambridge, Mass, 1999. ISBN 0738201081.
- Merriam-Webster. Semiotics, 2019. URL <https://www.merriam-webster.com/dictionary/semiotics>.
- S. Swink. *Game feel: a game designer's guide to virtual sensation*. Morgan Kaufmann Publishers/Elsevier, Amsterdam;Boston;, 2009;2008;. ISBN 0123743281;9780123743282;1498717713;9781498717717;1138403253;9781138403253;.