CART415 – Game Studio I Reflections

Prepared for Professor Jonathan Lessard

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# Introduction

I have taken the time to reflect on the class CART 415 Game Studio I given by Jonathan Lessard (JL) for Fall 2019. This is presented under five captions. The first is game genres and the other four are in relation to our game ITER at <https://martinjohnh.github.io/iter> and <https://github.com/MartinJohnH/iter> and <https://martinjohnh.github.io/doc-iter/>. This includes milestone 1 – project pitch, milestone 2 – story, milestone 3 – final pitch and post-mortem.

# Game Genres

I remember being surprised that nobody in the class voluntarily wanted to present the AR/VR portion of the game genres. I really appreciated JL’s slack channel post which we (Joseph Power and I) used as a general guideline and direction for our augmented reality games (AR) presentation. We were very lucky to have the Unity Developers’ Day and Unity XR presentations happening at Concordia before we presented our findings to the class. In retrospect, we should have emphasized that XR for the gaming community is still trying to define itself. This is in contrast to the traditional console and pc gaming communities which have an established following.

I was confident that the other game genre presentations were similarly curated by Jonathan and feel that the subject matter content was further enhanced by having the class members present the material from their personal perspective.

To sum up, this format really worked for me and the notes that I have taken from the presentations given is invaluable. If I may suggest that for future classes, these presentations be posted to a shareable platform so that they can be referred to later.

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# Milestone 1 – Iteration 1 - Project Pitch

September 4 – September 18

## Challenge:

Form team.

Brainstorm a game and prepare pitch presentation.

Unity version. Class computers had Unity version 2018.3.1 installed on them. Each of our team members were working with a different version of Unity. Our game mechanics required a 2019 version of Unity.

## Resolution:

Request for any 2019 version of Unity to be installed on the class computers so that we could synchronize to one version of Unity.

## Reflection:

Late summer, Martin-John (MJH) had canvassed Allan (AP), Ebi (EB) and I (AH) to find out if we would be interested in putting together a game for the CART415 class. Interestingly, I have worked with each on other projects and as a result knew as well as they did what we can expect from one another going in. At the beginning of the semester, JL agreed that we could go ahead as a team. This was the ideal class to explore game design and to try something original with the talent and diversity that we had as a team.

Team dynamics generally include the following phases: forming, storming, norming and performing. To my surprise, we had to redo the forming stage by exacting another commitment from everyone before we continued on with brainstorming ideas for the class game project.

From the outset, our team was decidedly in two camps. AP and MJH, both in the Computation Arts Major Program, were the designated programmers for Unity. EB and AH were familiar with Blender because they have taken CART360 and CART361. Even so, I’m convinced that should the need arise any one of us would contribute in any capacity.

I have been participating in the yearly game jam, Gamerella, since 2015 which has been instrumental in solidifying the building blocks that take a concept to a game following an effective structure and methodology over the course of a weekend. In addition, I enjoyed working with AP and MJH on our game ([Bubble Island](https://www.youtube.com/redirect?q=https%3A%2F%2Fallanpichardo.github.io%2Fbubbleisland%2F&redir_token=DVA2OuDFNjjVuvhw93HPGaGO9C98MTU3NTIzMDg3MUAxNTc1MTQ0NDcx&event=video_description&v=EFK5Y62W0fE) available as WebGL at <https://www.youtube.com/redirect?q=https%3A%2F%2Fallanpichardo.github.io%2Fbubbleisland%2F&redir_token=DVA2OuDFNjjVuvhw93HPGaGO9C98MTU3NTIzMDg3MUAxNTc1MTQ0NDcx&event=video_description&v=EFK5Y62W0fE> – [gameplay](https://youtu.be/EFK5Y62W0fE) on the Youtube channel at <https://youtu.be/EFK5Y62W0fE> ) for CART315.

All this to say, that I knew that our team would produce a game by the end of the semester. In fact, we had decided to combine several came mechanics that are challenging to code: ergo the 3D companion tether and the changing gravity mechanics. We were encouraged to choose one or the other in order to bring a playable game to the class. The team wanted to continue with both of these mechanics with the added challenge to make the game playable as well.

We set up a shareable Google Drive for the project documentation and presentations as well as the free assets and sounds. We explored using the Project option in Github as a project management tool, however, we eventually used a dedicated private slack channel as the preferred way to manage the project.

# Milestone 2 – Iteration 2 – Story

September 19 – October 16

## Challenge:

To incorporate JL’s recommendations from the pitch presentation into the presentation of October 16. These included, a title, design problem, sketches, overhead plan of the level, assets and a character moving in the engine.

## Resolution:

The team came together to storyboard the game including describing in detail how the puzzles worked. We ended our session by coming up with a solid story for our game which led us to add the “light” mechanic to the game. We set up a Pinterest mood board and divvied up tasks using the Github project management tools.

## Changes:

The game design style changed to a toon shader look. The team decided that the toon shader look for the game would amplify the metaphor of light versus dark, life versus death.

## Reflections:

We regrouped and made a concerted effort to detail the story of ITER. The feedback for our Project Pitch of September 19th from JL was instrumental in nailing down our game. The team had to come back and revisit the story of ITER which is based on Greek mythology where Orpheus who loses his beloved, goes to the underworld to try to bring her back to life.

Using white boards, paper, play acting we began to piece together a coherent story that became the basis for our game ITER. We decided on the mechanics which included a companion tether with a camera that follows the dog as well as changing gravity by turning valves.  We story boarded six sequences. The architecture of the first room was determined to be based on 1/2 the height of the Sistine Chapel which is 40 meters wide and 40 meters high. The second room is 40 meters in height and the third room is 20 meters in height. We set up a Pinterest moodboard.

Once our team felt comfortable with the story, the building of the game became easy.  Shortly after we had our story, the team decided to add the toon shading style with the idea that is would emphasize the metaphor of life and death, light and dark.   It was this decision to apply the toon shading that took the most effort from everyone to implement. All in all, the game design class was an ideal place for our team to explore different mechanics of game design. The one caveat that the toon shader brought to the game was that it made it more difficult to read the objects in the environment.

On reflection, it was an interesting exercise to implements the toon shading, however the tradeoff was that we lost the potential feedback from more playtesting.

# Milestone 3 – Final Pitch

October 17 – November 26

## Challenge:

To create a final pitch presentation with trailer that captured our vision of the new toon shader version of the game including game ready playable puzzles. Show the models for the characters. The goal was to create, rig and animate the child and dog models.

## Resolution:

Unfortunately, the freestyle Blender feature does not export to Unity and we spent considerable time to find a work around that would make the Toon Shader style work in Unity. This hiccup took up considerable time to implement for all members of the team. We did not have time to render the child more “ghostlike” as per JL’s recommendation.

## Changes:

The assets were individually treated in Blender to have a toon shader look and exported in a .fbx format ready to be imported by Unity. We decided to use the initial dog model and animations due to lack of time.

## Reflections:

I love how our team came together to put the final pieces to our playable level. We had reserved CDA rooms on the Friday night (before the following Wednesday delivery deadline) from 6pm to midnight in order to put together the playable level, trailer, sounds and final polish on our game.

Surprise! The CDA rooms were still running the old 2018 Unity version and therefore we were forced to use our laptops. At about 2am we assessed what was still required for our presentation on the following Wednesday and we divvied up the tasks to those who could commit to completing them. There was only one time that we overlapped and two people were working on the same task.

The final presentation was ready on time and we decided as a team that we would present one voice. In terms of game design, I must admit that we have many competing mechanics that can undermine the playability of a game. However, I am glad that we over did it because it offered us so much to learn.

# Post-Mortem

November 27 – December 4

## Challenge:

Present ITER to an industry professional with the understanding that we would receive feedback.

## Resolution:

The team came together to finalize the game and to produce a playable level and trailer and ready for the final pitch presentation.

## Reflections:

Looking back on our final presentation I'm proud to have been part of our team. I'm proud of what we produced in terms of game design as well as the game aesthetic in the time that we had.   The feedback that we received from both JL and Daniel Guertin, was invaluable.

In fact, after the presentation, I was able to chat with Daniel who took the time to further elaborate on some of the elements of the game that he found could have been better implemented.  For example, it was not immediately clear that the dog was the main character of the game. He suggested (in line with feedback from JL) that the child who was already “dead” could have shaded or transparent to visually impart that message to the player. Daniel had mentioned that the gravity feature could have been better emphasized by using a 90-degree change in gravity versus the 180-degree gravity change that we showed in our level. I really value the fact that we were able to present to an industry professional who was able to see our game for the first time and therefore was able to give a first impression feedback to our team.