

City of Tiers

Creating a Solo Artistic Game

A Major Qualifying Project

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Abstract

City of Tiers is an Interactive Media and Game Development Major Qualifying Project created to showcase the heart of what artistic game development means to me. A solo project, the goal was to develop a game that was both fun to play and beautiful to look at. The story and art style were carefully selected to create the mood of the game. This project was an experience in pushing creative boundaries and redefining personal artistic style.

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Thank you also to Rachel Burton for all of your crucial work during the early stages of the game in B-Term 2015. Your help was invaluable in creating the structure of the game, and your art contributed volumes to the early levels of *City of Tiers*.

Finally, to my good friend, Dan Murray: thank you for teaching me the basics of Construct 2, and for recommending the engine to me.

1. Introduction

City of Tiers is a 2D point-and-click adventure, in the Indie/Fantasy Graphic Adventure genre. An exploration of a gritty neo-Victorian fantasy world, told through the lens of a storybook. The player takes control of an inhabitant of this world, dubbed “Birdmask” for identification purposes, though he technically does not have a name. Birdmask, a dreamer, embarks on a quest to find fallen stars and return them to their place in the sky.

The target audience for *City of Tiers* is everyone from age 10 to age 100. The game is designed to be uplifting and not too complicated, so everyone can enjoy the story and the world that has been created for them. I believe that it is accessible to everyone who enjoys a good book.

This MQP began with several goals in mind. As a solo project created by an artistic major, it was established from the start that the art was the driving factor behind the game, not the mechanics. The game was intended to engage the player through visuals and storytelling. It was also supposed to be a platform through which I could hone and develop my artistic style. Instead of forcing a style that is “more appropriate for games,” I was encouraged to do what felt natural to me.

City of Tiers was created during the 2015-2016 academic year. It was designed in A-Term 2015 (please see Appendices A and B for the full Proposal and Concept Document) and developed in B, C, and D-Term. It became an exploration in solo game design with an artistic background.

2. The Story

2.1. Setting

The world of *City of Tiers* was designed to be a patchwork of European historical time periods, spanning from medieval to Victorian. The game does not necessarily take place on Earth as we know it, but the goal of using these varied styles was to make the player feel as if they had just stepped into a renaissance fair. The idea for the feeling of the world itself drew on many different sources of inspiration, including Neil Gaiman's *Mirror Mask* and *Stardust*, and the worlds of Tim Burton.

The game itself takes place entirely within the confines of the city in which Birdmask resides. The city is tiered, much like the city of Gondor in J.R.R. Tolkien's *The Lord of the Rings*: it starts out large and sprawling, and as one climbs higher and higher it begins to decrease in size. The city's main product is coal, and as such huge clouds of smog have begun to obscure the sky. The first three tiers have already been completely engulfed in smog.

Possibly the most important aspect in every resident of this city's life is the presence of the Clock Tower. It sits on the topmost tier of the city and rules every occupant's life like a king. Every resident of the city lives their life by the peals of the Clock Tower and would be lost without it.

In order to give the player the richest experience while keeping scope in mind, the number of playable tiers was limited to five. Each tier was given a specific color scheme to achieve cohesion. The tiers are as follows:

2.1.1. Tier 1

Tier 1 houses the working-class housing, where the largest percentage of the population resides and could be compared to the slums of larger cities during the Victorian period. The housing is very cramped: small apartment buildings with one-room flats. The streets are dirty and unkempt. The color scheme for this tier reflects the dullness of the lives of its residents, using a monochromatic scale of blacks, whites, grays, and purples.

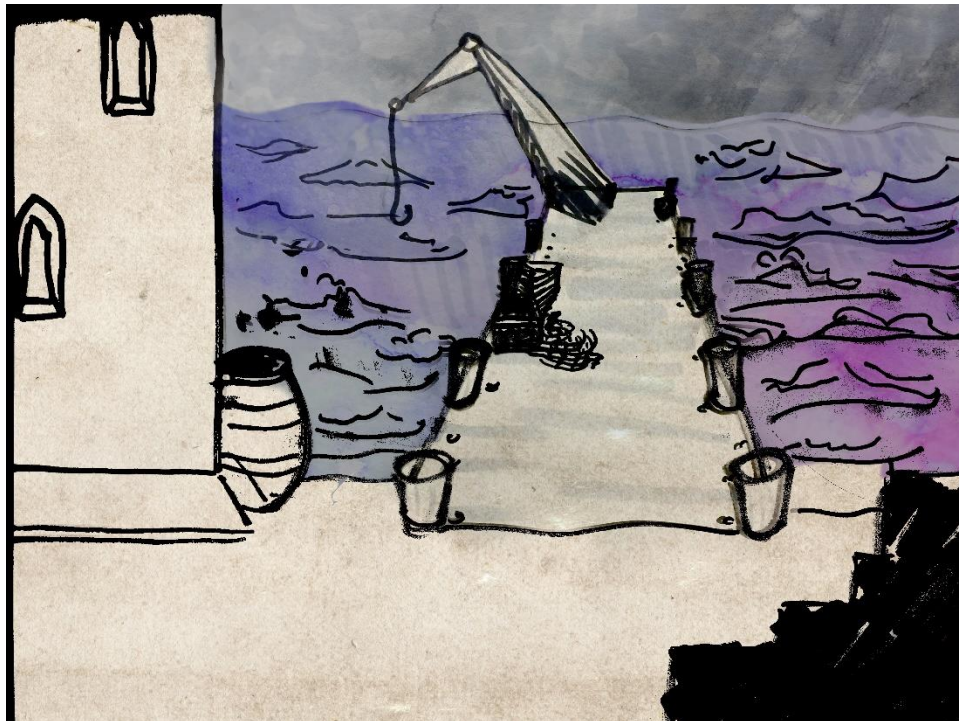


Figure 1: Tier 1 Docks

2.1.2. Tier 2

The factory district and the center of production and distribution, where most of the working class from Tier 1 go to work. The main export of this tier is coal. It is similar to Tier 1 in terms of architecture, but there are no living spaces. Instead, it is comprised of factories. The color scheme of this tier is also similar to Tier 1, but the purples are replaced with reds to give it the feeling of hot production lines and fire.



Figure 2: Tier 2 Factory

2.1.3. Tier 3

Tier 3 is the mercantile district. To have a job here is to be one step above the working class. All sorts of goods can be purchased here, including food, clothing, toys, musical instruments, and much more. It is comprised of storefronts of varying size. Some are prettier than others. As the player begins to ascend into the upper levels of the city, where the more affluent inhabitants reside, they begin to see more color. The greyscale model is still followed for cohesion, but depending on the shop we also begin to see brighter colors: blues, purples, reds, and golds.

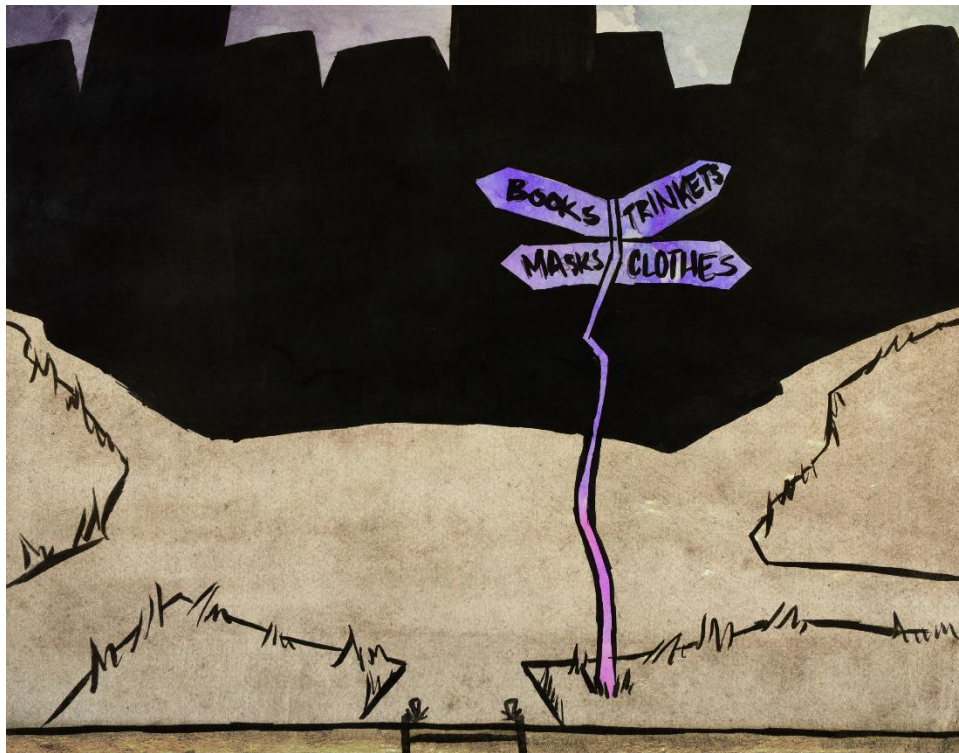


Figure 3: Tier 3 Crossroads

2.1.4. Tier 4

Tier 4 houses the upper middle class. The city's equivalent of nobility resides here. Their main job is to oversee the running of the lesser tiers, though it is rumored that most of them do nothing at all. This tier is comprised of sprawling housing (based loosely off of Boston's own Beacon Hill), all apartment buildings, with vast, lush gardens. This tier is the first time the player will see saturated color: the main color is gold, with heavy emphasis on green to signify plant life.

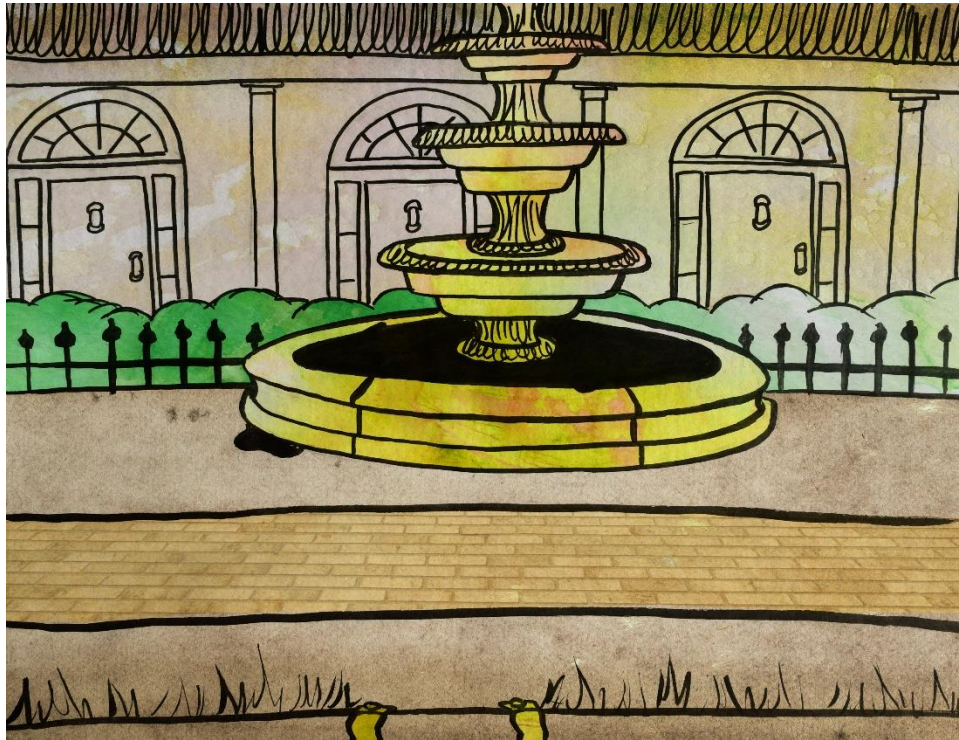


Figure 4: Tier 4 Plaza

2.1.5. Tier 5

The top of the city, where the Clock Tower sits. In stark contrast to the previous tier's feeling of decadence, this tier's color scheme pulls from that of Tier 1. There are no houses here; only the clock tower and a small, abandoned church. The shadow of the Clock Tower envelops this tier, giving it the feel of perpetual twilight.

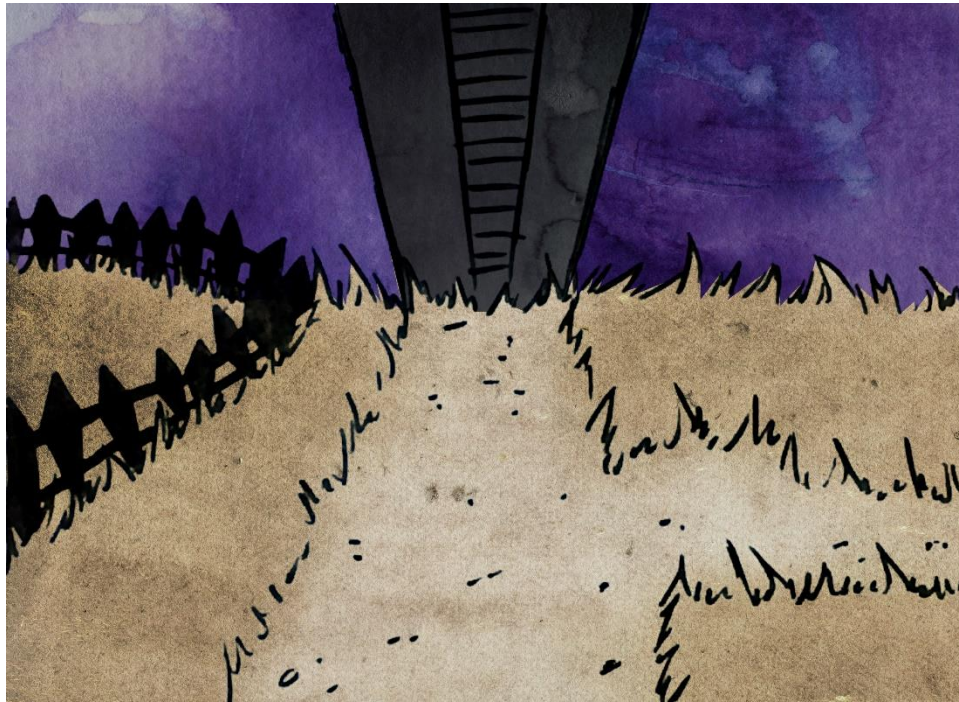


Figure 5: Tier 5 Crossroads

2.2. Characters

The occupants of this world are supposed to be ambiguous, especially in terms of race/species. Birdmask, for example, though human-like in appearance, is never actually defined as human (or as anything else). It is up to the players to decide for themselves what lies beneath the mask. All the inhabitants of the city are defined for the player by what they wear, where in the city they reside, and their interactions with Birdmask.

2.2.1. Birdmask

There is only one main character in this story, and that is Birdmask. A nobody in the eyes of society, he lives down in the slums with the rest of the working-class folk. In keeping with the rest of the story, his background is somewhat vague: it is left up to the player to determine where he came from. By keeping Birdmask's backstory and character vague, the player is able to put themselves in his shoes and immerse themselves in the game.

What is clear is that Birdmask is a dreamer. He most likely does not spend much of his time working. He has simple wants and needs, and he feels that his purpose in life is to find beauty in the world (an idea that most of the other inhabitants of the city would find laughable). The conflict he faces throughout the course of the game comes from a dream he has: he must find the stars and return them to the sky.

It should be noted that while Birdmask is consistently referred to as a "he" in this paper, his gender is never determined.



Figure 6: Birdmask, as seen in-game

2.2.2. Non-Player Characters (NPCs)

The player has the ability to interact with a handful of NPCs through Birdmask's journey through the city. Each NPC exists to give Birdmask a task to fulfill within a tier before he can continue on. Usually this task will be to help the NPC with something while simultaneously doing something for himself. In Tier 2, for example, the way to Tier 3 is blocked by a heavy coal cart, which Birdmask can only move with the help of a factory worker. However, the worker is trapped behind a door within the factory, so Birdmask must first unlock it, helping the worker and in the process also helping himself.



Figure 7: The Tier 2 factory worker



Figure 8: Tier 3 shopkeepers



Figure 9: Tier 4's Mayor with her cat

2.3. The Story

City of Tiers begins with a dream: Birdmask “wakes up” to find himself staring out of the window of his flat in the working class district at a clear night sky with hundreds of stars: something he has never seen in his waking life due to the heavy pollution of the city. He steps out of bed and out of the window onto the clouds of smog that cover the city below. In the distance, he sees the Clock Tower. He walks towards the Tower and steps onto the top. The heavens open above him, and he sees the great expanse of stars up close for the first time. Then, all of the stars shiver and fall from the sky at once, dropping through the smog and disappearing. He wakes up shortly after.

City of Tiers follows Birdmask’s quest to find the fallen stars and return them to the sky. Over the course of the story, he explores the city in which he lives and meets the interesting characters that live there, all while trying to create a more beautiful world.

3. Artistic Direction

3.1. Concept

The concept for *City of Tiers* was born from several pieces of art that I created in the summer of 2015. Struggling with artist's block, I tried to overcome it by doodling character designs in Sharpie. The main character of the story came into being in a matter of minutes, and a few days later I completed a full composition that then became the concept image for the game.



Figure 10: The first Birdmask concepts



Figure 11: The full composition that started it all

3.3.1. The Character of Birdmask

I have had a passion for character design for a long time, and every time I create a character I have tried to put a little piece of myself into them. Birdmask may have originated from a doodle, but he has come to mean a lot to me in a deeply personal way.

I have long had an affinity for gothic and medieval settings and objects, but not in a way that most people see them. To me, they represent peace and clarity. As a child, I loved everything having to do with witches and wizards (my favorite book was *The Lord of the Rings*), and I spent a lot of my time in the woods near my dad's house. I was constantly looking for signs of magic in my everyday life. As I've grown up, I like to think that I've kept that sense of whimsy, but as I have to take a more practical view of my life some of my childhood ideals have had to take a backseat. I think that Birdmask is so important to me because he ties my visual aesthetic (I have always loved plague masks) to that delicate sense of whimsy I carried everywhere with me when I was a child.

3.2. Inspiration and Reference

Using reference from other games and famous artists was an important part of developing the artistic style for *City of Tiers*. I have always been a fan of dark art with an unfinished look, and thus for many years have drawn inspiration from modern artists like Tim Burton, and classical artists such as Francisco Goya. I also do a lot of browsing online to find other artists that might be less well-known, and I run a small blog on Tumblr where I store sources of inspiration, whether they are photographs, character designs, poems, or other sources of artistic inspiration. Most of these follow a Gothic theme, though I also draw inspiration and reference from other genres, including Pastel Punk and Wicca/Nature.

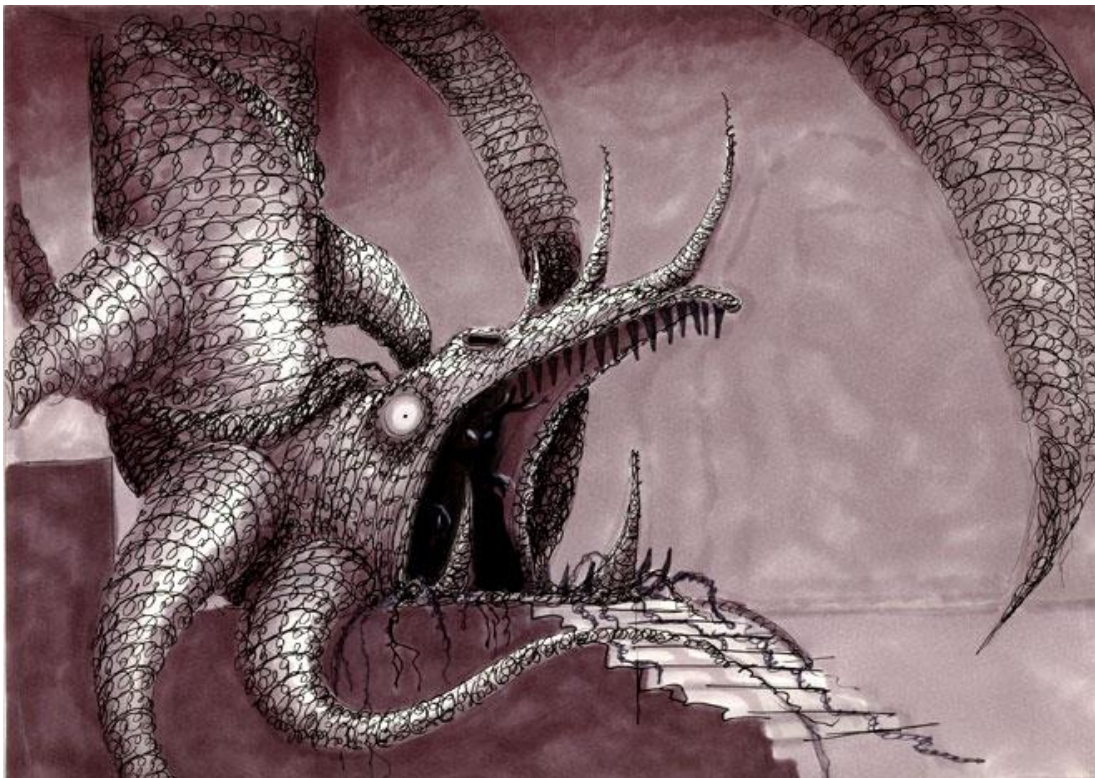


Figure 12: Concept art for *The Black Cauldron*, by Tim Burton. 1983.



Figure 13: A sample of inspiration art from my Tumblr collection. "Blind King" by deviantART user mareCaligine.

3.3. Stylistic Choices

I have never enjoyed what other art students might describe as finishing a piece of art. The art that I have made that makes me the most proud has a distinctly “unfinished” look to it: lots of sketch lines, line breaks, and uneven ink. My art naturally tends to be messy, and I believe that getting rid of its natural “sketchiness” makes it lose some of its uniqueness and originality.

With the help of Professor Snyder, I decided to make that element of my art the focus of the artistic vision of *City of Tiers*, and to make the game appear as if it were taking place on the pages of a sketchbook. Over the process of creating the MQP, I worked extensively with Professor Snyder to loosen my style even more and develop its unique strengths.

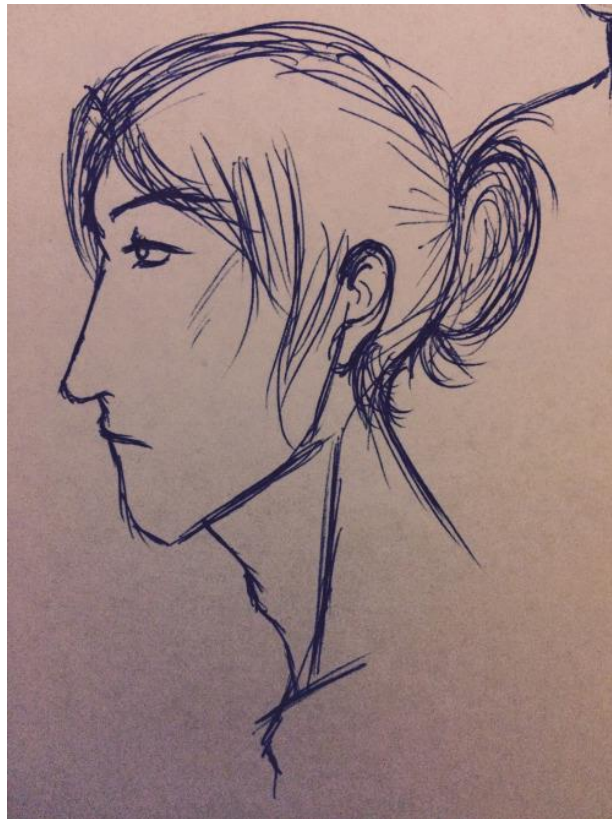


Figure 14: An example of one of my "unfinished" pieces. Portrait of an original character.

3.3.1. Mediums

I worked primarily with traditional mediums in order to maintain the unfinished look of *City of Tier*'s artistic assets. All of the characters, environments, and objects were first drawn in pencil, then inked with Faber Castel brush-tip pens. The lines were loosely inked, with heavy emphasis on "sketchy," short strokes. An emphasis was placed on keeping the look messy and slapdash, which added to the overall "sketchbook" feel of the game.

Once all of the assets were inked, photos were taken of the traditional pieces, which were then imported into Adobe Photoshop. No edits were made to the lines themselves: Photoshop was used solely for the purpose of adding color and texture. In order to maintain the sense that the game was taking place in the pages of a sketchbook, I added a rough paper texture underneath the lines. To give the levels color and cohesion, I layered free-sourced watercolor textures over elements of each environment and level. I chose to use watercolor as opposed to another type of paint medium because I have always associated watercolors with gentleness and peace, and I wanted to give a contrast between the dark lines and the color underneath.

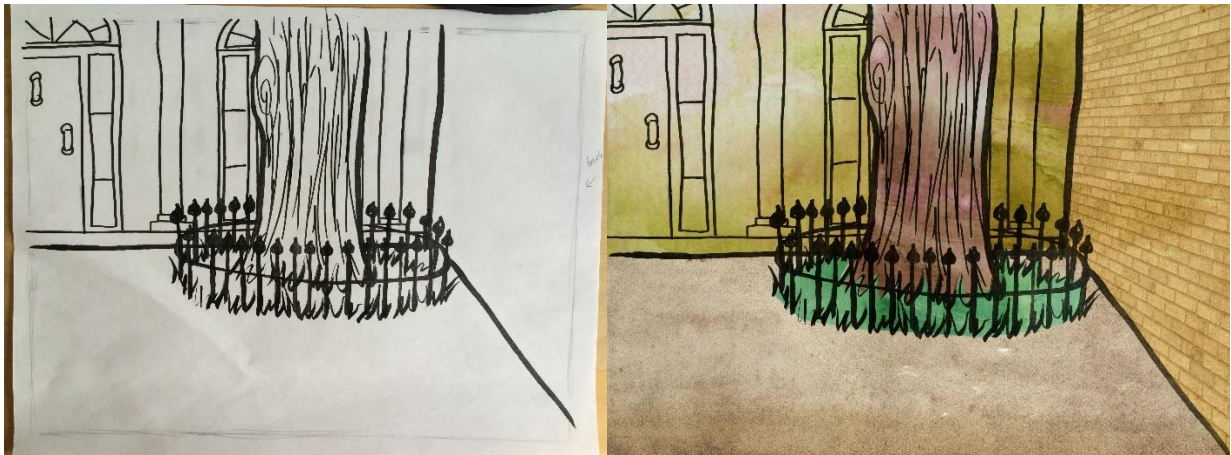


Figure 15: A background (Tier 4) before and after adding digital color and texture

3.3.2. Animation

All of the animations in the game were also created using a mix of traditional and digital methods. Each animated asset was drawn in separate pieces (e.g. Birdmask is made up of separate assets for his head, body, arms, legs, and feet), then animated frame-by-frame in Photoshop.

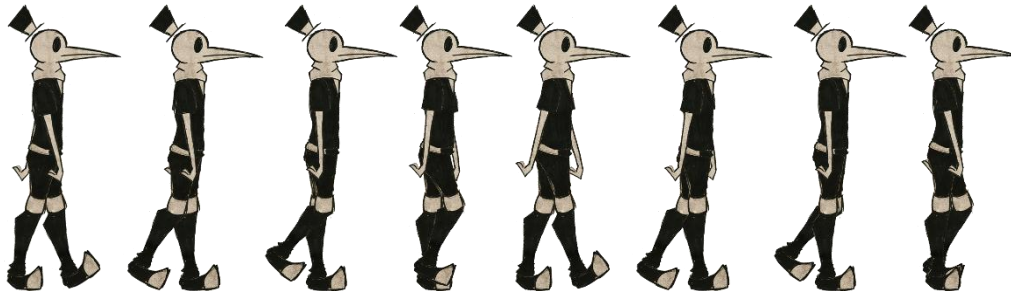


Figure 16: Birdmask's walk cycle

3.3.3. Traditional vs. Digital

Throughout the process of creating the artistic assets for *City of Tiers*, I learned a lot about the fundamental differences between creating art traditionally versus creating art digitally. Traditional art has always felt much more natural to me, and now I believe I understand why: when art is made traditionally, there is an inherent organic feel to it that I believe digital art lacks. It's in the nature of digital art to be finished; something that I have unconsciously fought against as long as I have been drawing. The most important takeaway that I have gotten from this project is the realization that digital art is just a tool, and it is not the only correct way to make art for anything, including games. If the way I express myself is through traditional art rather than digital, then that is the medium I should use.

4. Gameplay

City of Tiers is a third-person graphic puzzle adventure that takes the player through the world of the game's protagonist, Birdmask, on his quest to return all of the stars to the sky. The player begins the game on Tier 1 of 5, and must ascend through the city to reach the final tier. In order to move through the city, the player must complete puzzles, or tasks for other residents of the world.

4.1. Engine

As an artistic IMGD major with little computer science experience, it was critical that I was able to find an engine that would allow me to create *City of Tiers* without having to rely on heavy amounts of coding. I chose Construct 2, an engine developed by the British company Scirra, as the game platform for this reason. Its visual programming was essential to production, as it had an intuitive and easy learning curve.

4.2. Mechanics

City of Tiers is played simply, using only the arrow keys and the mouse. The player has the ability to move throughout the game, speak to NPCs, and interact with objects.

4.2.1. Dialogue

The dialogue of *City of Tiers* is entirely non-verbal. Drawing inspiration from other indie games such as Amanita Design's *Machinarium*, I chose to make all in-game dialogue a series of speech bubbles containing iconic images rather than words. I worked extensively with Professor Sheldon to make sure that the visuals were easy to understand and that the dialogue flowed at a good pace.

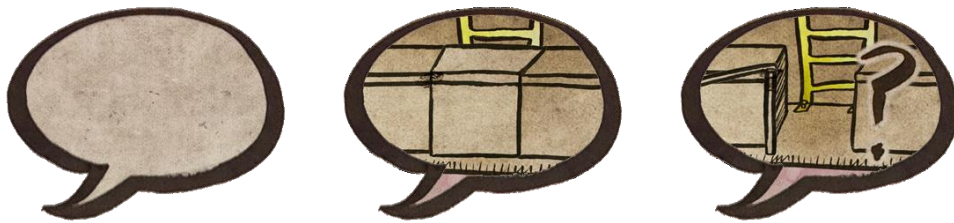


Figure 17: A simple dialogue example.

4.2.2. Ladders

Ladders are used to ascend the tiers of the city. There is one ladder located in each level, which is only accessible after the player has completed the set tasks of the level. Part of the puzzle of each level is figuring out what Birdmask needs to do in order to gain access to the ladder.



Figure 18: An example of a blocked ladder (Tier 2)

4.2.2. Hidden Stars

While the original intent of the game was to make the reward for each task completed one of the stars that had fallen from the sky in Birdmask's initial dream, the scope was changed to make the in-game world building more expansive. Instead of receiving the stars at the end of every task (with the exception of Tier 1, as it is the tutorial level), the player was instead given the option of finding the stars in every level. This added a fun mini-game, making the ultimate reward a) variable and b) slightly more challenging to receive. The amount of stars Birdmask

returns to the sky in the endgame is entirely dependent on how many the player manages to find throughout their exploration of the city.

The number of stars the player has collected is tracked using a variable called StarCount. This serves as the score.



Figure 19: A hidden star in Tier 3's Masks Shop

4.2.3. Win/Fail Condition

There is no fail condition. The player wins when they reach the top tier of the city. The reward is seeing how many stars they have successfully returned to the sky. It is considered a win even if the player only managed to find one hidden star. I believe this is essential to helping the game feel like a storybook: a story is meant to be enjoyed, not stressed over.

4.3. Level Progression

City of Tiers has five unique levels. After waking up from his dream where he witnessed the stars falling out of the sky, Birdmask leaves his house to embark on his adventure. The first thing he sees when he opens his door is a star careening out of the sky and straight into his neighbor's head. This begins the game proper.

4.3.1. Tier 1

Tier 1, also known as the tutorial stage of the game, begins with Birdmask proceeding into the street to check on his neighbor. His neighbor, a dockworker, is injured and panicked about missing work. Birdmask promises to tell the neighbor's boss what happened. The neighbor thanks him and tells him that if he can help him, he will give Birdmask the star that hit him. Birdmask can now travel in two directions: left to the docks, where he can deliver the news of what happened to the boss of the dockworkers, or right to a small shopfront. In order to complete the level, the player must first speak to the boss of the dockworkers to tell her what happened to his neighbor. She will then tell Birdmask to get her employee a bandage from the local shop. The player then proceeds to the shop where, if Birdmask speaks to the shopkeeper, he will receive the bandage. Once Birdmask returns to his neighbor and hands over the bandage, the neighbor will thank him, give him the star, and move aside, revealing the ladder that Birdmask can then use to climb to Tier 2. There are no hidden stars in Tier 1, as the star is given directly to Birdmask as the reward for completing the tutorial.



Figure 20: Birdmask's initial interaction with his neighbor



Figure 21: Finding the bandages

4.3.2. Tier 2

When Birdmask arrives in Tier 2, he can immediately see the ladder to the next tier. However, it is inaccessible, as there is a large coal cart blocking the way. In order to move the cart, Birdmask must find someone to help him. After entering the factory to his left, he will see signs of distress coming from behind a locked door. If the player clicks on the door, a dialogue will begin. Birdmask will discover that there is a factory worker behind the locked door. After Birdmask asks about the coal cart, the worker will agree to help move it, if Birdmask can find the key to unlock the door. The player must find the key hidden in the level, then proceed back to unlock the door. Once freed, the worker will go outside to move the coal cart. Moving the coal cart causes the one hidden star of the level to be revealed, which the player can collect before moving to Tier 3.



Figure 22: Birdmask interacts with the trapped worker

4.3.3. Tier 3

Tier 3 is the most open of the game's levels. The tier consists of four shops: Books, Clothes, Masks, and Trinkets. Upon arriving in the level, the player has the option to choose any one of the four paths at its crossroads. Three of the four paths will lead to the Books, Clothes, and Masks shops, where Birdmask will have the option of asking the shopkeepers where the ladder is. All of the shopkeepers will tell him it is in the Trinkets shop. When Birdmask reaches the Trinkets shop, he will see that the ladder is blocked by the counter. After asking the Trinkets shopkeeper if he can get to the ladder, he will be told no: if he wants to proceed to Tier 4 he will need to present three letters of permission, which can be obtained from the other three shopkeepers on this tier.

In order to procure the letters of permission, Birdmask must complete a task for each shopkeeper. The Books shopkeeper wants a book that the Clothes shopkeeper borrowed and never returned. The Clothes shopkeeper wants a mask from the Masks shopkeeper for a display they are working on. The Masks shopkeeper wants a book from the Books shopkeeper to

research a new type of mask to make. Once Birdmask completes a task for a shopkeeper, he will receive a letter of permission. The player can do these tasks in any order, but they must all be completed before the Trinkets shopkeeper will let him through to the ladder. There are three hidden stars on this level, which can be found in the Books, Clothes, and Masks shops.



Figure 23: Birdmask is given the location of ladder by the Clothes Shopkeeper

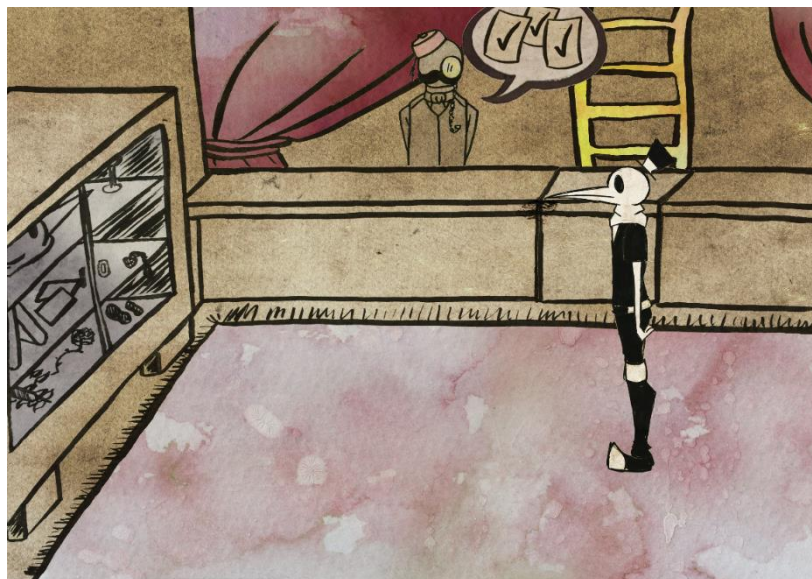


Figure 24: The Trinkets Shopkeeper informs Birdmask of the needed letters of permission

4.3.4. Tier 4

Tier 4 is the last level in which the player must complete tasks in order to proceed. The ladder in this level is accessible only via a key that the Mayor of the city keeps on her person at all times. After asking the Mayor if he can get through, Birdmask is told that if he can return the Mayor's lost cat, she will open the door for him. Birdmask receives the cat's favorite toy, and must set off to locate the cat. The cat can be found by a tree on the opposite side of the level, playing with the level's hidden star. If Birdmask has received the toy from the Mayor, he can give that to the cat instead. The cat will lose interest in the star, meaning Birdmask can pick it up, and then return the cat to its owner. Overjoyed that Birdmask found her cat, the Mayor will open the door to the ladder for him.



Figure 25: The Mayor informs Birdmask of her lost cat



Figure 26: Birdmask finds the Mayor's cat playing with a star

4.3.5. Tier 5

In Tier 5, the player has the opportunity to explore before completing the game. They can look over the edge of the city at the overlook, or proceed to the run-down church near the Clock Tower, where the last hidden star of the game can be found. Once the player is ready, Birdmask can go to the base of the Clock Tower, climb to the top, and release the stars back into the sky, ending the game.



Figure 27: Birdmask visits the abandoned church on Tier 5

5. Project Management

City of Tiers was, for the most part, a one-person venture. Due to the nature of the project, a thorough understanding of time management and scheduling was essential to the project's success.

5.1. Scope and Planning

I was fortunate enough to have the assistance of Rachel Burton, an artistic IMGD major, during B-Term 2015, when she took my MQP for ISP credit. With Rachel's help, I established a comfortable scope for the game. We kept it small, though the concept of the world presented the option for much more than we planned. We also designed the level flow to be modular, so that if the scope proved to be too large for the time allowed, the game could easily be scaled back while remaining playable and keeping its cohesive story.

As the project went on, I periodically created a schedule of tasks for myself that I could reference and use to ensure I stayed on track (my D-Term schedule of work can be seen in Appendix C). During game production, I strove to finish a level every two weeks. Week one was dedicated to asset creation and polish, while week two was dedicated to programming and level polish.

6. Post-Mortem

City of Tiers was an incredibly valuable learning experience for me. As a senior IMGD student, this MQP was the first time I actually got to work on a game from start to finish. In keeping with professional game design documents, I will conclude this paper with a post-mortem of the game, including what went well and what did not.

6.1. Challenges

6.1.1. Working Solo

Completing any MQP at WPI alone is, of course, a pretty daunting undertaking. With the exception of B-Term, during which I had Rachel's help to create all of the art assets the game needed, I was the only person responsible for asset creation, story continuity, and game programming. Time management was essential in making sure the project moved at a good pace and didn't stall at any point during production. I was successful for the most part, though there were a few hiccups (mostly involving time conflicts with other responsibilities) that, if I had the chance to go back, I would definitely tackle differently.

Stress was also a huge limiting factor of the project. Working under such tight self-inflicted deadlines did definitely lead to some stressful moments throughout the process. Stress is one thing that I have always struggled with during my time at WPI, and I have to say that I mostly did not succeed at overcoming that particular obstacle during this project.

6.1.2. Technical Knowledge

Being an artistic major, I did not have a very solid background in game programming to draw on as I began the technical side of making *City of Tiers*. The choice in engine helped dramatically with this, as Construct 2 relies mostly on a visual programming style that I, as a

visual learner, found much easier to work with than working in a more complicated program like Unity. It was still a steep learning curve, and it took a little while to master the basics, but after a while I became more comfortable with the engine and learned to use it to my full advantage.

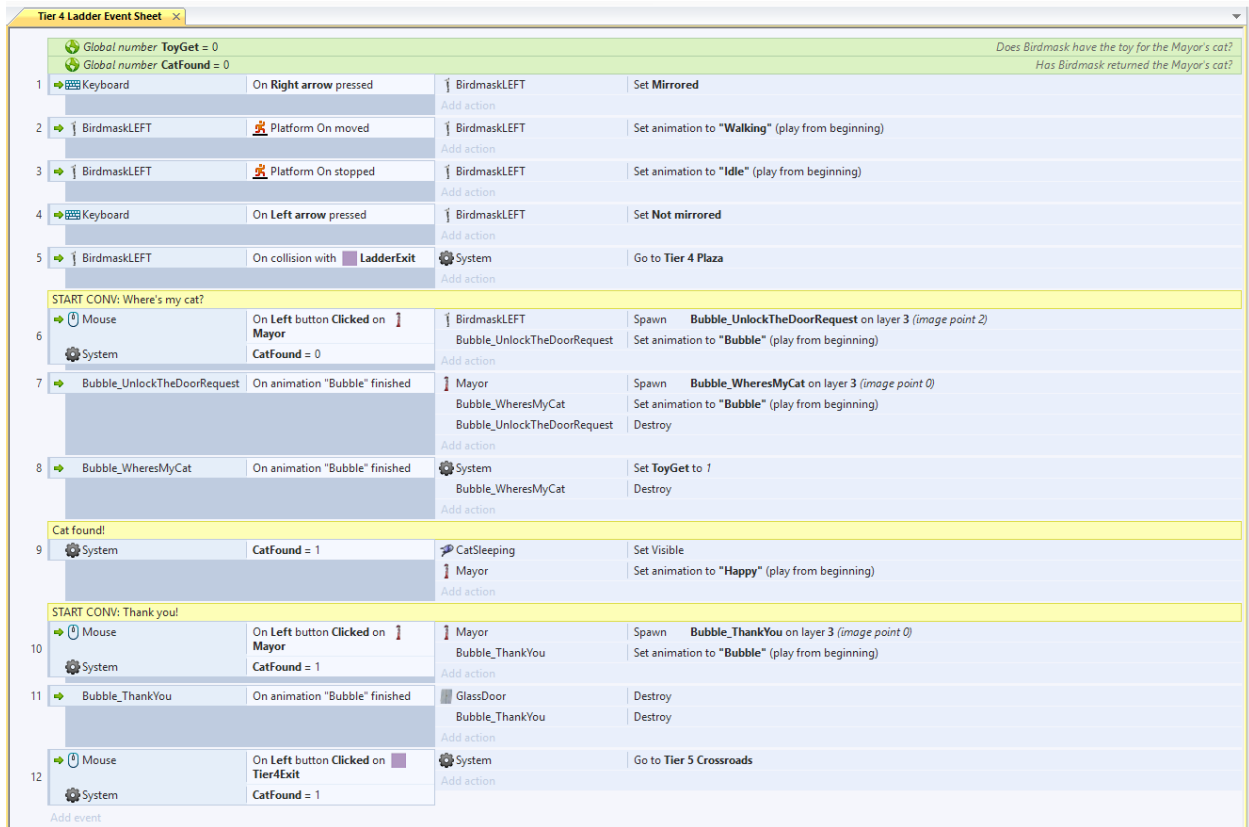


Figure 28: A sample event sheet in Construct 2 (Tier 4 Mayor interaction)

6.1.3. Sound

Due to time restrictions, I unfortunately had to scrap my original idea of adding sound to the game. This was disappointing for me, because I am a trained musician and was really hoping to have the time to give the game the original score I envisioned for it. I do intend to create the music and sound for the game after graduation, when I have time to sit down with it again.

6.2. Revisions

As production went on, my artistic style was continuously growing and changing. I learned how to create in the best way for optimization into the engine, and how to loosen up my style and really “own” what I was putting on paper. I also learned how to create an interactive story without relying on dialogue, and learned how to make my game programming more elegant within Construct 2. Therefore, each level is slightly different from the one before it. Creating the game was a constant learning progress, and I think that that is clear in the gameplay.

6.3. Achievements

Although the process of creating *City of Tiers* certainly had its fair share of bumps in the road, there were many positive aspects to the project as well.

6.3.1. Working Solo

This section has been given the same title as Section 6.2.1 for a very distinct reason. Although the task of creating an MQP by yourself is definitely a massive undertaking, it is also a great opportunity to learn a lot about yourself and to improve your own skills. Working alone allowed me to get individualized attention for my art, which has helped me to grow by leaps and bounds as an artist. Having sole responsibility for the look and feel of my game was incredibly freeing, and I feel that it has released me from an extended period of artist’s block that I have been trying to work through for years. I feel revitalized and ready to create even more.

6.3.2. Art

When I began this MQP, I set out with one goal in mind: to create a game that is visually engaging and that brings the player’s attention more to the art than the game mechanics. I have done just that. With a heavy emphasis on the importance of “creating outside of the box,” I have created a style of art that is unique to me, and a game that will stand out from the crowd. My

own artistic ability has grown as a result of this MQP, and I believe this experience will continue to benefit me long after I have graduated from WPI.

6.3.3. Tech

Before creating *City of Tiers*, I had no confidence in my technical ability whatsoever for a variety of different reasons. Looking back on the process of creating the game, my opinion of my skills has changed. I know now that I can hold my own and use the tools I have to my advantage in order to create something beautiful.

7. Conclusion

Looking back on this experience, I would definitely caution any IMGD major, artistic or technical, that there will be a lot of obstacles that they will need to overcome if they choose to do their MQP alone. It's a stressful process, and although I did have support from my advisors and my friends and family, it would have been incredibly beneficial to me to have another person or people to help me through the process. Nevertheless, I am very proud of what I have accomplished: technically speaking, the game isn't the most beautiful thing in the world, but it speaks to the heart of what I, as an artist, value most in my art.

Possibly the most important takeaway I have gained from this project is the importance of creating a schedule and sticking to it, no matter how fast the pace may be. I firmly believe that was the right decision to make.

Overall, I will look back on my experience creating *City of Tiers* positively. I grew so much as an artist and as a storyteller during this process, and I feel that I can only go up from here. The game's story and the character of Birdmask are deeply personal to me, and I look forward to not only polishing this game even more, but bringing them into other projects in the future.



Figure 29: A happy Birdmask is a good Birdmask

Appendices

Appendix A: Proposal

Interactive Media and Game Development Major Qualifying Project Proposal [Untitled]

Maeve McCluskey
November 2015

Introduction

A cloud of smog, a clock tower, and an empty sky. The stars have gone missing, and you're the only one with the dreams to find them. Search the city, heed the call, and don't forget your tophat. [Untitled] is a point-and-click graphic adventure with a neo-Victorian twist.

Problem

Too many MQPs that come out of WPI have a heavy focus on game mechanics. This MQP is a chance to bring something new to the table. With a strong focus on storytelling and unique 2D art, this game is intended to be a breath of fresh air.

Game Design Plan

Characters

The main character of [Untitled] is a resident of the city of [Unnamed]. While he does not have a name, he is known as Birdmask. A nobody in the eyes of society, he is a dreamer with simple needs and desires. He feels his purpose in life is to find beauty in the world, wherever it may be hiding.

[Untitled] intends to draw its player into a nonverbal world of masks and simple needs. The other inhabitants of [Unnamed] will all be NPCs with stories to tell or problems for Birdmask to solve.

Plot

[Untitled]'s story has five unique sections. It begins and ends in the sky.

The story begins with a dream: Birdmask "wakes up" to find himself staring out of the window of his flat in the working-class district at a clear night sky with hundreds of stars. He steps out of bed and out of the window onto the clouds of smog that covers the city below. In the distance, he sees the Clock Tower. He walks towards the Clock Tower and steps onto the top. The heavens open up above him, and he sees the great expanse of stars up close for the first time. Then, all of the stars shiver and fall from the sky at once, dropping through the smog and disappearing. He wakes up shortly after.

Birdmask's adventure begins with this dream, and his purpose is revealed shortly after: he must find the fallen stars and return them to the sky. His journey will carry him through the five tiers of [Unnamed], solving problems and listening to stories in order to gather the stars from the other inhabitants of the city. All the while, the great Clock Tower at the top of the city looms over all, dictating the lives of [Unnamed]'s citizens.

The game will end at the Clock Tower. After climbing to the top, Birdmask will again see the sky, devoid of stars. He will gather the stars he has collected throughout his journey and release them into the sky. This ends the game.

Gameplay

The game will be played entirely with the mouse. The player will have the ability to move throughout the game, speak to NPCs, and interact with certain objects (including ladders, some doors, and plot-relevant objects).

I am hoping to be able to give the player an interactable inventory. In most point-and-click games, the player can access a very minimal inventory, which shows them which items they have. At the very least, I would like the player to be able to view how many stars they have at any given time.

Game Flow

The game is broken up into six sections, five of which directly correspond to the tiers of the city. They are as follows:

1. Birdmask's dream (Cinematic)
2. City Tier 1: Working-class housing (Tutorial)
3. City Tier 2: Factory district
4. City Tier 3: Mercantile district
5. City Tier 4: Upper middle-class housing
6. City Tier 5: The Clock Tower (Endgame)

The game will begin in Birdmask's dream. The player will be in control, but will not be able to do much more than make Birdmask walk forward. When Birdmask reaches the top of the tower, the controls will be taken from the player and the title screen cutscene will play.

The player will regain control of Birdmask after he wakes up in his flat in Tier 1. Birdmask gets out of bed and makes for the front door. He opens his door and sees a star careen out of the sky and straight into some poor worker's head. This ends the opening sequence.

The tutorial stage of the game begins with Birdmask proceeding into the street to ask if the worker is okay. The worker is injured, and tells Birdmask that they need a bandage for their head. If Birdmask can get this for them, they will give him the star. Birdmask can now travel in two directions: left to the docks, where he can converse with the dock workers and the sailors, or right, to a small store, where he can ask the shopkeeper for a bandage. Once he has attained the bandage, he can return to the worker and hand it over, at which point he will be rewarded with the star. The worker then gets up and moves away, revealing a ladder to the upper tiers. Begin another cutscene: Birdmask looks up. He sees the city towering above him, with the Clock Tower sitting at the very top. This is when he makes his decision to find the rest of the stars and return them to the sky. He climbs the ladder to Tier 2.

Throughout the next three tiers, Birdmask will have to explore the districts, similarly to Tier 1, finding NPCs with stars to trade for favors and assistance. These parts of the game have not been laid out yet, but they will all be tied together with the same idea: find the stars, proceed to the next level of the city. Each Tier will be comprised of screens (for example, Tier 1 had three screens). The complexity of the tasks on each Tier will determine the number of screens, but there will never be more than five.

After Birdmask has finished his last task in the fourth tier, he will be able to ascend to the fifth tier: the Clock Tower. Once he reaches the Clock Tower, he will have the opportunity to explore, like on any other tier, but there will be nothing for him to do, save climb the ladder up to the top

of the Clock Tower. This ladder will take a very long time for him to climb, but once he makes it up he will be rewarded with an expansive view of the empty sky. This begins the last cutscene: he gathers the stars into his arms, opens his arms, and the stars are released back into the sky. Credits roll, and the game is over.

Style

The artistic style of [Untitled] is arguably one of the most important aspects of the game. The world of the game is designed to be a patchwork of historical time periods, spanning from medieval to Victorian. It does not necessarily take place on Earth as we know it, but all of the different styles should ideally give the player the feeling that they just stepped into a renaissance fair. The idea for the feeling of the world itself draws a lot from different sources of inspiration, including Neil Gaiman's movie, *Mirror Mask*, and his book, *Stardust*, and the worlds of Tim Burton.

All of the art in the game is intended to have a slightly unfinished, sketchbook-type feel to it. The backgrounds will be created using pen and watercolor, while the characters will all be drawn in black pen. The entire game world will be textured to look like the game is taking place on old paper.

Engine

Finding a primary source for gameplay inspiration has helped us to narrow down what engine would be the best choice for this MQP. I have been looking closely at *Machinarium*, a 2009 point-and-click graphic adventure game created by Amanita Design in Adobe Flash. As Flash has proved to be a limiting platform in the past, I believe our next best option would be Unity 2D. Most IMGD students at WPI have experience in Unity, and its visual programming appeals to me, as an artistic track major with little CS experience.

Team

The team for [Untitled] is currently as follows:

- Maeve McCluskey (MQP student): Lead director/producer/artist/musician
- Rachel Burton (ISP student, B-Term): Artistic assets, assistance in various departments as needed
- Britt Snyder (MQP advisor): Mentorship and guidance
- Lee Sheldon (MQP advisor): Mentorship and guidance
- ISP programmer(?): Possibly brought in in C-Term for assistance with technical polish

Timeline

This game's intend date of completion is the end of D-Term. It will be a three-term project, beginning in B-Term (October 2015) and ending in D-Term (May 2016). Detailed production schedules will be written up at the beginning of each term.

Appendix B: Concept Document

Interactive Media and Game Development Major Qualifying Project Concept Document [Untitled]

Maeve McCluskey
November 2015

High Concept

An exploration of a gritty neo-Victorian fantasy world, told through the lens of a children's storybook. The player will take control of an inhabitant of this world, dubbed "Birdmask" for identification purposes, though he technically does not have a name. Birdmask, a dreamer, embarks on a quest to find fallen stars and return them to their place in the sky.

Genre & Type

The game (currently untitled) is a 2D point-and-click adventure, falling into the indie/fantasy Graphic Adventure genre. Our main source of inspiration is *Machinarium*, a graphic adventure game created by Amanita Design in 2009. Other sources of inspiration include games created by Telltale Games (*The Walking Dead*, *Tales from the Borderlands*, etc.), *Year Walk*, and *King's Quest*.

Setting

The world of the game is designed to be a patchwork of historical time periods, spanning from medieval to Victorian. It does not necessarily take place on Earth as we know it, but all of the different styles should ideally give the player the feeling that they just stepped into a renaissance fair. The idea for the feeling of the world itself draws a lot from different sources of inspiration, including Neil Gaiman's movie, *Mirror Mask*, and his book, *Stardust*, and the worlds of Tim Burton.

The game takes place entirely within the confines of the city in which Birdmask resides. The city is tiered, much like the city of Gondor in J.R.R. Tolkien's *The Lord of the Rings*: it starts out large and sprawling, and as one climbs higher and higher it begins to decrease in size. The city's main product is coal, and as such huge clouds of smog have begun to obstruct the sky. The first three tiers have already been completely engulfed in smog.

Possibly the most important aspect in every character's life is the presence of the Clock Tower. It sits on the topmost tier of the city and rules every occupant's life like a king. Every resident of the city lives their life by the peals of the Clock Tower and would be lost without it.

In order to give the player the richest experience while keeping scope in mind, we have limited the number of tiers to five. Each tier will be given a specific color scheme to achieve cohesion.

The tiers are as follows:

- Tier 1: Working-class housing (monochromatic, purples)
 - Where the largest percentage of the population resides. Can be compared to the slums of larger cities during the Victorian period. Very cramped housing, small apartment buildings with one-room flats. Dirty streets.
- Tier 2: Factory district (monochromatic, reds)
 - The center of production and distribution. Where most of the working-class does their jobs. Main export is coal. Similar to the working-class district in terms of architecture, but there are no living spaces. It is all factories.

- Tier 3: Mercantile district (whites, greys, blacks, blues, reds)
 - To have a job here is to be one step above the working-class. All sorts of goods can be purchased here, including food, clothing, toys, musical instruments, etc. Comprised of storefronts of varying size. Some are prettier than others.
- Tier 4: Upper middle-class housing (whites, greys, blacks, reds, blues, gold)
 - The city's equivalent of nobility resides in this district. Their main job is to oversee the running of the lesser tiers, though it is rumored that most of them do nothing at all. Sprawling housing, all apartment buildings, like in the richer parts of Boston or London. There may also be some gardens.
- Tier 5: The Clock Tower (monochromatic, purple)
 - Starkly contrasting the rest of the city. There are no houses here. It is only the Clock Tower and a small, abandoned church. The shadow of the Clock Tower envelops this tier, giving it the feel of perpetual twilight.

The occupants of the world are supposed to be a bit ambiguous, especially in terms of race/species. Birdmask, for example, is never defined as human. It is up to the player to decide for themselves what lies beneath the mask. All of the inhabitants of this world will be defined to the player by what they wear, where in the city they reside, and what their interactions with Birdmask are like.

Characters

There is only one main character to this story: Birdmask. A nobody in the eyes of society, he lives down in the slums with the rest of the working-class folk. In keeping with the rest of the story, his background should be somewhat vague. I want to leave it up to the player to determine where he came from. It is clear, however, that he is a dreamer. He most likely does not spend much of his time working. He has simple wants and needs, and he feels his purpose is to find beauty in the world (an idea that most of the other inhabitants of the city would find laughable). The conflict he faces in the game comes from a dream he has: he must find the stars and return them to the sky.

Story

The game's story has five unique sections. It begins and ends with the sky.

The story begins with a dream: Birdmask "wakes up" to find himself staring out of the window of his flat in the working-class district at a clear night sky with hundreds of stars. He steps out of bed and out of the window onto the clouds of smog that covers the city below. In the distance, he sees the Clock Tower. He walks towards the Clock Tower and steps onto the top. The heavens open up above him, and he sees the great expanse of stars up close for the first time. Then, all of the stars shiver and fall from the sky at once, dropping through the smog and disappearing. He wakes up shortly after.

After his dream, Birdmask gets out of bed and makes for the front door. He feels instinctively that the dream was something more than just his imagination. His thoughts are proved correct when he opens his door and sees a star careen out of the sky and straight into some poor worker's head. This ends the opening sequence.

The tutorial stage of the game begins with Birdmask proceeding into the street to ask if the worker is okay. The worker is injured, and tells Birdmask that they need a bandage for their head. If Birdmask can get this for them, they will give him the star. Birdmask can now travel in two directions: left to the docks, where he can converse with the dock workers and the sailors, or right, to a small store, where he can ask the shopkeeper for a bandage. Once he has attained the

bandage, he can return to the worker and hand it over, at which point he will be rewarded with the star. The worker then gets up and moves away, revealing a ladder to the upper tiers. Birdmask looks up. He sees the city towering above him, with the Clock Tower sitting at the very top. This is when he makes his decision to find the rest of the stars and return them to the sky.

Throughout the next three tiers, Birdmask will have to explore the districts, finding NPCs with stars to trade for favors and assistance. These parts of the story have not been written yet, but they will all be tied together with the same idea: find the stars, proceed to the next level of the city.

After Birdmask has finished his last task in the fourth tier, he will be able to ascend to the fifth tier: the Clock Tower. Once he reaches the Clock Tower, he will have the opportunity to explore, like on any other tier, but there will be nothing for him to do, save climb the ladder up to the top of the Clock Tower. This ladder will take a very long time for him to climb, but once he makes it up he will be rewarded with an expansive view of the empty sky. He gathers the stars into his arms, opens his arms, and the stars are released back into the sky. That ends the game.

Gameplay

The game will be played entirely with the mouse. The player will have the ability to move throughout the game, speak to NPCs, and interact with certain objects (including ladders, some doors, and plot-relevant objects).

For example: in the tutorial section described in the above Story section, the player would have the following options: speak to the injured NPC, move between screens (left, right, and center) and move around on said screens, speak to the dock workers and sailors, speak to the shopkeeper, interact with the bandage, interact with the star, and interact with the ladder.

I am hoping to be able to give the player an interactable inventory. In most point-and-click games, the player can access a very minimal inventory, which shows them which items they have. At the very least, I would like the player to be able to view how many stars they have at any given time.

Features

A unique artistic style - It is my goal to make the art the primary focus of the game. The player should be drawn in by the beauty and the simplicity of the environment and character designs. With a 2D animation style and traditionally-created graphics, I believe this game will stand out from the other MQPs being presented this year.

A heavy focus on story - My first love is writing, and I am excited to test my limits by writing an entirely non-verbal story. This game's story is crucial to its success, and I intend to leave the player feeling fully immersed and taking great enjoyment from it.

A traditionally trained artistic mindset - I am not a programmer, nor will I ever be. I think that is an asset to this game. My strengths lie in traditional artistic training and a love of art history and storytelling. My goal is to wow the player through fully immersive experience, not shiny mechanics.

Original music - I am a musician, and it is my hope that I can get a completely original musical composition created for this game.

Target Audience

The target audience for this game is everyone from age 10 up to age 100. The game is designed to be uplifting and not too complicated, so everyone can enjoy the story and the world that has

been created for them. While some younger children might not enjoy the game as much because it is designed to be a bit creepy in some parts, I believe that it is accessible to everyone who enjoys a good book.

Hardware Platforms

At this time, the plan is to focus on designing only for the PC.

Estimated Schedule and Budget

This game's intended date of completion is the end of D-Term. It will be a three-term project, beginning in B-Term (October 2015) and ending in D-Term (May 2016). Detailed production schedules will be written up at the beginning of each term.

There is no budget, as it is an academic project.

Competitive Analysis

If all goes well, I do intend to put this game up on Steam Greenlight, but as of right now my only competitive thoughts are directed towards other MQPs. I want to make sure that the level of quality on this game matches or exceeds those of the other MQPs for this year.

Team

- Maeve McCluskey (MQP student): Lead director/producer/artist/musician
- Rachel Burton (ISP student, B-Term): Artistic assets, assistance in various departments as needed
- Britt Snyder (MQP advisor): Mentorship and guidance
- Lee Sheldon (MQP advisor): Mentorship and guidance
- ISP programmer(?): Possibly brought in in C-Term for assistance with technical polish

Risk Analysis

As this project is my MQP, I feel it's necessary to go into brief detail about my mental health: I am diagnosed with anxiety and depression, and I am fully aware that the artistic side of this project is highly ambitious. Life as a student at WPI is very stressful. I believe there is a chance for this project to heighten my stress levels to much higher than normal. I intend to take this risk seriously and to make sure that I keep close tabs on my mental health as the terms progress. If I ever feel that any part of the project is too much, I intend to bring it up with my advisors to make sure that appropriate measures are taken, and adjustments to the project made, if necessary. The same goes for any other student taking this project as an ISP.

Summary

This is the first game I have ever created, and I am very excited to get started. I believe that it holds real potential, and that the story focus on story and a unique artistic perspective will create a memorable experience not only for the player, but for the creators as well. I am very proud of the game concept, I believe in its success, and I intend to see it through to its completion.

Appendix C: D-Term Schedule of Work

MAEVE MCCLUSKEY
mmcluskey@wpi.edu
MQP SCHEDULE D-TERM 2016
March 17, 2016

DATES OF NOTE:

Thursdays (beginning on March 17) @ Noon: MQP Meeting

April 21: Project Presentation Day

Humanities and Arts Presentations: 12:00 – ~5:00

Maeve's Presentation: 3:50 (with a performance at 3:45)

May 3: Last Day of Term

PROJECT SCHEDULE:

March 24:

Final Level (Tier 5) Completed

March 31:

Polish 1

Presentation Draft 1

April 7:

Polish 2 & Music

Presentation Draft 2

Paper Draft 1 (structure of paper, flow)

April 14:

Presentation Final

Paper Draft 2 (rough draft)

April 21:

No Meeting

Project Presentation Day

April 28:

Last Meeting

Paper Finalized (final draft)

eCDR Submitted

NOTES:

Britt would like to meet in a tech suite to go over the presentation.

Completed polish = A complete walkthrough with good visual elements. Bugs are OK if the game is still playable and enjoyable.

QUESTIONS:

Is the game submitted with the eCDR, and if so, what file formats are acceptable?