

Creating animation for Transmedia
Working with multiple products in synergy with each other

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Abstract

My purpose with this paper is to find out how my workflow is affected when creating two products in synergy with each other, and if I can still reach a sufficient level of quality by my standards.

I chose to do my research during a transmedia project. By observing what happened during the project, I could compare my experience from this project with workflows normally used for animation in the games and film industry.

We spent the majority of the time allotted for the project planning how the two products would unfold, and how we could link them together in a way that benefited the project as a whole. We however did not get as much time in the production phase, which meant that I had to produce the animation in the order that I received the required assets.

My conclusion was that I appreciated being able to plan how the two products would work together, but that I and the team would have needed more time in the production to test our ideas.

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1 Introduction

In January 2012, I was admitted to an international program Eucroma, where I was studying Transmedia together with a group of students from all over Europe. The first three weeks we spent both in Hungary and Germany. However, during next five months the program continued in Denmark.

The objective of the program was to produce a short film and a game that would be connected through a common story world. The unique aspect of this project was the focus on the production process.

Usually, a movie and a game within one project will be produced separately of each other, even though they might be linked through a common story or franchise. This would benefit the project as a whole since each product requires a unique set of skills, and those skills might be found within different companies. But there are some disadvantages of the process, since the assets from one product, such as a movie, often can not be reused for another product such as a game. Therefore, in such case the assets need to be remade.

During Eucroma project, we worked together as a mixed team. Most of the team members have previous experience specific to either game or film. The main idea was that we would learn from each other during the project by creating assets that could be used for both products. The workflow that I have developed while studying animation on my own needed some modifications so that could be adapted to work with two different products, each with their own requirements.

2 Background

Transmedia is a rather new term that is still undergoing a process of definition. Henry Jenkins¹ defines transmedia storytelling like this:

Transmedia storytelling represents a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story.

Imagine for a moment puzzle pieces, each piece being an experience in some form. If you put all of the pieces together you will get the full image and a deeper understanding of the universe that encompasses all of the puzzle pieces.

For example, the Pokemon franchise consists among other things of an animated tv series and series of games. It is possible to only play the the games and have a perfectly enjoyable experience. But for a child to know everything there is to know about Pokemon, they're going to have to indulge in every part of the universe.

This differs from other media in the sense that the products are from the beginning planned to give the audience a deeper understanding of the universe. A game will not be a simple re-telling of the events that happened in the movie - it might be focused around a different character, or be set at a different point in time, etc.

Henry Jenkins² says this about the growing popularity of transmedia:

This past month, I attended a gathering of top creatives from Hollywood and the games industry, hosted by Electronic Arts; they were discussing how to collaboratively develop content that would play well across media. This meeting reflected a growing realization within the media industries that what is variously called transmedia, multiplatform, or enhanced storytelling represents the future of entertainment.

This poses some problems, as Jenkins writes about in his article Transmedia Storytelling 101¹:

Because transmedia storytelling requires a high degree of coordination across the different media sectors, it has so far worked best either in independent projects where the same artist shapes the story across all of the media involved or in projects where strong collaboration (or co-creation) is encouraged across the different divisions of the same company. Most media franchises, however, are governed not by co-creation (which involves conceiving the property in transmedia terms from the outset) but rather licensing (where the story originates in one media and subsequent media remain subordinate to the original master text.)

At Eucroma, while we worked as one team, we had one director for each product. These two directors would come up with the storyworld collaboratively, where each of the directors' skillsets would play in to make the experience interesting on both media platforms.

Working with transmedia had a major impact on how the projects are conducted. One of the major differences between a movie and a game is in how they are *rendered*. Rendering can be

1 Henry Jenkins, "Transmedia Storytelling 101", 2007-03-22.
http://henryjenkins.org/2007/03/transmedia_storytelling_101.html (retrieved 2012-06-27)

2 Henry Jenkins, "Transmedia Storytelling" (Technology Review), 2003-01-15.
<http://www.technologyreview.com/news/401760/transmedia-storytelling/> (retrieved 2012-06-27)

compared to taking a photo or filming after setting up a scene in real life, it's simply the process of creating 2D images from a prepared 3D scene.

A movie scene is often very complicated, it might include a lot of objects and intricate light setup. Since rendering takes such a long time per frame, it has to be rendered long before it reaches the audience. This is also called *pre-rendering*. After rendering a movie the scene and the actions that take place within the scene can not be changed, which has an affect on the pipeline of creating a movie.

To shorten the rendering times, often the scenes are only built to look good from the camera view. In the same way a Hollywood production might only build the front of a house and not the interior, of the scene is shot on a street.

A game environment poses a different challenge. The scene, unlike a movie, can be altered depending on the player's actions. The player is also free to explore the scene from any angle, which requires the scenes to complete.

Due to the interactive qualities the game has to be rendered in real-time, which limits how complicated the scene can be. Where the movie could take an hour to render one picture, the game will have to do it in only a part of a second.

To achieve this objects, or *3D models*, for example, has a lower *polygon* count. A polygon is simply a flat surface with a number of corners, and each object is made up of a number of surfaces. When the polygon count is low, the object can't have as many details as they would in a movie.

The *texture*, the skin of the object, can not have as many properties as in a movie. A metal can would for example not reflect its environment as this would require too much time to render. Many other aspects are affected as well.

Because of these different requirements and limitations, different products often have different assets made that cater to their needs. But for our project, we wanted to use the same assets for both products. They had to both be simple and practical enough to use in the game, but also be modified to look detailed enough for the movie.

2.1 Eucroma

Eucroma is an acronym for The European Cross Media Academy. Introduced for the first time in 2012, it is a six month project that runs during spring. The background and purpose for Eucroma is defined as follows³:

EUCROMA is established in response to the increasing potential for multichannel entertainment. [...] The volume and speed of this evolution has created a gaping demand for professionals with capacity to envision and work across media. [...] This not only challenges media producers to think in new ways – it also requires the new professionals to master a continuous mixing and matching of skillsets. It is EUCROMA's mission to provide Europe's strongest talents with these competencies.

3 Cross Media (Eucroma), <http://eucroma.dk/cross-media/> (retrieved 2012-06-28)

I originally applied as a character animator, but ended up also writing character biographies and drawing storyboards. The goal during the project was to create a storyworld, and based on that produce a game and a short movie. Throughout the project we had several lectures and meetings with experienced people, which helped us progress in a better way.

2.2 Brief introduction to animation

The art of bringing a fictional character to life is a very complex one that I am not going to discuss too heavily here. The traditional animator Bill Tytla⁴ was once asked how he managed to bring life to his characters, and he responded:

To me it's just as much a mystery as ever before – sometimes I get it – sometimes I don't.[...] The problem is not a single track one. Animation is not just timing, or just a well-drawn character, it is the sum of all the factors named. No matter what the devil one talks about – whether force or form, or well-drawn characters, timing, or spacing – animation is all these things – not any one.

To successfully animate a character that appears to be thinking and feeling, there are a number of elements that have to work as one. Some of these elements were condensed into a number of animation principles by the first animators at Walt Disney. I will discuss these further in the 2.3.

What's the purpose of animating at all? Character animation is a visual art of storytelling. Compared to a single drawing, animation gives the character another dimension through movement. Simply by changing the frequency of a character's blinking, the mood of the character might go from nervous to thoughtful.

Character animation in games has a different set of requirements. The player is not only observing a series of action on a screen, the player is one of the characters in the game. The player will interact with the environment and other characters, which requires the animation to respond in such a way that the player understands what is happening and feels immersed in the game world.

Game animation also has a heavy focus on actions, and the dynamic nature requires that the animation should work from every angle. Movie animation however is mostly focused on the thoughts and expressions of the character, often following their journeys.

2.3 Principles of Animation

In the early era of Walt Disney animation, the animators were treading in unknown territory as they tried to discover the secret behind good animation. Some early animated series were Oswald the Lucky Rabbit in 1927, where some characters were animated using rubber hose technique (the limbs would seem to not have any bones or muscle, and would act more like spaghetti or rubber hoses). Although this suited the demands of the industry, the Disney artists were pushed to evolve the discipline.

Soon enough some practices kept reoccurring with satisfying results, got names, and are today what we know as the 12 principles of animation. They turned out to be fundamental enough that even today they are still some of the first things you learn when becoming an animator.

4 Thomas, Frank; Johnston, Ollie 1981. *The Illusion of Life*. New York: Walt Disney Productions.

I will summarize each principle, and then discuss briefly how these principles translate to modern 3d animation.

- **Squash and Stretch**

As long as the animated object in question is not completely rigid, there will always be some squash and stretch happening. A good example of this is the up and down motion of chewing a piece of gum. In animation this phenomena can be exaggerated to create a character that feels more organic - the whole head might change shape while chewing.

- **Anticipation**

Newton's third law states that for every action there is an equal and opposite reaction. For an action to happen, it needs energy, and the build-up of this energy is referred to as anticipation. For example, to jump upwards, we must first crouch. It can also be used for comedic effect when the action doesn't happen as expected.

- **Staging**

Staging is basically about the art of arranging the characters, objects and environments in such a way that there is no doubt about what is happening on screen.

- **Straight Ahead Action and Pose to Pose**

These are two fundamentally different approaches to animating. With straight ahead animation the animator would start by drawing the first frame, then the second and continue this sequence until the final frame. With pose to pose, the animator would first create the main storytelling frames, and then fill in the missing frames inbetween each of the main frames.

- **Follow Through and Overlapping Action**

While exploring animation, the early Disney artists discovered that everything doesn't stop moving at the same time. If a fat character came to a stop, his belly might continue to move forward for a few frames before settling. This type of movement was called follow through or overlapping.

- **Slow in and Slow out**

In order to control the energy used in an action, movements often slow in or/and slow out. If for example I need to put down a glass on a table, I would slow in when I'm just about to put the glass down to avoid breaking it.

- **Arcs**

Naturally, the movements of most living creatures will be defined by an arc; a circular path. In animation this is commonly used to create more natural movements, and to avoid the feeling of rigidness.

- **Secondary Action**

Secondary actions mostly refer to smaller movements that would not break the animation if they weren't there, but still do a lot to enhance the performance. For example blinking or shaking.

- **Timing**

Timing refers to the amount of time that passes between two actions.

- **Exaggeration**

To make it clear what the character is thinking and doing, we often have to exaggerate the movements of a character. A person in real life might not jump two meters high in the air whenever they are angry, however, for Donald Duck this is a common occurrence.

- **Solid Drawing**

This is more commonly referred to as “Good posing” by animators today. A pose is how a character expresses a feeling or thought, and it shouldn't feel unbalanced or too rigid. Many animators begin a piece of animation by creating the most important story-telling poses first, also called *Pose to Pose*. I will describe this further in 4.2.5.

- **Appeal**

In the same way that we enjoy watching an actor on stage with a lot of charisma, an animation with a lot of appeal is also more enjoyable. In my personal opinion, appeal is mostly about making the audience feel empathy with the events happening on screen.

This applies to 3D animation as well. Through rendering 3D animation is displayed as 2D, in the same way traditionally drawn 2D animation is.

There are of course more aspects of animation to keep in mind. Staging for example is more difficult to achieve in modern 3D games, where the player holds the control over the camera. In games it's therefore much more important to create animation that reads clearly from all angles, not just one.

Walt Stanchfield suggests some more principles in *Drawn to Life* (Stanchfield and Hahn 2009). Tension is one example. This is where straight lines and sharp angles can be used in contrast against relaxed shapes to suggest the type of movement. Silhouette is another principle that I personally use a lot while animating. A good silhouette will help a pose or movement read clearer to the audience.

3 Problem Statement

Traditionally games and film follow different paths. They are produced by different teams, which use different pipelines and assets. At Eucroma we broke that pattern by attempting to share assets which were to be used for two different products.

We hope that this way of working will in the end be more time efficient, and that it will help a series of products to feel more cohesive. By creating assets that compatible with several different media platforms, it will not only be useful to projects in production, but also future projects.

This way of working does impose some limitations on my workflow, and the tools I have to produce my work with. While games in general requires less detailed assets due to the limitations of home computers, film in general requires more details to convey feelings and thoughts in a credible way. In the compromise between the two different types of media, some detail might have to be sacrificed, or created in another way than customary.

My challenge thus became to produce animation that was of satisfactory quality with assets that were not optimized for a specific media. For an animation to reach high enough quality the animation has to be believable, and it should engage the audience emotionally.

3.1 Purpose

My purpose with this paper is to find out how my workflow would be affected by working on two different products in synergy with each other.

I also want to find out if the quality of my work would be affected by working on two products simultaneously, and if I can produce animation that reaches satisfactory quality by my standards.

3.2 Driving Questions

- How is my animation workflow affected by working on a transmedia project, as opposed to working on a game or movie separately?
- Can I produce animation with satisfactory quality in accordance to the description in chapter 3 despite working with assets that were not optimised for a specific type of media?

3.3 Method

I have chosen to do my research during Eucroma project. The method of investigation is based on the observations during the project where the reliability of animation was investigated. I have observed what happens during the project, and compared my experience from this project with workflows normally used for animation in the games and film industry.

I have used two methods to determine when the animation has reached a sufficient quality. The first one, is based on evaluation where both me and the director together are estimating if the animation is

believable in relation to physical laws such as gravity.

The second method is based on my coworkers reactions during playback of animation. Their spontaneous reactions during the presentations of the animation are feedback on in what extent I have managed to get the audience involved in the story on the screen.

3.4 Method Discussion

Due to the limited amount of time, I was not able to spend as much time as I would have liked on each product. I had around three weeks to spend working on each product, which is incredibly short. Normally at least a few months is spent on creating animation for one product.

The most positive thing about how I chose to go about doing my research is that I got a lot of hands-on experience. I got to make mistakes and learn from them.

The most negative thing is that since we had so little time, I barely had time to put my ideas and thoughts into practice. If I had longer time, I would have liked to try out a few different workflows to see which one would work the best.

If I were to go back and do it again, I would make sure that I had less work to do. When there is less material to produce, there is also more time for trial and error.

It was hard to decide sometimes if my animation had reached a satisfactory quality, partly due to lack of experience with animation. While you can imitate the laws of physics, there is no real way of telling if that's how it would happen in reality. I had to rely on my own and the director's judgement.

When it came to emotional response, I watched how my coworkers reacted during the Show and Tell we had once each week. But just as everyone enjoys different things, everyone also reacts to emotions in different ways, which made it harder to analyse their response.

If I had asked my coworkers to fill out a questionnaire about how they felt during the animation, I would have been able to more accurately decide if I had managed to engage the audience with my animation or not.

4 Production process

When we arrived in Budapest at the beginning of the project, none of us knew anything about transmedia or each other. The first few weeks were spent listening to lectures and doing a number of smaller projects to start understand what we were about to undertake.

When we came to Denmark we formed a concept team and a production team. The production team would focus on producing prototypes and testing equipment, while the concept team worked on the storyworld. For a couple of weeks I was mostly involved in the concept team where I wrote character biographies and came up with story ideas for the short movie and game. Later on I focused more on production, especially when I started animating.

The basic concept we came up with was a storyworld where humans has isolated themselves within several cities with high walls. Outside the walls curious monsters, or *gargants* as we called them, roam freely around in the wilderness. These monsters are very emotional, and as a response, emotions has become shunned in the human society.

David (see Figure 1) is a doctor in one of these cities who sets out to save his little sister Doris from her mental disease. While travelling to another city Doris gets lost in the wilderness, and David has to save her. Along the way he stumbles upon Maggie, a gigantic gargant, who will change how he sees himself. David and Maggie are the main focus of the short movie.

Doris turns to the darker side, and lets her mental disease take over. She gets a companion, a small gargant called Bob, and together they are the main characters of the game.



Figure 1 – The four characters.

4.1 Animation Schedule

Animation for both products started in April and continued for two months. The first two weeks were designated to start animation on the two game characters, Doris and Bob. The following four weeks after that were spent animating the short movie, to then go back to the game and complete any

unfinished animation.

The schedule I kept while animating on the short movie and game differed in character. As the movie was pre-rendered, the schedule imitated a waterfall. First the scene for a specific shot would be set up by the short movie director. Each shot lasts for as long as the camera stays in one view, when the camera cuts to a new view a new shot also begins.

Then I would receive the scene, and work on one shot at a time. Once a shot was deemed as finished by the short movie director no more changes were to be made on that animation. The shot would then continue it's path down the pipeline to other parts of the team – setdressing, lighting and finally rendering. This process was repeated as many times as necessary.

Early on I was worried about the workload I had been assigned for the short movie. Normal tempo for an animator at a bigger animated movie studio is around 3-5 seconds a week, while we were planning to animate up to 20 seconds a week with two animators. The rigging also posed a problem, which I will discuss further in 4.2.

As I was still a student and did not have much experience with such a high tempo, I was worried about being able to produce animation with high enough quality. My plan was to use the animation I produced in my *demoreel*, a short reel that shows off my abilities as an animator to future employers.

After some discussion it was agreed that we would get some extra help to finish the short movie in time. This help came in form of an animator who worked temporarily with us for two weeks.

The game however worked with real time graphics. The animation consisted of small building blocks that would depend on the player's actions within the game. As long as I did not change the basic conditions, for example changing the size of a box the player could pick up, I could update each of these building blocks at any given time. This meant that I was able to keep a more flexible schedule where I could give attention to the animations that I felt needed it the most.

Since I was the only animator on the game, and due to the flexible nature of games, I was able to plan a workload that I knew I could handle.

4.2 Rigging

Rigging is the act of putting controls in a 3D model, which the animator can manipulate to create animation. Compare this to creating a marionette by putting strings on a doll, to then make it move around. It's of very high importance to an animator that the rig is easy to work with, to achieve a result of high quality.

Since we wanted to share as many assets as possible across the media platforms, the rigging had to take requirements for both the game and movie into account. By doing rigorous testing on the rigs we could make sure that the rig could be used for both products without compromising.

What this meant for production was that we created a 3D models for the game which did not exceed the allowed polygon count (as mentioned in chapter 2), to then be rigged and animated for both the short movie and game. After animation was done on the short movie the 3D models with low polygon count were exchanged to 3D models with high polygon count (and more details). It is remarkable easier to add polygons than to remove polygons.

To be as efficient as possible during production, it was decided that all characters would only have their bodies rigged, and the faces would be rigged as soon as the bodies were done. This presented a challenge for me as an animator, as I rely on the face to show emotion and thought.

This was not a big problem while animating for the game, as the game is driven by action rather than emotion. But while animating for the short movie, it was difficult to perform a good job without one of the most important parts of a character.

It also presented some challenges time-wise as the rigger fell behind schedule. We had to prioritize shots which included the characters that were already rigged, or just animate one character in a shot where there were supposed to be two characters.

4.3 Short Movie Case: David runs out of the forest

I'd like to present two cases from the short movie and game where I go through my workflow in greater detail. I will also present some challenges that arose while working.

In this part of the short movie, David has just been chased down a forest path by a very aggressive Bob. As David comes out of the forest he enters a gigantic shadow belonging to Maggie David ducks as she swings her enormous arm to defend David against the attacking Bob.

The encounter between David, Maggie and Bob were my first three shots to animate on the short movie. The purpose of these three shots was to show the relationship between David and Maggie. Even though Maggie looks scary because of her size, she is like a mother to David.

4.3.1 Preparation of animation

When I prepared a new shot to animate, an important element of my workflow is getting an overview of the work to be done. Especially in this project as it was the first time for me producing animation as a part of a team, and since I had to finish the animating the body before I animated the face due to rigging and schedule restrictions (see 4.2)

To get an overview I familiarized myself with the characters, objects and environments inherent to each shot, and took care of any issues that I found. I also alerted the director if I required help from other team members to be able to animate properly.

In this case I had three sequential shots with lots of actions and different characters (see Figure 2).

- In the first shot we see David running out of the forest, and looking up at an unknown monster.
- In the second shot we see Maggie for the first time, as she prepares a swing.
- The third and last shot is rather complicated. We see David taking cover as Bob jumps to attack behind him. Maggie's arm swings into picture and knocks Bob away.

My early concerns were regarding the last shot. Many things would have to happen at once and this could lead to confusion from the audience. When there are so many points on the screen to focus on at once, staging the characters in a clear way becomes essential.

The challenge of the second shot involved staging the two characters to present the difference in height between David and Maggie. It was necessary in the shot that we fully saw both of the characters. However, the story required the composition to also show the force of Maggie's swing and how close it would be hitting our protagonist. It would feel like it was almost about to hit the camera and audience as well.

Once I felt secure and confident that I knew everything there is to know about my assigned shots, I started shooting video references. Using a digital camera I recorded myself acting out the different shots of each character. I use this mostly as brainstorming tool, it's easy to play around with different ideas when it takes only a few seconds to act out. As I act out the scenes I try out different variations. Sometimes less action can be more dramatic, or a pause before a big movement.



Figure 2 – Screenshots of the three shots that I animated.

4.3.2 Linear approach

A movie is typically played in a linear fashion. Some stories within movies might not move linearly in time, they might start at the end of the story and then explain how the characters came to end up there.

But the movie itself will still play from beginning to end of the tape.

When creating an animated movie, this means that already from the first planning stages the end result can be predicted. By the time animation starts there is usually a finished storyboard that describes all shots in detail. The storyboard describes what will happen in each shot and how the story moves from one shot to the next.

When I shoot references and plan the actions of the characters, I try to always keep the context in mind and how the character is feeling. An example of this is the first shot where David runs out of the forest. When I first animated that shot I did not keep in mind that he had just been running for his life through the forest. Instead of fearing the worse, David looked like he was just taking an leisurely stroll. This was not the mood I wanted to communicate to the audience at all, and something the director did not approve of either.

For the audience to stay immersed within the world of the movie, switching between different cameras should preferably happen as discreetly as possible. One way of creating a feeling of continuity with animation is to carry on movements between different shots. I had to think of this between the first and second shot, where the only link between the shots is David. He starts to look up at the end of the first shot and this movement was continued into the beginning of the second shot.

The more that is understood about a shot, what is happening and what is going to happen, the easier it becomes to create the illusion of a fictional world. The downside is that you can't change something drastically within one shot, as it may disrupt the audience's from becoming immersed in the sequential flow of the story.

4.3.3 Pose to Pose

After shooting satisfactory references I chose to animate by the method of *Pose to Pose*. This is a method of animating that has been used heavily by traditional and 3D animators alike.

Imagine that you take a number of photos of a person in action, and then play each photo for a certain amount of time. Each photo would be one *pose* that tells an important bit of information about what the character is doing. See Figure 3 on the next page for an example.

This way of animating is superior in showing the animator's ideas early on, while being flexible enough that the animator can easily incorporate suggested changes to the poses.

The main focus during the early stages of animation is clear storytelling. There should be no doubt about what the character on screen is doing and thinking. For this to be successful there needs to be good posing and staging. Other focus areas are also timing and appeal of animation. If the audience can't empathize with David being afraid of Bob, we've lost an important reason for them to care about the movie at all.

The process so far is usually called *blocking*, building the base of the animation. The next phase is called *splining*, which is where the characters actually start looking animated. In the Eucroma project I

required that the director approved of the blocked shot before I went into splining. Once in splining it's not as easy to make any major changes to the movements.

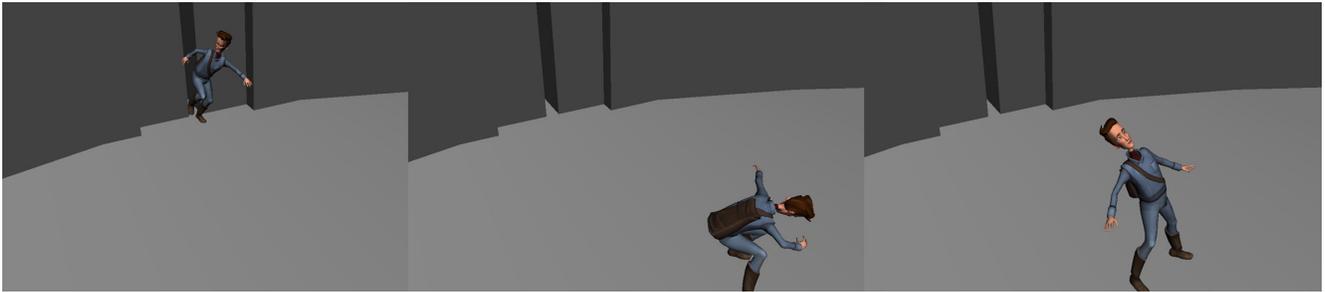


Figure 3 – A sequence of three poses.

The focus during splining is on **how** the character moves around. Spacing, slowing in and out, overlapping and arcs are looked at very closely in this phase. Secondary action is added.

4.3.4 Feedback

An essential part of the workflow while animating is the feedback loop between the animator and director. But that turned out to be a major challenge as the director was barely available. He was teaching a workshop in another part of Denmark and was only available during late evenings, mostly through short Skype text chats. He still had to supervise the entire short movie team, so he couldn't spend much time with each person.

The original plan for me was to get a few shots in a sequence and finish them before moving on to the next couple of shots. But this led to me spending a lot of time on one shot during the day, only to receive major changes to implement in the evening. If the director had been on location, I could've asked him immediately when I was done the blocking of a shot if it looked good enough to take it to the next phase.

I changed my routines around a bit, and started working a little bit on several different shots during the day. If I was uncertain if I should continue on one shot, had done a major change on my own that needed feedback, etc, I could just put that shot aside and work on something else.

In the end the director ended up taking a few of my shots as he couldn't communicate clearly enough how he wanted it to be. But most of the time I had no problem implementing the changes suggested. Either I would go into the curve editor and edit the curves directly, sometimes I would have to remove little bits of animation and add a completely new one.

Every Friday we also had *Show and Tell*, where everyone got to watch the work the rest of the team had done during the week. That was also a source of some feedback for the animation, especially when a certain pose did not read clearly enough.

4.4 Game Case: Character animations

The game revolves around Doris who has to solve puzzles to find her way around in the world. While Doris is the antagonist of the storyworld, in the game the audience gets a chance to see her perspective. Here and there she encounters Bob whom she must interact with in order to further progress into the mysterious woods.

The purpose of the animation in the game serves a much more practical cause. For the player to understand what is happening with Doris, she needs to react to the player's actions.

In this project emotions were incorporated in the game as a game mechanic. Sometimes Doris would have to use anger to solve a puzzle, then go back to being normal. This meant that I had to keep the mood in mind while animating, it had to read clearly what mood she was in.

4.4.1 Preparation of game animation

I communicated with the game director and programmer to find out each character needed to be able to do. I also got an overview of what the programmer was working on, as that would dictate what animations needed to be done first.

Otherwise my preparation process for the short movie and game looked almost the same. Since the player is free to walk around the game world as they wish, I had to plan for the animation to look good from any angle. I also had to consider that some actions would have to be split up into sub-actions. Where I would normally animate the jump as one action, I had to divide it into three parts: the push off, the falling and the landing.

I also recorded references for each action in the game. The references consisted of me acting out the movements of the character I was to animate in front of a camera. I found that I animate a lot faster when I can use the filmed reference as a base for poses, timing and overlapping.

4.4.2 Dynamic approach

Game animation consists of a number of separate building blocks sometimes called loops. These building blocks contains short animations, for example walking or running. At any point one short animation can be replaced with another, responding to the actions of the player. This presents a few challenges for the animator, as the short animations will have to fit together in a consistent manner, but also work as individual animations.

The player's role in a game is different from an audience watching a movie. While the audience observes the movie from an outside perspective, the player is fully immersed in the game. The player takes on the role of the hero, becoming the character they are controlling. To keep this illusion intact it's important that the animation works from the perspective of the player. If the player jumps, the character has to be up in the air instantly, or the movement will feel slow.

See Figure 4 for a chart of Doris' animations and how they can transition into other animations.

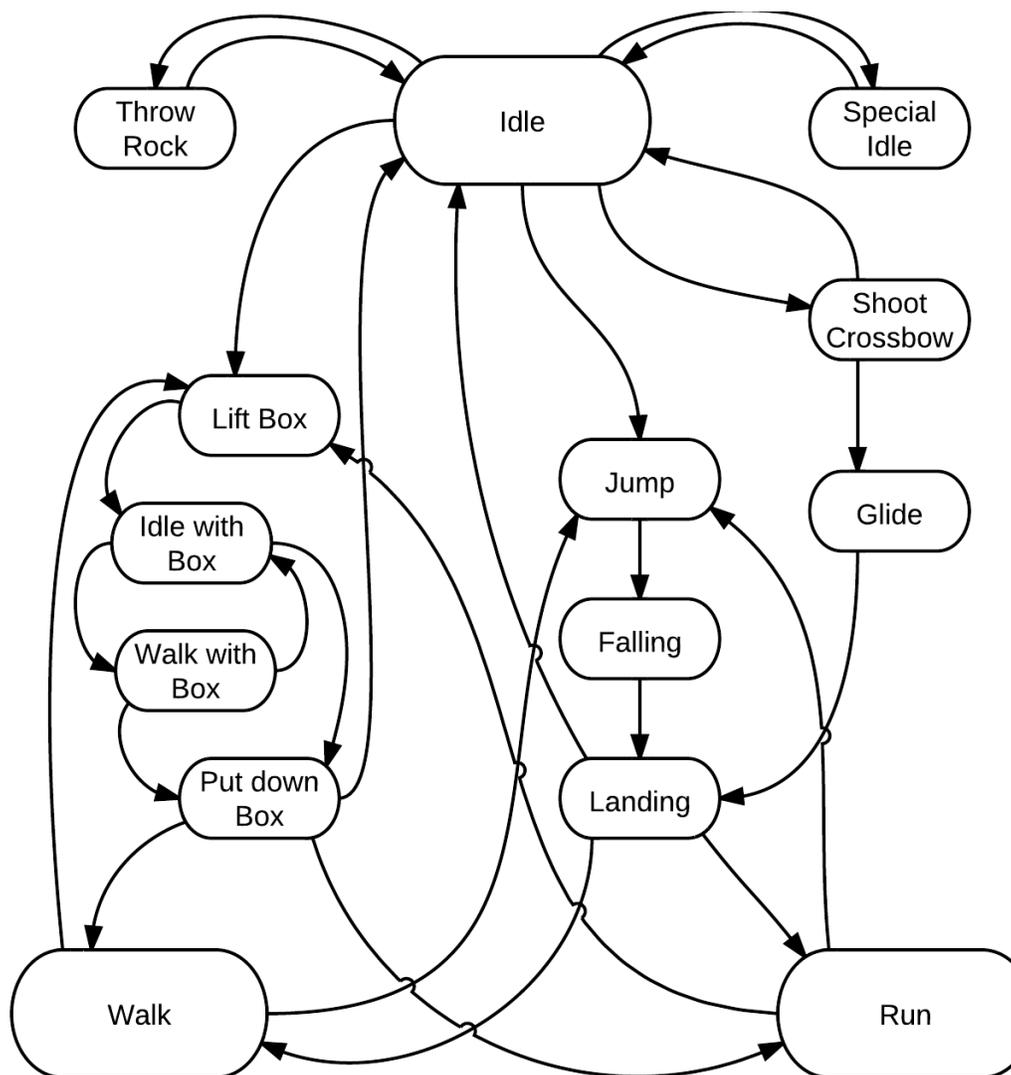


Figure 4 – A chart of Doris game animations and how they relate.

4.4.3 Re-using animation

For most of the game animations, I kept using Pose to Pose (as described in 4.2.4). There were two major reasons for this decision. The first was that the programmers needed some kind of animation for each action the character was supposed to do, to confirm that everything was working as intended. For this I created roughly blocked out versions of each animation with somewhat correct timing and a few poses.

The second reason was to be able to re-use a lot of animation. Since a lot of building blocks are meant to work together, it made sense to animate in a way that allowed me to quickly copy one or more poses

from animation to use in another. For example, the action of putting down a box was just a series of poses that I copied and reversed from the animation for picking up a box.

4.4.4 Feedback

While we officially had a game director who was supposed to take decisions for all aspects regarding the game, that person acted more as a game designer. The vital difference is that he cared more for how the game would be played, and not so much about the looks of it. Therefore I did not receive much feedback on how my animations looked.

The little feedback I got was often very vague, and it was clear the game director did not fully understand how to work with an animator.

The programmer was my main source of feedback regarding the functionality of the animations. But even then we did not have a person who kept an overview of the progress of the game, so some things did not get communicated between me and the programmer. At one occasion I had worked on several animations that had been removed from the game the day before.

The programmer was however away for half the game animation period. As he did not implement any animations in the game during that time, I also couldn't get any feedback on how the animation was looking in the game.

5 Analysis of results

In order to analyse my workflow during the Transmedia project, I have described how workflows for a game and film usually look like. The image below present the general steps of each workflow during the animation process in order to determine the differences.

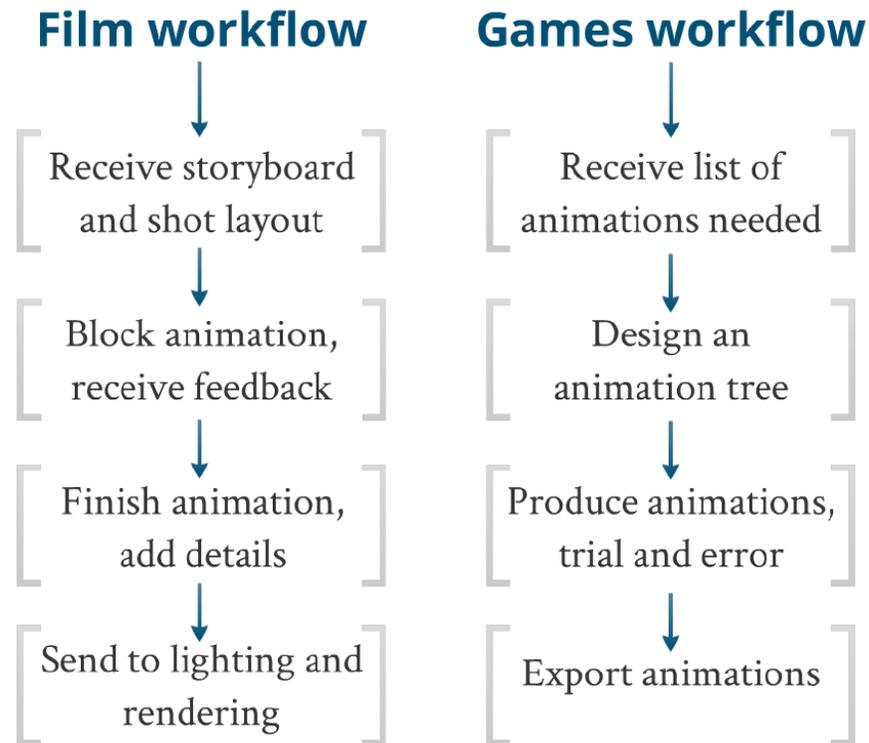


Figure 5 – Animation workflows in film and games

There are a few things that are common to both the workflows. For example, each workflow consists of two phases – pre-production and production.

Pre-production is the phase where ideas are formed, concepts are made and necessary material is gathered. To start animation, there are often a number of things needed, such as a model, a rig, and setting to animate for. Games and film differs a bit here, due to the nature of each media.

Film is a linear media, thus the animated scene can be decided in great detail long before the animation is created. The animator might get a storyboard with drawings of how the character should act, and use that as a base.

While working with games you often simply receive a request of a certain animation that needs to fulfill a purpose, such as walking, sitting or performing a certain action. A game animator might also get *motion capture* data, where a live actor has been recorded in 3D.

Production is where the animator uses a 3D software such as Maya or Motionbuilder to produce the

animation needed. Film animation is often made from scratch, and often starts with the animator producing a bit of blocked animation to see if the director approves of the ideas.

If the game animator uses motion capture as a base for the animation, there is no need for the blocking stage. The animator simply adjusts to the already existing animation to fit the limitations of the project.

Since the nature of game animation is somewhat unpredictable, some trial and error might be needed to achieve a satisfactory result.

When the animation has been produced, the animation needs to reach other people who will implement it in the end product. In the case of film animation, the animation would reach a third phase called *post-production* where all of the 3D elements of a scene are matched together.

Game animation usually ends up in a *game engine*, a program which puts all of the different assets together in a manageable way. The animation will first need to be exported from the 3D software to a .fbx-file, and then be loaded into the game engine.

5.1 My transmedia workflow

There were a few changes to my workflow while working on this transmedia project. The planning phase, or pre-production, involved planning the animation for both products at the same time, taking into account the restrictions that we had. Two characters would be used in both the short movie and the game, so they had to have similar characteristics. The movements they had to perform in each product varied greatly, so we focused on recognizable character traits, such as Doris' glasses.

While I was not directly affected by working on two different products, it did have an impact on the other team members that was creating the assets from which in the next phase I created the animations. To simplify the process, we wanted to be able to use the animation we created for one product, in the other product. For example, in this way we could use a running animation from the game, in the short movie, and simply adjust it to the new conditions.

This however meant that the rigs for the characters bodies had to be exactly the same. Due to the nature of games, there is a limit to how detailed and advanced the rig can be, so we simply had to compromise and remove some of the control that a rig for film animation would normally have.

As the rigger was trying to juggle creating rigs for four characters, he fell behind schedule and had to focus on getting the body of the characters rigged first. As a consequence, the face was rigged halfway into production. The finer details of the characters, such as ears, tails, etc, were rigged even later.

This led to me working in a layered approach, where I would finished animation on the body of a character, and then come back later to animate the face and other features.

These iterations are visible in the illustration "work timeline" (Figure 6 on the next page).

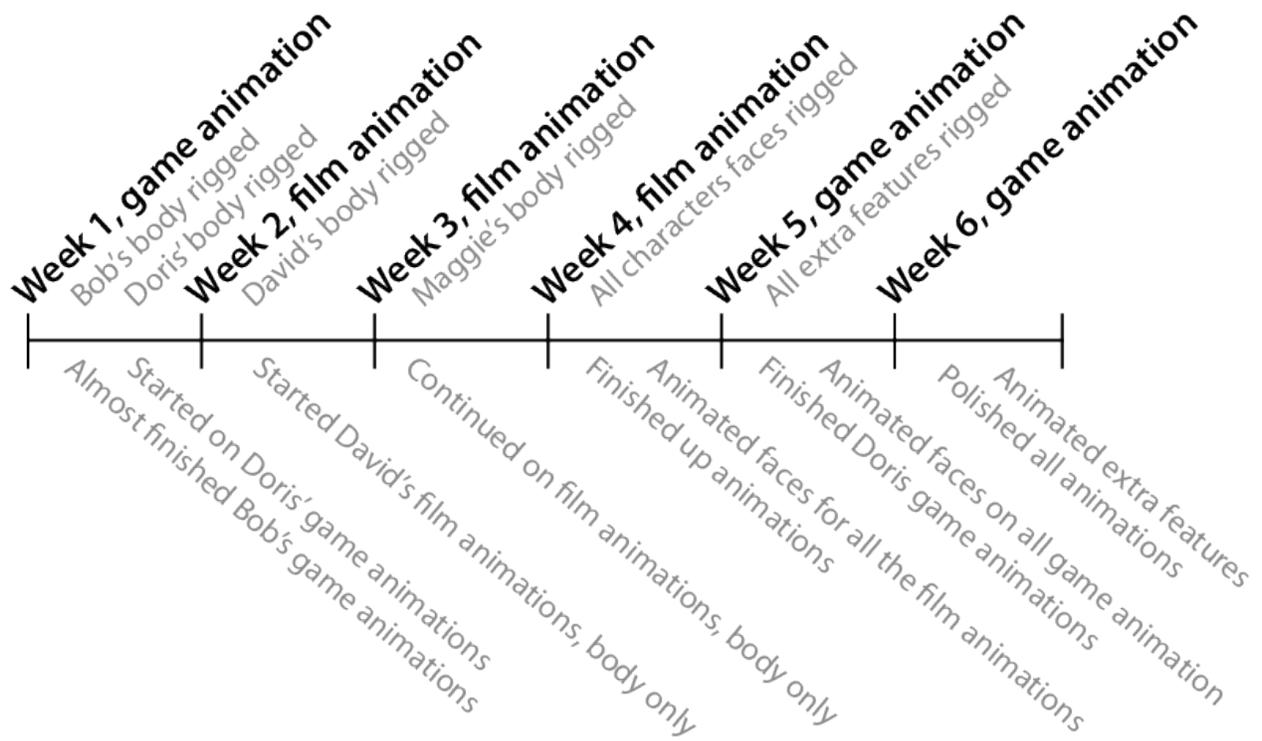


Figure 6 – My work timeline at Euroma

6 Conclusion

The purpose of this thesis was to see how my workflow would be affected by working on a transmedia project, as opposed to working on a game or a film separately. The major challenge to overcome was that a lot of assets would have to be shared between the two products we created in the transmedia project.

I also wanted to see if I could produce animation of satisfactory quality, despite working with tools that were not optimised for a specific product.

6.1 First driving question

My first driving question is as follows: “How is my animation workflow affected by working on a transmedia project, as opposed to working on a game or movie separately?”

Normally, the pre-production phase would focus mainly on one product, for example a movie. After this phase is done, the concept might be sent to another company, where a different team will use the concept as a base to create a game.

But in our pre-production, we would plan the short movie and game side by side, constantly throwing ideas back and forth between the two products. If we came up with a great idea for a game mechanic, we would try to implement it into the story of the movie.

I found this change to be a very positive one. Rather than trying to adapt the characters for a game after the short movie has already been finished, we were able to make the end result more coherent. We could plan the two products in such a way that they were both enjoyable on their own, but together they created a more encompassing experience.

Our two characters, Doris and Bob, were to show up in both products. As they would perform movements of great variety between the game and short movie, and be shown at different angles and distances, it was important that the characters remained clearly recognizable. For example we were able to have Doris interact with her glasses as a way to give her a characteristic trait.

Another positive aspect of working on a transmedia project was that all assets were created with the intent to be used in both the game and the short movie. If we so wished, we could take animation from the game and use it for the short movie. Normally the rigs would have been very different, which would not have allowed for such a transfer to happen.

The major drawback to this way of working is that everything needs to be done with two products in mind. We spent a lot of time in pre-production trying to get all of the puzzle pieces to work together, and when we got to production we did not have a lot of time left for trial and error. We simply had to produce animation and hope that it would look good. This is further discussed in 6.2.

As we were pressed on time, only the most important parts of the characters would be rigged and animated in the beginning of the production period. This posed the problem that we had to animate unfinished characters, and then come back later when more of the rig was finished to animate the face

and other extra features.

I feel this is a negative aspect that is not specific to the nature of our project, but rather it's somewhat common in the industry to aim too high and run out of time during production. As mentioned, a transmedia does require more time in the pre-production phase, which might have made the work load heavier during the production phase.

An ideal workflow would allow time for trial and error. It would be a given that not all animations turn out perfect the first time around, so there would be dedicated time to creating iterations.

In a perfect workflow, all assets would be finished and tested before production, which is sadly something we simply did not have time with during this project. But in that scenario, I would be able to animate the character as a whole, rather than animating the body first while imagining how the face will look later on.

6.2 Second driving question

My second driving question is as follows: “Can I produce animation with satisfactory quality despite working with assets that were not optimised for a specific type of media?”

It's hard to define satisfactory quality, as it's highly subjective. I decided to focus mainly on two aspects of quality – believable movements and the ability to engage the audience emotionally.

As well as animating a character performance, I also have to imitate physical laws as I animate. The feeling of weight and force is very important to recreate in animation, otherwise it will distract from the story and it will be hard to understand what is going on.

A walk for example is nothing more than a series of falling forward and catching your balance, so to create a believable walk there has to be a moment of falling in every step. If failing to do so, the walk will appear to be “floaty” - as if the character is walking in space and doesn't weigh anything.

The other aspect deals with the emotional response of the audience. When an animation is successful in engaging the audience, the viewers might feel like they get to know the character as a friend almost. They will laugh when the character is being silly, or get angry when the antagonist makes the protagonist's life hard.

To achieve this response, the character often needs a goal and an obstacle stopping the character from reaching that goal. In the short movie, David's goal is to find his sister, but his obstacle is that she doesn't want to be found.

I found myself struggling to work with the rig and the model for the character, as they were created to work for both the game and the short movie. It did not have as many details as I would have wished, which is necessary if you want to convey thought and subtext.

As many camera views in the short movie moved in closer on the face of the characters, the smaller details such as blinks, squinting, et cetera, plays a bigger role. The characters therefor tended to look a

bit robotic during close-ups as we did not have as much control over the face as we might have had during a movie production.

An aspect of the project that affected the quality of my animation was the very limited time we had to create the short movie and game. As it happened, the time to plan the animations and to iterate on them was reduced to barely nothing, and most of the time was spent producing animations.

Animation is very labor-intensive, and it is easy to get stuck in the technicalities of it, so it is important for a good outcome to have a detailed plan before you touch the 3D software. In an ideal case I would record reference of myself and create a 2D version of the animation to test my ideas. But in this case I would just record myself acting out the scenes, and use that as a loose base for the animations.

It's also important for a good end result to realise that not all animations turn out perfect, or as intended. Therefore some time needs to be spent testing animations, especially in the game as the different blocks of animation need to fit together seamlessly.

In general I feel that my animation during this project did not reach a satisfactory level of quality. I base this conclusion on not getting as much response as I'd hoped to, and my own opinion that the animation was not believable enough.

I did not reach my goal partly because I feel I had to improvise a lot during the process of animating and I did not have a lot of time to fix my mistakes. It was also hard to imagine how the end result would look, as I did not have the final rig for the short movie, and was not able to test the animations for the game.

6.3 Future projects

During this project I learned a lot about working with storyworlds and producing multiple products with the same team. I found it a very positive experience to plan all the characters animations and how they would behave in the pre-production phase.

I have also gained a lot of experience working with less than ideal conditions. The rigs weren't finished when we were supposed to start animating, which meant that we had to come back several times to add animation to new parts of the rig as they got finished.

We did not have a lot of time to produce each animation, yet I have learned during this time how to plan quickly and animate efficiently. Additionally, I have learned the importance of being able to deal with the trials and errors through the animation process, as well as to be time efficient in order to finish the animations.

Considering the future projects, I will be more persistent to get feedback from my coworkers, possibly in the form of questionnaire, where I can measure more exactly how emotionally engaging my animations are. Since an animator habitually spends several hours on each animation, it is easy to get lost in details and lose sight of the animation as a whole. Therefore, it is good to have a detailed feedback from other people, based on their first impression where they could describe their spontaneous reaction on my animations.

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Image references

Figure 1, Stina Boberg (2012). Image of the four characters.

Figure 2, Stina Boberg (2012). Image of three shots in the short movie.

Figure 3, Stina Boberg (2012). Image of three poses in one shot.

Figure 4, Stina Boberg (2012). Diagram of one character's game animations and how they relate.

Figure 5, Stina Boberg (2013). Film and games workflows.

Figure 6, Stina Boberg (2013). My work timeline at Eucroma.