The Thinking of Animation: Conflict of 3D and 2D

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Abstract

The computer game and cinematic movie are quite common recreational activities in recent people's life, and the computer technology in the game and the cinema is more and more advanced, especially 3D technology is the main instrument which is used on games and cinemas. How does a 3D animation to be created, the procedure of "Pixar Company" is that the Pixar employees pitch their ideas to other members of the development team, and that is reminiscent of a sales pitch, but the real challenge is to get the audience to believe in the idea and see the possibilities in this challenge. The 3D animation is the main production in the animation market, because it looks vivid than 2D animation, and the 3D animation also need to be added more detail, however, there is a slight difference between Asian countries and Western countries. The animation in the Western countries are using 3D technology, but in the Asian, especially in Japan, it still uses 2D technology in animation, because they prefer hand draw and traditional graphics, so most of animations in Japan are 2D, however, Japan is also good at 3D technology, while, sometimes people would overlook the importance of a good story which is more prominent than the 3D technology employed in the animation movie by producers. As a consequence, no matter the producer applies 3D technology or 2D technology, the technology which is used to perfectly profile the story in an animation movie would be regarded as the best technology.

Keywords: Animation, 3D Technology, 2D Technology

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Introduction

The computer game and cinematic movie are quite common recreational activities in recent people's life, and the computer technology in the game and the cinema is more and more advanced, especially 3D technology is the main instrument which is used on games and cinemas. The 3D is three dimensions which include X, Y, Z axles (Fig1.). The 3D technology makes computer games and cinemas as the real world. It can adjust figures, articles, space and actions. This technology makes them which are like the real human being and let people who are watching movies or playing games feel that they are in the real situation, so the 3D technology is the advantageous skill in this century.
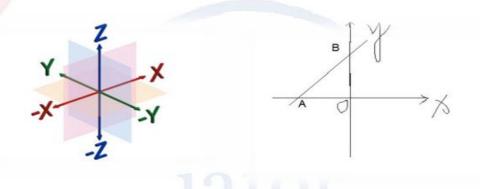
Fig1. The structure of 3D & 2D

3D technology produce and process

Disney Pixar is a famous animation producer in the world. Pixar has a lot of experience in 3D animation, for example: Toy story; Monsters.inc; Finding NEMO; CARS; Ratatouille and WALL.E, they are all popular movies in the animation market, and they all made by 3D technology, because the Pixar wants to make the animation not just like animation, the Pixar wish it close to the real world and make movies lifelike, so they keep developing new 3D skills to create new animation and add more audio and more emotion into the movies.

How does a 3D animation to be created, the procedure of "Pixar Company" is that the Pixar employees pitch their ideas to other members of the development team, and that is reminiscent of a sales pitch, but the real challenge is to get the audience to believe in the idea and see the possibilities in this challenge. In the second step is that the text treatment is written. A treatment is short document that summarizes the main idea of the story. However, a lot of treatments of the same idea are going to be created in order to find the good balance between the same ideas. These ideas will be filled later by development and storyboard teams. Thirdly, the storyboard is just like comic book by hand drawn, the artists of storyboard have to draw every different actions and

emotions of the movie, they must make every slice of animation seems like real movement, then use the "blueprint" technology, and there is an important thing is that the scenario has been created at this time. The fourth step is voice talent recording. The Pixar artists of storyboard record voice at the first time, when the story and dialogue are finished, the professional actors will record the character voices which read from the script and improvising. The actors must record voice lines several time and different ways, and the best reading and recording will be used in the animation, although there is a little noise and distortion in the best recording, but if it doesn't influence the quality of the animation, the Pixar won't remove it, just let it be the characteristic in the fished item. In the next step, the Pixar art department is going to create the look and the feel about the story, this department creates inspirational art illustrating the animation world and the characters. The art department includes the sets designing, visual looks and props for the surfaces and the colors, it also designs the "color scripts" for lighting. These all parts are impressionistic pastel illustrations. After These procedures, the 2D graphic images will be transfer to 3D model by hand drawing and scanned in three-dimensionally, or it is created directly in the computer, the art department gives the animation "avars", the avars is the object in animation design. After the sets are built in 3D, all the sets need to be dressed by prop models, this step is that create a believable world, then the Pixar gives the animators emotions, sounds, lights and they need to set the view and the camera, and they use "Pixar's animation software" to set the movements and the facial expressions in each scene, these steps are necessary to be used in animation. The last step in computer is that use the "shader". The shader is the technology which used on creating surface color and the texture, after that, the main point in the frame is the lighting, the Pixar uses the "Digital Light" to control the brightness in the stage and balance the color with the animation, the whole procedure of animation production is mainly dominated by arts department in Pixar. Therefore, in the following texts, the popularity of 3D animation and the fall of 2D animation in current animation market will be explained further with examples.

Comparing with 3D and 2D animation position

The 3D animation is the main production in the animation market, because it looks vivid than 2D animation, and the 3D animation also need to be added more detail, it includes the expression, emotion, action, and color balance, there are a lot of parts to be organized in the animation. In the 21 century, the 3D animation meets the demand of the public in recent society, because it is vivacious than 2D animation, and it also close to the real world, but the animation has more imagination and creation, it can do anything that the human can't do, but it does look like so real.

That is why 2D animation becomes fall, although 2D technology is the basic of animation, but it still has some insufficient parts. There were many famous 2D animations in the early animation market, The Lion King, Aladdin, Beauty and the beast (Fig2.), they are good movies, they all have beautiful stories and pretty graphics, but the main point is that the picture looks just like cartoon, it can't be vivid. Some people say that the cartoon should be like the cartoon, if it uses 3D technology in the animation, it is not the cartoon anymore. On the other hand, the 3D technology has been create, the purpose is proving the visual effects and fluency in animation, it can creates a lot of new imaging view which the 2D technology can't do that, and the brightness, color, contrast, camera, light and the smooth also can be adjusted slightly, because of 3D technology, there is more diversification in the animation world.

Compare with 2D and 3D animation in the market for now, the 3D animation seems like more popular than 2D, and it does attract more and more different age spectators and audiences, because it can create plenty of imagination and originality for consumers, the 3D animation is going to become the main type in the animation market (Fig3.).

Fig2. Sample of 2D animation (All by Disney official website)

Fig3. Sample of 3D movie (All by official website)

Discussion

There is a slight difference between Asian countries and Western countries. The animation in the Western countries are using 3D technology, but in the Asian, especially in Japan, it still uses 2D technology in animation, because they prefer hand draw and traditional graphics, so most of animations in Japan are 2D, however, Japan is also good at 3D technology, there are some famous games on play station and computer which are Japan made, for example: The Final Fantasy; super Mario; Devil May Cry, Japan uses a lot of 3D technology in games, but they more like uses 2D technology in animation,   because "comic" which is a special culture for Japan. "The comic could affect any field of culture in Japan, ex: novel, music, drama and movie" (Miazaki, 1996), beside this, "Japanese can accept the image without color and only shape, this image could be applied in any Japanese culture" (Miazaki, 1996), consequently, most Japanese think that the story, background and the role, if these parts can attract spectators, then using 3D technology or not is not so important for them.

In the western countries, it maybe the culture different, the spectators and the audiences prefer 3D games and animations, because they want to enjoy the game and movie, the vivid role and space are very important for them, and the detail of the games and the animation also effects them, like "World of Warcraft", it's the quite famous on line game with 3D technology, and it is played by many players in different countries. This game has great visual graphics, splendid audio, fluent actions, that is why it has been successfully and it becomes the quite popular game in the world.

The "UP" of Disney Pixar is the newest 3D animation, even though the "UP" (Fig4.) is still the animation, it made some changes and improvement, the skin of the every role is more vivid, and the color of skin is moderate and saturated, it used the natural hues, it makes spectators more comfortable when they are watching, and the background in the animation is really like the true scenes in real world, especially the cloud, blue sky, buildings and balloons which has transparent and true color, this part is the surprised part for spectators. The Disney Pixar is the 3D animation specially company, it has cooperation with the Disney Company. The Disney had doing 3D animation by their self, but it was not success, then the Disney started to cooperate with the Pixar Company, and the 3D animation which were made by those two companies was very successful, for example: Toy Story; The Bug's Life; Monster.INC, later, the 3D animation were all made by Pixar Company, and the 3D technology of the Pixar becomes famous in the animation. However, these two companies were broken, but the Pixar kept making a lot of famous 3D animations. The Pixar researches the comments of the consumers, it compares the 2D and 3D

animation, which why the consumers feel that the 3D is better than 2D technology, and the research reports the consumers more like 3D animation, because the 3D technology create more imaginary world for people. In addition, a variety of parameters in 3D technology is more close to virtual world when compared to those in 2D technology. The Pixar starts to improve the technology which they made every 3D animation, and they try to use different hues of colors, and add diverse elements of new perspectives. Moreover, they would employ a range of character descriptions and profile. Furthermore, they would also take into account the current need for the public by means of conducting market survey or questionnaire. Additionally, Pixar also take care of the demand of their customers in 3D industry. However, it is also noteworthy to mention that "UP" would become the best seller since it is the first 3D animation based on the gap of old generation and young generation which is different from characters in relation with animals or some great men adapted from the historical stories. While in terms of disadvantage of 3D technology, it does not have any breakthrough in 3D technology applied to this film.

Fig4. Disney Pixar, UP movie (Official website)

Conclusion

In summary, the current demand of 3D technology is much higher than 2D technology. In addition, the competition among 3D animation corporations in 3D market is drastic in great degree. While, sometimes people would overlook the importance of a good story which is more prominent than the 3D technology employed in the animation movie by producers. As a consequence, no matter the producer applies 3D technology or 2D technology, the technology which is used to perfectly profile the story in an animation movie would be regarded as the best technology.

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