Evolution of Art Form of Video Animation Design Under the Background of Computer Graphics System Development

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Abstract

According to the development of discipline and teaching situation of computer graphics, computer graphics analysis in the curriculum system, the reform of teaching contents and teaching methods, improve students' computer graphics theory teaching and practice teaching effects by using limited time, adapt to the social demand for graphics software R & D personnel. Motion design and production are of great importance to film and television animation. This article mainly elaborates the present situation, the characteristic and the master method of the movie animation movement design and manufacture. Including the animation, motion animation design and production of organized, planned production features that emphasize the characteristics of movement, exaggeration, force and rhythm, this paper presents the common problems and solutions in the animation language, and the main differences between the animation design and performance in different forms of animation. Through the animation design and expression of the past and present situation analysis, looking forward to the future animation art movement design development. Aesthetic lens performance is the artistic pursuit of many film and television creators. Animation, as a highly hypothetical art form, which is one of the distinctive artistic features of film and television animation, which is based on the limitation of the camera and is full of expressive lenses.

Keywords: Computer graphics, system, development background, film and television animation design, art form, evolution

Introduction

Aesthetic lens performance is the pursuit of many film creators, but also the audience's most intuitive source of information received, so the lens design of film and television works is particularly important. In the era of rapid development of information technology, high-tech special effects have been gradually integrated into the creation process of film and television works. Animation, as a highly hypothetical art form, is born with the mysterious magic power of turning dreams into reality. Its lens performance is more artistic than the general form of film and television.

From the perspective of animation production, motion design is the blood and meat of the whole animated cartoon. To compare a cartoon to a person, he needs scripts and stories to support it. Scripts and stories are like human skeletons, but skeletons are out of the question. How can a skeleton get angry? So the blood and flesh of an animated cartoon is the design and performance of the action. Motion design and performance distinguish animation from other

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forms of plastic art. At the same time, the infiltration of plastic art also distinguishes animation from traditional film art. Finally, we have seen that film and television animation has become a full art, built up and it has both comprehensive and independent.

The production of film and television animation requires a large number of people to perform the design and performance of the action, including two-dimensional animation, the original painter, intermediate painting practitioners, three-dimensional animation action adjustment personnel. At the same time, this process takes up a lot of time for film production. Even as individuals, animation, short film creators, or animation students, when animating, most of the operating time is also in motion. Therefore, the design and performance of animation can be studied as a discipline. Its development and progress is related to the overall development of animation art, and will also affect the development of plastic arts.

Computer graphics is a discipline that studies how to use computer and graphics processing principle, method and technology, in the era of technological innovation, computer graphics to computer aided design and processing, film and television animation, military simulation, medical image processing, weather, geology, finance and electromagnetic visualization in scientific fields, no doubt and it is one of the most active branches, the most widely used development in computer science. This course is a computer, and related disciplines of a theory, technology and application of the combination of technology applied courses. The purpose of teaching through the course of the study, the basic principle and method to enable students to understand and grasp in the generation and processing technology of computer graphics, basic knowledge, and be familiar with the relevant international standard graphics software, for learning other courses and engaged in development work to lay a solid foundation.

![Figure 1. Computer graphics.](image)
The Proposed Methodology

**Computer graphics.** Computer graphics is a very important and practical introductory course in computer related fields and computer games and animation fields. There is a big gap between the rapid development of graphics and traditional teaching and learning results. At present, most universities use computer graphics as a specialized platform for information science. As an elective course, common problems in computer graphics are fewer classes, students are not willing to buy the textbooks, curriculum evaluation is simple, general to submit the design report or graphics program students learning effect. Graphics theory and experimental are very strong, on the one hand, the teaching theory of less teaching hours, if too much emphasis on the theory of various explain the basic graphics generation algorithm, graphics transform, curve modeling and illumination model, will involve a large number of mathematical formula, makes students feel boring and difficult. On the other hand, there are not enough hours of curricular practice, which makes it difficult for some students to feel independent and develop graphical programs.

**Computer graphics teaching strategy of multi demand model.** With the rapid development of computer graphics in recent years, many scientific research institutes and to engage in scientific research personnel before entering the scientific research institutes, important algorithms involved in computer graphics to have a higher level of understanding, has a strong mathematical foundation, at the same time, the completion of undergraduate courses in the undergraduate graduates, there will be a certain proportion of students in scientific research institutes. From the university graduates feedback, many students to graduate, did not actually focus on the course of computer graphics, many basic graphics algorithms do not understand, in scientific research institutes, research into the apparent time is too long, cannot complete the assigned tasks timely to supervisor, under great pressure of scientific research. Therefore, in the teaching plan is modified, we especially consider the factors of the scientific research institute is committed to entering students to increase the algorithm depth, not blindly all the computer graphics algorithms are introduced, it focuses on the commonly used algorithms, training their own ability to put forward the improved algorithm.

**Characteristics of animation production.** The creation of the cartoon and the creation of the film is very different, no entity cartoon actor, although there is a script, but compared to the film, the middle part is more like the operator in the completion of an industrial products. Because of this, it cannot make participants long-term excitement. The middle part is a very boring process, with the longest time, but without the "gold content". The traditional two dimensional animation has its own advantages, but it also has great limitations, especially the production of action. The original painting is the main and intermediate two-dimensional animated components, beginning in the creation of the state may be a kind of fun, but not long time such fun. A job that repeats too little for a long time will soon tire. But that's the feature of 2D animation. And the action adjustment personnel of three-dimensional animation needs to be polished constantly to finish the product. So the animation of the character and scene of action batted is inevitable, not one. Animation is still made up of "painting", but it is not only flat, but also three-dimensional. But it still can't be separated from the perspective, composition and color principle in the painting. So, to be more exact, the creation of animation is the job of the animators in a short period of time making large quantities of paintings. These works are related to each other.

The design of the action must be planned as part of the lens design, and as a personal creation, it may be constantly modified during production. But when it comes to commercial production, planning is more important, or it can cause problems that cannot be coordinated among the
operating departments. Therefore, no matter from which angle, even if the individual creation, also must take all actions in the original design and draw the complete planned before, the most effective method which is to improve the work efficiency. In the creation of the need for information collection, for animals, characters and natural objects movement laws should be aware of. Avoid "taking one step at a time". In particular, the animation of an unrelated painting into another irrelevant painting has been found by Western stakeholders, which attract at least five minutes, even for children. Films are much less appealing to people than episodes with episodic action. Therefore, we should pay attention to the considerable changes in the enjoyment of the film. Because motion design does not mean that two pictures have changed, you should pay more attention to whether it is connected with the plot. The connection with the plot can greatly increase the design and expression of the action, and can be appreciated and expressed. Therefore, the action of film and television animation has a strong planning.

**Performance methods and technical features.** In addition to screenwriters, film and television animation practitioners basically have to learn the special discipline movement laws. The law of motion includes the movements of characters, animals and natural objects. In violation of these laws, logical errors can arise. Make it difficult for people to have a favorable impression of the film itself. It is not contradictory to follow the law of motion and exaggeration, for exaggeration is the extension and reinforcement of the law. Hyperbole, which is not based on regularity, is hard to base on.

These theoretical foundations of animators enable animators to become animators. These theories are different from those of mathematical physics. They are based on experience. In fact, these theories refer to the previous summary of the operation of the industry. For example, walking, if you simply walk as 13 key frames, then completely become a formula, when the 13 key frames of the mold on the set. The fact is not so simple, because people will not walk itself and a machine like a set of actions to complete every rhythm. The animators themselves are clinging to the changes in these conceptual movements.

In fact, the animation movement law is first observed by the animation worker's life, and two is compiled by the experience of predecessors. It is no exaggeration to say that the majority of the sources are the latter. Because, as an individual, the experience is limited and if we want to master more knowledge of the laws of motion, we must obtain the experience of predecessors. In addition, we can find that it is not so simple as "take", we have mastered these laws of motion and will summarize new laws on the basis of them. As mentioned above to walk as we now distinguish between men and women, between men and women between the walking postures is we can be the most changeful, research on the movement regularity of their summary. What we cannot ignore is that no matter how many textbooks we have or the experience of our predecessors, we cannot give up the origin of the laws of motion". Art comes from life, and life is the greatest textbook. We sum up our theory, explore new laws of motion, we should also find out from life.

Exaggeration is one of the main characteristics of film and television animation, including exaggeration of shape, exaggeration of motion, exaggeration of color, etc.. Among them, the exaggeration of action is a prominent link, the position is second only to the law of motion. It is also one of the important methods of animation performance. The exaggeration of action can make the film rich in art and widen the difference between the movie and television animation works and the general film and television works. Cartoon characters can make people can't do the action, not because of the dangers involved in the live action, animation in the face of any actor cannot take a shot. For example, can be exaggerated expressions of exaggeration, whether Japan or domestic cartoon animation cartoon characters on the face and facial features are surreal flesh processing, we can see Donald's eyes out of eyes, you can see the machine cat...
tongue to the ground or grey wolf face like a balloon is a punch. But we don't have to worry about the role of so hurt, but do not feel what is not reasonable. And in the ordinary film and television works, if there is no specific background, so exaggerated performance will make the film looks awkward. Limb exaggeration also conforms to this principle.

Influence of manifestation. The form of expression has a great influence on animation design and performance. From the cost point of view, the traditional two-dimensional animation performance is difficult, especially the original painter, they can rely on only the pen and information of these two tools. In addition, they can only rely on experience. But 3D animation modeling is different, and the camera provides a full range of multi angle operation platform for them, they cannot even grasp professional knowledge modeling ability, need only have the certain regularity can work. Of course, the design of their previous actions has also been designed, but in terms of intermediate artists in 2D animation, their operations are clearly more flexible. The material has an impact on the animation practitioners, as well as the motion design of the film itself.

This is clearly reflected in the lens changes, such as the front and side of the action design. For the traditional two-dimensional animation, positive action performance is difficult, it is low relative to the reference side, even with the funny action to attract the audience's cartoon "Pink Panther", it is also noticeable that creative people as far as possible to avoid the absolute positive lens, and the lens side.

Conclusion

The design and performance of motion picture animation is the same as other arts. It originates from life and is higher than life. Exaggeration and better performance will always be the pursuit of animators, just as cameras do not eliminate paintings. Animation is an art, not just a technique. In film and television animation, the creation of the lens is highly free, such as unconstrained, imaginative, surprising. When you look carefully, you will find that countless cartoons are extremely ingenious in the design of the lens. Besides the long and impressive lens design, the conversion of montage is also illusory and free. This is the difference between animation and general form of film and television, and it is also a great artistic feature in lens processing.

Reference

