The research of 3DSMAX technology in interior design based on aesthetic principle

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Abstract

Nowadays, science and technology are advancing by leaps and bounds. Digital technologies such as big data and internet plus are changing the development of all walks of life, especially in the highly competitive ranks of building home improvement. In recent years, the application of 3DSMAX software in home decoration design is also very common. In the living environment and living space of contemporary people, we can see that people have higher and higher requirements for home decoration, and it is very important to use digital software design to improve people's living space. Therefore, I analyze the application of 3DSMAX software in interior design based on aesthetic principles, hoping to make some improvement and reference for the development of interior design.

Key words: aesthetic principle, 3DSMAX, interior design

Introduction

With the continuous development of modern science and technology, 3DSMAX software has been generally recognized in design and development, and people pay more and more attention to it during the development process. this software is indispensable in interior design. from the increasingly affluent life of modern people, it can be found that more and more people begin to seek comfort and individuality, and use computers for design and analysis. It has greatly increased people's convenience for the form of life transformation scheme, and it is also a great performance of changing people's lives with science and technology at present. However, good software is only a tool. How to add aesthetic principles in the design process, so that the scheme designed by designers is not an empty manuscript, but an artistic work, which is very important. It is the core of the rapid growth of designers at present to organically combine design software with aesthetic knowledge. This paper mainly analyzes the application of 3DSMAX software in interior design, hoping that through this paper, the application and development of 3DSMAX software can be promoted more effectively. As for 3DSMAX software, it is an effect software capable of 3D space simulation design, which covers many aspects such as interior design, industrial products, animation, etc. It was designed and launched by Autodesk Company, and it is also the most widely used 3D design software in the development and interior design of modern and contemporary world. Interior design is a subject that combines many factors such as light, color, design aesthetics, etc. 3DSMAX software can well control the performance of decorative design and achieve satisfactory results. It is precisely because of these characteristics that an important foundation has been built for interior design and development.

1. "Colorful" in Design

Contemporary street art and design are active and full of vitality. Such diverse styles, unique innovations and strong artistic appeal make people feel very energetic and make designers feel excited. Designers vent their emotions heartily in their works of art, let their imagination gallop in infinite space, and express their desires, fantasies and various desired tangible entities one by one. They fully express the beauty of various structures, forms, materials and crafts, and greatly expand the design inspiration of modern people. We can feel the beautiful effects of light, color, texture and transparency. Whether it is three-dimensional or semi-dimensional sculpture or plane or semi-dimensional sculpture, it can awaken people's interest and excitement. Artists try their best to break through the visual order of ordinary people and regard space as an entity. The material, block and color are freely manipulated, thus highlighting the artist's personality. These artistic charms in life are the truest, most intuitive and most touching aspect of our life, bringing the design inspiration into the interior design works. The inspiration from generate is infinite, which is the limited to infinite in design.

Philosophy holds that the development of things is accomplished through constant negation, and the development of design style is no exception. The development form of design style also presents a spiral rise. With the advancement of the times, the advancement of culture and the continuous development of design style through its own ideas. There is an interactive trend between the development of minimalism and the development of culture. In order to seek for development, minimalism needs to adapt to the global atmosphere, which requires the mutual integration of other cultures. The truth of the information age mainly involves new possibilities brought about by simplicity, which is a fierce collision between the new and the old. The information age brings new possibilities to minimalism. In order to realize the new development trend, minimalism requires geometric modeling, and the interior design style has developed closely. Of course, the advanced design model needs the combination of science and technology to achieve the most favorable support. Here, 3DSmax is a powerful design guarantee to promote the development of the present design.

As a powerful 3D software, 3D is a model creation in a virtual 3D space. As one of the powerful functional software in the application of computer technology, 3D can build several modern 3D models in computers, which seems to be a flying wing inserted for designers' inspiration, so that designers are not restricted by space, objects, manpower and funds, and can show their design achievements more quickly. Technically speaking, designers should first have the computer operation ability, such as AutoCAD, 3ds max, photoshop and three major software. The use of 3DSMAX software enhances the artistry of interior space. In the process of interior design, the application trend of 3DSMAX software in interior design is accompanied by the gradual change of the home improvement orientation of human appreciation level. The design scheme to be displayed in the process of interior design is the formal rule of beauty to be displayed in the whole design process. The design and application of 3DSMAX software should be targeted according to different needs of consumers and consumers with different ages, hobbies and personalized needs.

1.1 Spatial Change

The first thing people need to meet for interior design is the demand for space. Realizing the rationalization of space is the basic requirement of interior decoration design. While realizing the rationalization of space, people should also feel the beauty in it, because the purpose of design is to serve people, and the design should focus on people's subject, which requires designers to break the previous concept of space and explore the space image of the new era.

1.2 Color Requirements

Indoor colors can affect people's vision, and can also affect people's mood and emotional changes. The scientific design of colors makes people healthier physically and mentally. Therefore, colors should not only meet the functional requirements, but also meet the requirements of beauty.

1.3 Light and Shadow Requirements

People are more eager to return to nature in a closed environment, especially the fast-paced life in modern cities. People are more yearning for the natural and relaxed theme. The warm and comfortable lighting design can simulate the effect of sunlight entering the room, and the bedroom is equipped with comfortable and natural lighting effects, which can make people feel more relaxed.

Second, "ever-changing" in software. Using 3DSMAX software to design interior scheme is to model according to drawings, design 3D model, then select decoration materials and preview decoration renderings, which can adjust the materials of interior decoration according to your own preferences, so as to better display the design style of interior decoration, and then adjust the lighting to improve the decoration effect.

2. Model Establishment

The modeling of 3DSMAX software is combined with the original plan drawn by CAD, and after importing, the space sandbox is built and the wall is designed in the top view interface. The space to be designed is outlined through the tracing points of lines, and then the corresponding room height is squeezed out. Then, the functions of back vanishing and model wall turning over are used. When building the house model, attention should be paid to the knowledge points of "points, lines and surfaces" in the aesthetic concept for the design of ceiling and wall decoration. In this way, the hard-fitting of indoor space also highlights the effect of rhythm and rhythm, and uses basic commands such as extrusion, contour, chamfering, etc. to complete indoor basic modeling.

2.1 Endowing Materials

3DSMAX software has a powerful material modulation function, because the distribution of materials is closely related to renderers, so we should choose a good renderer before designing materials. The most commonly used renderer is V-RAY renderer, which has a very good effect, is very realistic in restoring indoor effects and is relatively convenient to use. The commonly used renderings in interior design are as follows: 1. Latex paint, which generally reflects 20-25, diffusely reflects 245-250, and highlights 0.3, can be modulated into the effect of interior walls; 2. Tile, whose reflection color is generally adjusted to light blue reflection, which mainly simulates the color of skylight and is subdivided into 20, diffusely reflects 245-250, and glossiness is 0.8-.

2.3 Lighting Effects

The lighting design in the software is very important, which is equivalent to the finishing touch in the whole design scheme. In the scheme design, we use the most commonly used V-RAY light source, which is very convenient to operate. Different display effects can be achieved by setting different lighting parameters. After setting the V-RAY shadow, the display effect is more realistic. When designing the ambient light, we first set the ambient light, such as skylight, and then we can set the main indoor light source and ceiling lamp. Then, the downlight is set, and the performance effect of the downlight is similar to the effect of filling light, which can make the indoor effect richer and the indoor material feedback more refined. With the abundance of indoor light sources, the performance effect is more beautiful in the high-definition output renderings.

2.3 Camera Erection

There are many kinds of cameras set in 3DSMAX software, among which VR physical cameras are common. The settings are adjusted according to scaling, short-distance cutting, long-distance cutting and depth of field, and more cameras can be freely adjusted according to the needs of indoor space display, so the display effect is very good.

2.4 Rendering of Renderings

Rendering skills of renderings should be scientific and reasonable; the manager should restore the interior design effect in real situation, so as to make customers feel immersive; rendering lights should be more indoor layout to adjust the number of lights and the degree of exposure; in the test stage of renderings, the second entry should be lowered to speed up rendering; instead, the design entry should be raised as much as possible when the pictures are really high-definition. Here, we should combine the changes of warm and cold colors in aesthetics. The color of the living room is set to warm light, and the color of the bedroom can be adjusted to neutral tone. Combining aesthetic knowledge, we can restore the indoor space better. Of course, after getting the final renderings, we should also use photoshop and other software for post-image processing, and adjust the saturation and hue of colors to make the renderings more realistic.

Third, the "old tune and new play" in the case. Aesthetics in design is closely related to painting, and the simple form of expression is deeply influenced by modern abstract painting. Kandinsky's combination of points, lines and planes greatly shows the basic principle of aesthetic composition. Minimalism in painting is an aesthetic

form with great functionality, which greatly promotes the development of aesthetics and makes the form of pictures move people's hearts.

Traditional indoor space effect software for making 3D real scene includes 3dsmax, Interior design is a branch of design art, which is an artistic design that creates an indoor environment with reasonable functions, suitable for human habitation and meeting people's material and spiritual needs according to the nature, characteristics, environment and corresponding standards of buildings, and uses physical and technical means and architectural aesthetic principles. Through reasonable design, the space on which we live can not only meet our physical and material needs, but also meet our aesthetic and spiritual needs, and strengthen our love for life.

When an interior design is completed, the design is presented in an aesthetic way. There are sketch relations and color relations. The effect presented here is based on aesthetic principles, that is, we often discuss the combination of points, lines and planes, the collocation of colors, the change of light and shade, and so on.

There are two main reasons for the performance of interior design renderings, among which interior designers can scrutinize and improve their own designs through renderings, and build communication bridges with customers through concrete graphics, and designers can constantly improve their own schemes. Secondly, the performance of renderings can enable designers to better control the whole design direction, and make the design of the schemes more concise and direct, because with this bridge, customers can also save more time to understand the concept of human settlements.

For designers, design is an emotional activity, and an excellent designer often needs many design modifications to determine his own design scheme. Therefore, interior renderings can enable designers to achieve the best design results at the lowest trial and error cost, and constantly revise their design concepts, thus saving a lot of manpower, material resources, time and construction costs.

Design is an emotional activity, and a designer's excellent works often have to undergo repeated modifications from the composition stage to achieve the final satisfactory effect. Therefore, interior renderings can let designers know their creativity in advance. In today's decoration market, customers hope to see the creativity given by design intuitively when talking about the order. Design renderings can be said to be the key to open the hearts of customers. Excellent interior renderings can show the real environment in advance to impress customers and thus stand out from the increasingly motivated decoration market.

In the early indoor performance, due to the lack of popularity of computers and software, most indoor renderings were hand-painted by designers, and most of the designers who drew renderings were students of the Academy of Fine Arts with solid artistic foundation. However, with the popularity of design software, the advantages of computer software gradually began to replace hand drawing, and the computer renderings were restored with their authenticity, which made customers feel immersive when they looked at renderings. It can be said that this is a means of talking about orders that can impress customers very much. The most important design software is American 3dSmax, 3dSmax, which is a very famous sandbox software for modeling and effect expression in computers. It is an effect software integrating modeling, lighting, material and rendering.

With the rapid development of computer software, hardware and software, the production level of indoor and outdoor environmental effects has been continuously improved. In recent years, indoor effects have well demonstrated the propagation of indoor light under various lights. This is an era of popularization of computer software. With the development of various softwares, such as C4D, Autocad, Photoshop, Coreldraw and other softwares have appeared. Designers have become more and more efficient in the design process, and have solved various problems in interior design more quickly. With the increasing maturity of marketization, various online interior design softwares based on cloud data have emerged nowadays, especially 3D Home, Kujiale, Zhaikili, etc., with simpler operation flow and more optimized rendering, and the ability of rendering interior renderings is no longer unattainable, but more approachable, especially the online rendering design software, which is based on the computing power of network and cloud server. It takes several hours to render a good indoor rendering, and it can render 4K image quality in just 10 minutes, which greatly improves the clarity of the picture, restores the display of indoor effects, and highlights the real design feeling. After being exposed to the above offline and online software, the author deeply admires the development of science and technology. In the future, 3D design platform based on VRY glasses may appear immediately. Designers and customers wear 3D smart devices at the same time, coexist with the virtual 3D environment, and carry out design service

work in a three-dimensional and real way. The whole process is relaxed and happy, which can restore the effect of staying at home naturally and fresh, find the shortcomings of design, and achieve real one-to-one private customization to meet people's higher demand for home.

Conclusion

With the continuous progress of social sciences, 3DSMAX software has been widely used in interior space performance. In the process of interior design, relevant designers can use the software to design excellent interior works more conveniently, and can quickly adjust to meet the needs of customers, so as to create different needs of consumers and express the space. However, no matter how convenient the tools are, the aesthetic concept and people-oriented design thinking in the design cannot be lost, so as to keep moving forward and allow designers to create a richer and more diversified charm of interior space.

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