Research on the Application of Computer-Aided Software in Interior Design

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Abstract. Computer network technology brings people a cross-epoch change. The computer has changed from a behemoth to a small object that is now easy to carry; from the beginning, the computer can only be used for computing, and now it can search for all kinds of information in the network, not only to calculate any questions, but also to shop directly on the Internet. The development of computer technology also promotes the continuous updating of computer aided software. It is because of the emergence of computer-aided software that the traditional way of interior design has changed obviously. Computer aided design makes interior design more convenient and fast. This paper introduces several common computer-aided software and analyzes the application research measures of computer-aided software in interior design.

1. Introduction
With the continuous development of society, China's economy is also constantly improving, the quality of national life has also been improved, people also have higher requirements for housing. People's demand for a house is not only to live, but also to have a better, more reasonable layout, can meet their various needs of the house. In the past, it was not so easy to design a house or interior design. Because of the limited technology and limited tools, many projects were difficult to achieve or slow to achieve, and many of the requirements could not be met. But now the times are different, science and technology are constantly innovating, there are many auxiliary tools, can meet people's more needs, to achieve higher efficiency.

2. Comparison between traditional interior design and modern interior design
Because of the continuous progress of modern science and technology, many computer professional software is also being continuously developed. The development of computer network brings not only the progress on the network, but also the development of technology. Computer-aided software, for example, in interior design has a great help. The traditional way of interior design is to need people, pen and paper, and some professional drawing tools, all designed manually, drawn by the designer himself, and to be very accurate, and measured with a ruler. It takes a lot of manpower and time to do a design, and is inefficient. Man is a wise creature, in order to reduce cumbersome procedures, can improve efficiency, computers appear in people's eyes. Now, the appearance of computer-aided software has brought great convenience to interior designers. With computer aided software, designers conceive interior design ideas in their minds. As long as they use 3 D or 2 D drawing software, they can better present the designer's design ideas. Moreover, the use of computer-aided software will make
drawings more quickly, thus saving a lot of time and allowing designers more time to create. Therefore, the role of computer-aided software in design is very important[1].

Modern computer-aided software has many advantages, using three-dimensional design mode, can more intuitively observe the advantages of computer-aided software. First, design intuitive: using three-dimensional mode, can be observed from multiple angles, see whether the design space design is reasonable, can be more intuitive. Second, easy to modify: using computer-aided software, you can directly modify the unreasonable design in the window. Third, convenient management: the number of models to be established is small, the number of views is unlimited, can automatically generate associated graphics. It is precisely because computer-aided software has so many advantages that more and more interior designers prefer the use of computer-aided software, whether novice or veteran are very familiar with these interior design needs of computer-aided software.

3. Application of Computer-Aided Software in Interior Design

In the present society, the use of computer-aided software has been a very common thing, in interior design is more widely used, and the use of computer-aided software in interior design has been very mature, the two are inseparable.

At present, interior design is divided into several steps:
- Designers in the mind to design a reasonable layout of the house.
- Drawing using AutoCAD software, Draw a fine interior design.
- Three models Dma three D of software, Let the person can see the design effect more intuitively.
- Rendering the model with Vray software, Increase atmosphere effect.
- Post image processing using Photoshop, Make the design look softer.
- Video editing using PremierePro software, Make the whole video look more attractive, Customers like it more.

3.1. Application of AutoCAD software

After observing the house, the designer will make certain measurements and understand the customer's requirements, then conceive and design, constantly modify, and design the interior design scheme satisfactory to the customer. Then through the reasonable layout, some data and data are input into the software, then the software will draw the stereoscopic drawings, and finally draw the accurate interior design[5].
3.2. Application 3Dmax software
The use of 3Dmax software is to draw out the interior design construction drawing, import the designed structure diagram into the 3Dmax software, and establish the basic object model. When the model is established, you can see a three-dimensional model, you can clearly see all the interior design, but also clearly show whether the interior design is reasonable. Therefore, modeling is a very important process, designers must be combined with the reality, considering the actual design interior decoration after the effect of display, according to different actual conditions and customer requirements to choose the appropriate modeling form. Moreover, in modeling, we must abide by the principle of accuracy, far thick and near fine, in order to achieve better results. Now when we buy a house, the salesperson will show the three-dimensional composition of the house to the customer, and then explain to the customer the type of house. In fact, the customer is looking at the model of the house, so the indoor model can also be presented in this form. Give customers a more intuitive feeling.

3.3. Lighting effects design
After the basic object model is built, the lighting effect should be processed. In order to better display the results of interior design, the lighting adjustment should be more close to the actual scene. However, different scenes, the number and type of lights will be different, and the attributes of lighting will be different. Then in the interior design, commonly used three kinds of light sources are main light, auxiliary light, background light. Of these three kinds of lights, the most important thing is that the main light is in the core position, it is the position of the irradiation in the center, so the position of the main light must be designed so that it can be well harmonious with other light[6]. In some places, where the main light can not be expressed or can not be well expressed, the auxiliary light is used to fill it, so that the light source arrangement is more reasonable and the design sense of light sense is stronger. Then the background light also has its very important function.

3.4. Cruise Animation Design
Cruise animation setting is also one of the important parts of interior design software, this part needs to be shot, different people see different effects, then cruise animation must also shoot different angles, in order to show different effects. Mainly the most important interior design part and the most wonderful part in the form of animation. Just like when we watch a movie, there will be different angles to shoot us, this time are different angles to shoot well, presented to us, the concept of cruise animation design is similar to this.

3.5. Application of Vray software
After the 3D model is established, the next step is to render the model, which is also an important step in interior design. The function of this software is to add some special effects to the design. Such as global lighting, coke and other special effects, can make the entire interior design brighter. Different Vray materials will also have different effects, so designers can also choose the appropriate material according to the effect they want to achieve. Vray software is an essential part of interior design, it can make the whole design look vibrant, add some special effects, can give customers some special feelings, such as a sense of belonging, This is also an important element for designers to add in the design, so that customers will want to live in the house.

3.6. Application of Photo shop software
After rendering the interior design model, the Photo shop software is used to modify the picture, as long as the color in the picture or some unreasonable layout, and the color collocation is not good, so that the whole design picture is more exquisite. There are also some details of the adjustment, and the image proportion of the adjustment, so that the entire design layout more perfect. This perfect work is presented to the customer, and the customer will trust the designer more, and then there will be more business cooperation, which is win-win for both the designer and the customer.
4. Conclusion
It can be seen that the application of computer aided software has obvious influence on interior design. Computer aided software not only brings about the improvement of interior design efficiency, but also brings great convenience to interior designers. Speed up the development of interior design industry, can explore more talent. More and more interior designers can make their design more perfect through these computer-aided software, thus showing in the public view, in the design industry has deeper attainments.

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