Application Analysis of Computer Effect Drawing in Landscape Design

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Abstract: With the progress of modern science and technology, computers are gradually applied to various fields, greatly improving the efficiency of work, in which the effect drawing of landscape design is an example. In the design of landscape effect drawing, the designer makes a simple conception plan of the design drawing by observing the entity project, and then uses the computer to draw his own ideal effect drawing. Such landscape effect drawing integrates the designer's design soul, not only let the expert understand deeply, but also make the layman have a good understanding. Therefore, this paper first describes the definition and function of computer effect drawing in landscape design, then analyzes the common software for drawing computer effect drawing in landscape design from four aspects, and finally expounds the four steps of drawing computer effect drawing in landscape design.

1. Introduction:
Nowadays, with the great progress of science and technology and the rapid development of society, computers have begun to be applied to the drawing of landscape design drawings. The application of computer to the drawing of design drawings has changed the traditional drawing method, not only changing the time-consuming and laborious manual drawing into a fast recording method, but also improving the working efficiency and quality in many aspects. Because there are many drawing softwares on the computer and the picture has high definition, therefore draws out the effect drawing rich and colorful, the true degree is extremely high. Through the computer drawing effect map, not only can express the designer's design soul, but also can observe the model of the design drawing from many perspectives, make the effect drawing more vivid and realistic.

2. Definition and Function of Computer Effect Drawing in Landscape Design

2.1 Definition of Computer Effect Drawing in Landscape Design
Landscape effect drawing is a visual language with aesthetic feeling and artistry designed according to the design drawing of landscape architectural engineering, while computer effect drawing in landscape design can design rigid landscape architectural engineering design drawing into vivid and soul-rich effect drawing [1]. In addition, the computer design landscape effect drawing can not only express the designer's design concept to a large extent, but also facilitate the designer modify the effect drawing at any schedule. Therefore, the advantage of designing landscape effect drawing with computers is not available in manual drawing. At the same time, the computer effect drawing can observe the design effect from multiple perspective, and further make the effect drawing model more realistic, so as to attract customers and investors.
2.2 Function of Computer Effect Drawing in Landscape Design

Computer-designed landscape effect drawing are a 3D visual experience, which can directly design various colors and natural lighting effects in the effect drawing. At the same time, designers can deepen their design ideas through computer design, which is also conducive to expanding the designer's thinking space, allowing designers to have more real design inspiration, and has a positive effect on design effect drawing. These advantages are not available in traditional manual drawing. At the same time, the computer design effect drawing are more conducive to laymen's understanding. With the improvement of people's quality of life, more and more people attach importance to the effect of landscape design. Therefore, in the design of landscape effect drawing, it is inseparable from the customer's idea of changing the effect drawing at any time. Using computer to design effect drawing can enable customers to have a better understanding of the effect drawing, thus facilitating communication between designers and customers, and also facilitating designers to change the effect drawing at any time according to customer's needs.

3. Common Software for Drawing Computer Effects Drawing in Landscape Design

With the rapid development of the network, there are more and more kinds of computer drawing software and their functions are becoming more and more powerful [2].

3.1 Software for Drawing 2D Effect Drawing

Since the computer was applied to the design of landscape effect drawing, a large number of drawing softwares have been used continuously in the design process, among which the most widely used software is Auto CAD. The functions in Auto CAD software are relatively comprehensive. For example, the drawing of routes, integral buildings, green plants and other projects in landscape design drawings can be completed by using the most basic commands such as straight lines, ellipses and line segments in Auto CAD software. At the same time, these tools can be combined to draw the plan, elevation and section of landscape engineering drawings. In addition, Auto CAD software can modify and move the structure and position of each project in the drawing at any time during the design process, and supplement the color of each small project in the drawing, so as to achieve visual aesthetic feeling and enhance the overall effect of the design drawing.

3.2 Common Software in Model Construction

In the process of designing the model of landscape effect drawing by computer, 3D modeling software, such as Sketchup software and 3D Max software, are often used, which have their own advantages and disadvantages. The 3DMax software has a relatively high cost performance, which can not only integrate the three powerful functions of setting off, screen design and building three-dimensional model, but also import the dwg file of landscape architecture project in 3DMax software, and use the three-dimensional model building function of 3DMax software to realistically construct the contents of the plan in the process of designing landscape effect drawing, including the whole building, decoration and layout, floor tiles and indoor and outdoor lighting effects, etc. However, it takes a lot of time to learn the modeling method of 3DMax software. Sketchup software not only has the same function as 3DMax software, which can import Auto CAD files and draw 3D models, but also has the functions that 3DMax software does not have. For example, Sketchup software is easy to operate and easy to learn, and it is more targeted in the 3D model design of landscape effect drawing. Therefore, when using computer to design landscape effect drawing, compared with 3DMax software, Sketchup software is more dominant.

3.3 Image Processing Software——Photoshop

People are familiar with Photoshop software, which is a necessary retouching software for teenagers, photographers and computer professionals. Because Photoshop software has powerful image processing function and high recognition, in the process of designing landscape effect drawing with computer, Photoshop software is also applied to improve the overall appearance and simulation of renderings through its powerful functions of color matching, image deduction and color separation, and the
processed renderings are stored in various file formats. At the same time, Photoshop software is popular with people, and it is widely used in daily life, and it is simple to operate and easy to use. Therefore, the staff need not spend a lot of time studying before using Photoshop software to design landscape renderings, and the designed renderings are more conducive to customers' understanding [4].

3.4 Other Functional Software for Effect Drawing Processing
Under the condition of advanced science and technology, network technology is becoming more and more mature. When using computer to design landscape effect drawing, in order to make the effect drawing more appropriate and effective, other functional software will also be applied. For example, Rhino software is very small, but it has all NURBS model building functions in model building. Lightscape software can integrate three technologies: transmitting light energy, tracking light and shadow and holographic projection. There is also Maxwell Render software which can effectively improve the visual effect of the effect drawing, and it can independently make the model design effect more realistic.

4. Drawing Steps of Computer Effect Drawing in Landscape Design

4.1 Analysis of Overall Site and Model Construction
Model construction is the most critical and important step in drawing landscape effect drawing by computer. Before building the model, it is necessary to carry out on-the-spot investigation on the landscape project. During the investigation, the surrounding environment of the landscape project should be recorded, which is beneficial to better integrate the landscape project with the surrounding environment when drawing the effect drawing in the later period. Then, the overall project should be analyzed, and the idea of the engineering structure should be drawn by hand, so as to determine the main body of the design landscape effect drawing [5]. The overall effect of the effect drawing thus drawn is better, and the details are fully expressed. Finally, the model is built by software such as 3DMax, which draws the effect drawing.

4.2 Surface Material and Mapping Effect of Effect Drawing
In the design process, one of the greatest influences on the final effect quality of the effect drawing is the surface material and mapping effect. At present, in the process of drawing effect drawing, 3D Max version 9.0 is most used. Because in 3D Max software, not only the surface material is strong, but also the quality of the edited mapping is good, and the workload can be reduced by using 3D Max software to build models, the materials and mapping provided by 3D Max can be fully utilized and presented in the process of designing effect drawing.

4.3 Use Relevant Tools to Contrast the Output Scene.
After the completion of the model construction, it is to output the effect drawing. Before outputting the effect drawing, it is necessary to foil the output scenes, and the tools used in foil are also important factors that affect the final effect quality of the effect drawing [6]. There are many tools for setting off scenes. Designers first need to determine the final image effect of the effect drawing, and then select the setting off tools suitable for the effect drawing model. When customers have high requirements for the quality of effect drawing, designers can adopt Mental ray software or Light Tracer software. The two software are highly compatible, so their final contrast effect will be very good and can meet customer needs.

4.4 Post-processing of Effect Drawing——Adjustment and Beautification
After a series of software processing, the overall effect of the landscape effect drawing has come to an end. Finally, the final refinement of the effect drawing is equivalent to polishing in manual drawing. Post-finishing is the necessary step to get high-quality effect drawing. Photoshop software can be used to finish effect drawing with its powerful image processing functions, so as to improve the final quality
of effect drawing [7].

5. Concluding remarks:
With the development of science and technology, more and more computer software is applied to the process of designing landscape effect drawing, which greatly improves the quality and simulation of effect drawing, but there are advantages and disadvantages. Therefore, designers should be careful in drawing effect drawing so as not to appear visual misleading.

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