The Innovative Application of Computer Image Processing Technology in Web Design

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Abstract. In recent years, with the rapid development of my country's network technology, the content of computer network technology has become more and more diversified. As one of the contents of network technology, web design has also received more and more attention from the people, and its development market prospects are extensive. In order to make web design more competitive in the development of computers, the application of computer image processing technology in web design has become an unstoppable trend. This paper mainly studies the application of image processing technology in the design of computer web pages. It elaborates and analyzes the image processing technology in computer web design, and then combines with the emerging semiotics to promote the further development of computer web design.

1. Concept Discussion

1.1 Overview of Computer Image Processing Technology.
Computer graphics and image processing technology is the use of computer software to further optimize and perfect graphics and images. According to relevant processing requirements, the software and hardware of the computer system are used to cooperate with each other. Related software systems include corresponding CAD, CAM, CAI, etc. The hardware system includes keyboard, mouse, CPU, graphics card and other image processors. Using the functions of the above hardware and software, under the request of the operator, it can realize geometric deformation processing and realize effective conversion of various forms Image, perform related segmentation, restoration and other operations to achieve the expected image processing requirements. Using a computer system, it can digitally process the related light and shade changes, continuously optimize the color of the graphics, and meet the relevant color effect requirements. Due to the high-speed operation capability of the computer and sufficient storage space, it looks like the display is directly modified against the film or video. In fact, for computers, in the colorful world of pictures and videos, there are only three original colors of red, yellow and blue. Through different combinations of them, various colors are expressed, and then pictures and videos are implemented accordingly. Modifications.[1].

1.2 Overview of Semiotics.
Design the word comes from Latin, the explanation is a mark in Latin, the symbol for full compliance with human used in the past, in the contemporary meter, a series of design elements we can call sign, designers will be processed using the symbolic elements to the design, these symbols endowed with a certain cultural background, also contains the ideas of the designer at the same time, can also reflect
the artistic features in the design, so joined the symbols element in web design and open the bigger space, also is more advantageous to the connotation of the design work[2]. In web design, for example, in order to make people better to understand design, using the familiar symbol is particularly important, such as a web design related to literature, if add the image of an education or a book image to design, can make people produce lenovo, also can increase the richness of design sense and aesthetic sense.

2. The Main Function of Computer Image Processing in Web Design

2.1 It Has the Visual Function of Attracting Customers' Eyes.
In the process of web design, compared with other contents in web design, pictures can attract users' eyes more effectively and help specific websites to increase their visits. The content, color, image style and image size of the image in the web page will have an impact on the visual appeal of the effect. In practice, the majority of web surfers are drawn to the image of the web page. Different types of pictures have different ways of expression, so they will bring different visual effects. For customers, there are also differences in browsing experience. Under such a big premise, the process of processing graphic image needs to comprehensively apply the expression mode of graphic image to give full play to the function and value of graphic image.

2.2 The Image Provides a Guide to the Information the Viewer Needs
Generally speaking, the images in most web pages are set according to the specific content of their pages, so if the visitor needs to find that information, they only need to look at the information in the images inside their pages. Images in web design can simply summarize the main content of a web page or web site, but also reflect the design philosophy of web designers to a certain extent. Visitors can find information accurately based on the pictures in the web design, saving time[3]. The function of image guide to the viewer is also reflected in the flow of webpage information search. Some pictures in the webpage often contain the specific flow in the webpage. The viewer can browse the webpage through the guide to the picture. This not only beautifies the browsing page, but also makes it easier for visitors to find information.

3. Computer Image Technology Combined with the Specific Application of Semiotics in Web Design

With the great transformation of Chinese society, web design is also changing under the general trend. From copying or learning from foreign designs in the past, we start to slowly change our design thinking, and start to treat web design with a comprehensive new concept, so as to make design changes. Computer image technology combined with semiotics is an important step in design innovation. In our design practice, the following three application methods are listed:

3.1 Comprehensive Design of Web Pages By Using Various Forms of Images
The concrete application of computer image processing technology in web page design firstly is the comprehensive design of the image form of web page design. Using computer technology to adopt various forms of image form, in order to achieve the purpose of enhancing the picture sense of webpage image design. Real photos can bring visitors into a unique atmosphere, and visitors to the page can easily accept this kind of real pictures. So you can use computer processing technology and the combination of real pictures, the page to express the specific content in the form of text into the picture, to meet the realistic needs of visitors. However, in the process of computer image processing, it is necessary to avoid the use of a single form of image processing, the use of diversified, multiple forms of image design, in order to prevent viewers from aesthetic fatigue. A subsubsection. The paragraph text follows on from the subsubsection heading but should not be in italic.

3.2 Combination of Tradition and Innovation
When we design, we must balance the balance of tradition and innovation, the use of semiotics in the web design to carry on the design of innovation at the same time, how to deal with the relationship between the number of symbols, how to find modern design in the modern and traditional required
that a symbolic element, a symbol of modern design, would be reasonable to a certain element, make it fit at the same time also can achieve innovation of web design. For designers, it is particularly important to strive to absorb symbolic elements and modern computer image techniques for future design innovation.

3.3 Strengthen Graphics Processing Skills in Web Design

If you want a visually reasonable webpage, you must adjust the image layout. The image size will change with the web design changes, the larger the size, the more content, the smaller the size, the less content. The image size needs to be determined in the vector drawing tool and cannot be scaled after being converted to a picture. Especially in Fireworks files, straight lines, text, etc. are all vector graphics. When applied to web design, they must be output first to facilitate the compression of the file. The output PNG image will lose the editable information and turn it into a bitmap. The image size adjustment should be done before output. In order to increase the number of page views, the image shape should be paid attention to when image processing. Different image shapes can bring different feelings to people and improve the overall beauty of the web page. For example, a rectangle will give people a more regular feeling, and a round shape will give people a warm and inclusive feeling. Therefore, choose the appropriate image shape in web design.

3.4 Pay Attention to the Size of the Picture

Due to the limitation of computer screen size, the size of pictures should be controlled effectively in web design. The computer image processing technology is used to control the size of the image in the web design to ensure that the image in the web design will not exceed the width and length of the display screen. At the same time, due to the close relationship between the clarity and the size of the graphics in the web design, if the image is processed with a larger size, then the clarity of the image will also change, and the same is true for a smaller image. Thus, image size and clarity become the key to web design. If blindly pursue pictures, it will cause pressure for the loading and running of the web page, thus affecting the overall browsing effect of the web page. Computer image processing technology is mainly used to process JPEG images, weigh the loading speed of web pages and evaluate web browsing effect, aiming to improve the quality of web design and optimize the browsing results.

3.5 Comprehensive Processing of the Specific Role of Images in Web Design

In computer image processing technology and web page design, the main role of the image in the web page design is not the same. For some clear and eye-catching images, can be directly as the subject of the page image. And other images can also be used as background images, navigation images and link images, can also be used in the process of web design with some illustrations and some dynamic pictures of the whole web page background modification, let the whole web page design dynamic and static combination, make it more beautiful and ornamental[4]. In addition, the website will also put the enterprise's own logo in a prominent position on the web page, to increase the first impression of visitors to the enterprise, improve the use of web advertising efficiency.

4. Conclusion

To sum up, the arrival of the "Internet +" era presents a brand new network state, and digital media web pages are bound to become the development trend of web design. Therefore, the use of computer image processing technology for web design, in addition to full consideration of the content design, but also constantly reasonable use of new related technical concepts to innovate the layout of the web page, to ensure the unity of the style of the web page. With the development of computer image processing technology, its effect in web design is getting better and more and more important. The combination of computer image processing technology and web page design is a very complex and extensive work. This requires the designer of computer image processing design to have high professional design literacy[5] The application of computer processing technology in web design has greatly improved the effect and quality of web design, increased the number of page views, and enhanced the external visibility of enterprises. With the in-depth development of computer graphics
and graphics and image processing technology, it will definitely bring a profound impact on our production and life, which will help realize the digital development of all aspects of society, ensure the effective improvement of work efficiency, and realize the large-scale production efficiency. It is believed that in the future, my country’s web technology will become better and better and will become more complete.

5. References

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