Analysis of Computer Graphic Image Design and Visual Communication Design

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Abstract. Firstly, this paper expounds the concepts of visual communication design and computer graphic image design, analyze the relationship between visual communication design and computer graphics design in detail, including the similarities and differences between them. Then, it analyzes the requirements of visual communication design and computer graphic image design, including design ideas, skills and concepts. Then, it elaborates the practical applications of computer graphic image design and visual communication design, including multimedia products, artistic creation and design, and commodity appearance design. Finally, it analyzes the combination of visual communication design and computer graphics image design. It is hoped that more people in the industry will pay attention to visual communication design and computer graphic image design, which will help promote the further development of computers.

1. Introduction
The demand and application of computer network from all walks of life are increasing, and the continuous development of information technology makes people's work and life change. Computer graphic design is widely used in people's daily life and work. With the continuous development and improvement of computer technology, people's visual taste has gradually changed. Many products need to be designed with the help of computer graphics images. At this stage, with the ever-changing needs of consumers, the use of computers to design graphics images and visual communication of products has been paid more and more attention.

2. Concept of Visual Communication Design and Computer Graphics Image Design

2.1. Visual Communication Design
The so-called visual communication refers to the creative idea of using vision to convey to the audience, so that the audience can intuitively feel the information that the designer wants to convey, and the audience can have different sensory feelings. Visual communication design means that designers use visual communication to show their emotions or creative ideas through art works and pass them on to the audience, which can present the connotation and appearance of products in three dimensions. With the progress of science and technology and the continuous development of computer technology, the traditional two-dimensional visual communication design and the fixed three-dimensional visual communication design can no longer meet the needs of the audience. At this stage, the dynamic visual communication design is the focus of development. How designers carry out visual
communication design can bring more economic and social benefits, which is the focus of work at this stage. Science and technology information technology and the change of people's living and working style also bring new challenges to visual communication design.

2.2. Computer Graphics Image Design
Computers have been widely used in all walks of life. At present, the continuous development and progress of computer also drives the progress of social economy, and the development path of computer technology is further broadened. Using computer software to assist in people's work can effectively improve the work efficiency, reduce the working time and simplify the workflow. In the design of graphics images, designers can use computers to get more convenience, and at the same time, they can show their unique and exquisite creativity intuitively by using computer graphics image design. Under the social environment of the information age, the methods of computer graphics image design need to be further updated and improved. Different designers will have different ideas and design ideas in the process of designing products. Computer graphics image design software can be used to assist the design, which is beneficial to show the designer's creative ideas intuitively. Computer graphics image design software can break the limitations of traditional manual design, which is beneficial for designers to publicize and develop products. This diversified design method and design form can make the decorative effect and publicity effect of the designed products displayed intuitively.

3. Relationship between Visual Communication Design and Computer Graphics Image Design

3.1. Differences between Visual Communication Design and Computer Graphics Image Design
There are many differences between visual communication design and computer graphic image design. Visual communication design is to express emotions through dynamic forms of expression, which makes the audience resonate emotionally; Generally speaking, computer graphics and image design focuses on designing works with intuitive visual effects, and most of them publicize and study static graphics and pictures. From the perspective of professional emphasis, it is necessary to deeply study the consumer psychology and needs of the audience before designing, and then carry out visual communication design, which will help the audience to resonate emotionally with the designer when watching the visual communication design products, and is conducive to the promotion of visual communication design works; When designing computer graphics images, the designer's professional knowledge is required, and the designer is required to have excellent artistic skills and professional artistic knowledge, so as to make the computer graphics and image design works fuller and more intuitive. Computer graphics image design and visual communication design need to adopt different creative dimensions in creative thinking.

3.2. Similarities between Visual Communication Design and Computer Graphics Image Design
The similarity between visual communication and computer graphic image design lies in that they both express the concept of product design. Show the designer's design idea and emotional expression by using different design methods, in order to get the audience's emotional resonance. Visual communication design and computer graphics image design have great creative demand for innovative elements in the creative process, and both of them need to integrate fashion elements and their own emotions at the same time, so that the designed works can present unique artistic visual effects. The designers of visual communication and computer graphics image communication need to learn most of the same professional knowledge, including color art and other professional courses, related art professional knowledge, and require designers to be able to apply what they have learned in practical design work.
4. Requirements of Visual Communication Design and Computer Graphics Image Design

4.1. Design Ideas and Skills

Visual communication design and computer graphics design need to use computers as an aid in terms of design ideas and skills. This requires that both computer graphics and visual communication designers should be proficient in computers. Designers need to have strong logic, be proficient in graphic and image design software, and be able to effectively integrate design content and design concept. This is conducive to its skills and design ideas have more inspiration, design a variety of products. Visual communication design and graphic image design both require designers to have clear design ideas and superb design skills, improved designers' innovative thinking ability, and practice computer-aided software frequently so as to master them skillfully. Only in this way can the innovative consciousness be integrated into the design process, and the design ideas are different from others. Generally speaking, the designer first needs to collect the corresponding materials, then draw up the outline of the design, then carry out conceptual design, then design and develop, and finally implement the design scheme. The process is shown in the following figure:

![Figure 1. Design Ideas](image)

4.2. Design Concept

Visual communication design and computer graphics image design in the design concept is different. This is an effective means for computer graphics image design to embody the design idea. This method of computer graphics and image design can polish the common things in life and make ordinary things more affinity. This can attract the audience and stimulate the audience's desire to buy products, which is also the important significance of product design. In the process of computer graphics image design, the designer's painting skills are high. Whether the painting and color collocation can attract the audience can reflect the design results of computer graphics images. Visual communication design is an effective combination of design themes, and then the design concept is highlighted. For example, when designing a refrigerator advertisement, it is necessary to design according to the functionality of the refrigerator, and the visual effect of the design needs to focus on the preservation function of the refrigerator. At this time, the designer needs to use the combination of graphic images and preservation functions to conduct in-depth research and analysis on preservation as the design theme. If the theme of the advertisement is determined to take preservation function as the propaganda point, the designer needs to use other graphic images to echo the preservation function. Refrigerator is one of the essential products at home, with a wide audience. Designers need to analyze the characteristics and characteristics of refrigerators and audiences. In the process of advertising design, highlight the main function of refrigerator. The audience can intuitively feel the functions and advantages of this refrigerator.

5. Practical Application of Computer Graphics Image Design and Visual Communication Design

5.1. Application in Multimedia

In the aspect of multimedia, computer graphics image design and visual communication design are very important. With the popularization of information technology and the development of Internet technology, multimedia has been widely used in people's daily life and work, and has gradually become one of the necessary components of life. When designing multimedia products, designers need to pay attention to the feelings brought by designing products to readers and enhance the design connotation. For example, people need to watch TV dramas in their daily life. The design of visual communication needs to pay attention to the visual feelings brought to the audience, so as to attract viewers. Different filters in TV dramas will bring different visual feelings to the audience. Designers need to have enough understanding of the theme and plot development of TV dramas, and bring them into the position of viewers in the process of visual communication design. Design according to the...
psychological needs of the viewer, and fully display the connotation and spiritual level of the works. Visual communication designers’ design of key points of TV dramas will have a great influence on the popularity of film and television works. For example, if you design the visual communication of life drama, you can't add a thick filter, otherwise you will lose your sense of reality, which will lower the audience's expectation of the drama and lower the score of TV drama to a certain extent.

5.2. Application in Art Creation and Design
In artistic creation and design, computer graphics and image design and visual communication design need to be integrated into the theme and creation of the works, and designers need to effectively integrate the ideas that need to be expressed in the presented picture works, and intuitively convey the designer's design ideas and artistic connotation to the audience. Graphic and image design is widely used in artistic creation and design. Computer software can assist designers to realize the expected ideas and make artistic creation achieve the expected results. Once there are any problems in the process, computer software can be used to adjust directly, which can polish and improve artistic creation and design, and help highlight the creative ideas of artistic creation and design. At present, most enterprises will display cartoon characters in the process of publicizing the connotation of corporate culture, which requires designers to have enough understanding of corporate connotation and apply it to the whole process of design, choose cartoon images that meet the requirements of corporate connotation, and effectively combine product image with corporate culture. The purpose of design is to make more people understand the connotation and culture of enterprises through brand image. In the process of designing brand image, designers need to have a full understanding of corporate culture, and at the same time need to consider whether the audience's understanding of brand image is simple and intuitive, and then design brand image from the perspective of satisfying public understanding and aesthetics to ensure that the works presented to consumers need to attract enough attention and be particularly intuitive. In the process of brand image design, select the most suitable patterns and graphics to apply, and then use computer software to process and polish the selected videos and pictures. Ensure that the designed finished products can meet the public aesthetic, attract more people's attention, and achieve the purpose of brand and product promotion.

5.3. Application in Commodity Design
In the design of commodity appearance, computer graphics image design and visual communication design are particularly important. In the process of selecting goods, the audience first sees the outer packaging of goods, which means that the sales volume of goods will be affected by the design of goods. The audience's first impression of the goods, whether they will choose to buy, depends on the appearance of the goods. If a consumer sees that the appearance of a commodity completely conforms to his own aesthetics and attracts his own attention, then he will pay more attention to the commodity, and then he can have a deep understanding of the characteristics of the product, and then choose whether to buy it according to his own needs, which broadens the customer base. Even some consumers buy this product because the product design conforms to their own aesthetics. In the process of selecting the same type of products in daily life, most people will choose the product design to meet their own aesthetic requirements for purchase, which reflects the importance of visual communication design and computer graphic design in the product design from another level. In the process of designing the outer packaging of products, designers need to have a good understanding of the functional characteristics and "selling points" of products, and then design products according to the needs of audiences, which can attract consumers' attention at a glance, enhance consumers' purchasing power, and virtually increase product sales. This is also the function of visual communication design and computer graphic image design in commodity packaging design.
6. Application of Visual Communication Design and Computer Graphics Image Design

6.1. Interface design
Visual communication design and computer graphics image design are mostly used in many electronic products, including mobile phones, tablet computers and computers. The combination of visual communication design and computer graphic image design can make the interface of mobile phone, tablet computer or computer more artistic and ornamental. In this way, on the basis of keeping the original operability and functions of related electronic products, it is more in line with consumers' aesthetics, and is conducive to providing consumers with visual enjoyment.

6.2. Illustration painting design
In the process of illustration painting design, it also needs to be applied to visual communication design and computer graphic image design. Generally speaking, in the design process of illustration and painting by computer, the related software needs to have basic functions such as color matching and painting. Designers will use "pencil" to draw drafts, and then use computer graphics and visual communication design to color and artistic design sketches in the software. Most illustrator designers will use computer graphics and image technology to create, and at the same time combine visual communication design in the process of creation, so as to create more excellent paintings.

6.3. Product packaging design
In the process of product packaging design, visual communication design and computer graphic design are widely used. In the process of purchasing a certain product, the unique packaging design is an important part to attract consumers' attention. Many factors need to be considered comprehensively in the design of product packaging, and visual communication design and computer graphic design are used as auxiliary in the design process, so that the packaging design can achieve the best effect. Packaging is one of the important channels to realize the value of goods. Packaging can improve the visual communication effect of goods, which can not be separated from the assistance of computer graphic design. Product packaging designers use computer graphics and image design to transform product packaging, achieve better visual communication effect with skills, attract consumers' attention, and help promote consumers' desire to buy.

6.4. Text design
Text design is the basic application in graphic design. In the traditional form, if you want to process text, you can use drawing software and word processing software, but you can only make simple adjustments to the text, such as performing some artistic processing on the shape, color, font size and font of the text. This way and method of processing text is too simple to achieve customer satisfaction. With the wide application of computer graphics image design, it can bring different artistic effects to text design. Professional computer graphics and image design software can adjust the text image carefully, convey different visual effects through different text images, and serve the audience better. For example, if the merchants need to promote their products during holidays, they will choose text propaganda as the form of advertisement. Computer graphics and images can be used to design the propaganda text with strong festive atmosphere and unique shape, so that the advertising effect of visual communication can be improved.

7. Conclusion
There are many similarities between visual communication design and computer graphics design, but there are also big differences. In the practical application of the two design methods, it is necessary to adjust the design process according to the design requirements and ideas. Only in this way can the effect of product design be better presented. With the continuous development of computer technology and information technology, the application fields of visual communication design and computer graphic image design will be gradually broadened, which is not limited to the current advertising
industry and multimedia industry. In people's daily life and work, visual communication design and graphic image design have gradually deepened and can be seen everywhere.

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