

Research on computer graphic and image design method based on visual communication technology

Wei-wei Zhang

College of Electronics and Information Engineering, Xi'an Siyuan University, Shaanxi, Xi'an, 710038, China

Abstract: The current computer graphics and image design is not only limited to the performance of images, more attention to visual communication, enhance the performance of images and visual communication effect. With the development and application of intelligent technology, the application of visual communication technology in computer graphic design will improve the aesthetic feeling of design works, at the same time, continue to enhance the ability of design appreciation and perception. By analyzing the overview of computer graphics and image design and Visual communication definition, and combining the relevant design elements, the paper analyzes the method of computer graphics and image design based on visual communication technology.

Key Words: Visual communication technology; computer; graphic image; design method

Under the background of Information Age, the rapid development and wide application of digital information technology make the computer become a very common tool in people's work and life. Computers are playing an increasingly important role in graphic design and Visual communication. At present, developed countries have basically fully realized the use of computer graphics and image design, in our country, the technology is also in constant exploration and development. Therefore, it is of great significance to explore the application of computer graphic design and Visual communication.

1. AN OVERVIEW OF COMPUTER GRAPHIC DESIGN AND VISUAL COMMUNICATION DEFINITIONS

1.1 Computational graphics and image design

After entering the new century, the development of digital technology and new media makes visual communication step into a new era, making people's lives more and more rich. At present, computer graphics and image design has become a very common method of art creation, and has been widely welcomed by many young users. This kind of design method can make people's imagination to maximize, at the same time in the field of education, computer graphics and image design has also played a huge role, making the teaching form become more flexible and vivid, realized to the creative potential of the effective tap. At present, there are many kinds of computer graphic design software, such as Photoshop, Flash, CAD, 3DS, Max, etc. , using these software to carry out graphic image and design work has many advantages, such as high efficiency, convenience, beauty and precision.

1.2 Visual communication

The Visual communication means that the designer, based on his own design ideas, adopts a visual communication method to express the design content. It can not only be transmitted through the audience's senses, but also through the audience's perception, at the same time can also use specific psychological effects to achieve the promotion of communication effect. In the process of Visual communication, designers first need to determine the specific content, and then through the individual-group or group-group to achieve the effect, the media is very wide, covers a lot of traditional media and new media. The ultimate goal of visual communication is to express certain ideas. Today, Visual communication have been used in many fields, the most widely used are commercial design and graphic design.

1.3 Analysis of differences in computer graphic design and Visual communication

Computer graphics and image design and Visual communication differences are reflected in three aspects: first, the time of generation is different. With the appearance and development of computer, all kinds of new technical means and tools are spouting out, which greatly improves the efficiency and quality of graphic and image design. Second, the design purposes are different. The purpose of Visual communication is to convey certain ideas through aesthetic images and images. Computer graphics and image design is objectively constructed by static image and dynamic image in two-dimensional or 3D. Third, the design skills are different. The core technologies of the Visual communication include product packaging, advertising design, etc. . The core technology of computer graphics and image design is video editing, composition, printing and other related content. Both have strong professional. In contrast, the former needs a lot of theory as support, the latter needs to master some professional computer design software.

2.COMPUTER GRAPHICS AND IMAGE TECHNOLOGY ON THE IMPACT OF VISUAL COMMUNICATION ANALYSIS

2.1 The influence of computer image technology on color elements of visual communication

In Visual communication, the use of color elements is very important, human beings have different sensory experience of different colors, so the rational use of color is very helpful to enhance the visual communication effect. In computer graphics and image technology, color is presented in digital mode. At present, the common color modes include RGB, LAB, bitmap, etc. . In the Visual communication, designers can use computer graphics and image technology to make flexible adjustments to the elements of color, and to carry out accurate grasp of color, purity and other indicators. For example, in product packaging design, we can use computer graphics and image technology to overlay multiple color elements, based on the results of big data mining, according to the needs and preferences of different audiences, design a different color model to achieve the promotion of product publicity.

2.2 The impact of computer graphics and image technology on the character elements in Visual communication

Text is an important tool in Visual communication. As a visual symbol of linguistic information, text can provide more intuitive, clear and flexible information transmission. In the Visual communication, the use of computer graphics and image technology can optimize the text elements from two aspects. First, the text content of the artistic treatment, to create a multi-level visual effects and enhance the expressive force. The second is to optimize the text format design, such as the text for vertical typesetting, or from the right side of the beginning of the text layout. In addition, through some professional computer software can also be the size of the text, font and layout of the adjustment, so that the text elements present a richer effect, to achieve effective coordination between text elements and other elements.

2.3 The impact of computer graphics and image technology on the Visual communication elements

In the Visual communication, the different arrangement often conveys the different design thought, based on this, the designer can promote the design thought accurate expression through the scientific reasonable arrangement, strengthens the design expressive force. The introduction of computer graphics technology into Visual communication can accomplish some tasks that traditional design can not. For example, in the drink design, the use of computer software can drop the process of water vividly displayed, so that the entire screen specific dynamic aesthetic. For example, when a book is published, the computer can be used for electronic typesetting, on the basis of continuous improvement and improvement, which can greatly improve the efficiency of book typesetting work, but also reduce the workload.

3. COMPUTER GRAPHIC AND IMAGE DESIGN ELEMENTS BASED ON VISUAL COMMUNICATION TECHNOLOGY

A very important role in visual communication is the element of choreography, especially in the use of computational image technology. The arrangement is to achieve the artistic process of effective request communication according to the goal request of information communication, through scientific arrangement and organization of the above visual elements, balance and coordination of each component structure. The practical application category of arranging elements is very extensive, using the transformation, overlap, isomorphism, deconstruction and deformation of graphic elements by using the graphic image processing software such as Photoshop and Painter, etc. , not only can it be personalized, but it also allows designers to use their creativity to rearrange each image or piece of information that has nothing to do with each other, the use of software modification technology and replacement functions of the image for a series of stylized modification, so that it has a different change effect.

The most basic human vision is the shape of the object and the color it produces when the human eye reacts to visible light. Color always radiates the magic charm, so in the whole process of visual communication within the role of color is self-evident. Through the use of image technology, three-dimensional design of the object, so that the object to form a three-dimensional effect and its effective color adjustment, hue, contrast, transparency and purity to adjust to the best, visually present in People's visual field of vision, so that they can have a very clear understanding of the object. Through the operation of image design, the designer fully integrates his design concept into the designed products, and through the adjustment of color information, reveals the complex color impression in nature in a regular way, display in people's vision, so that people can more directly understand the image of the information conveyed by the content.

The realization value of graphic elements is generally represented by the image production and debugging and the specific division of the image. After a series of images are collected, image technology will import them for adjustment and processing. Generally, it will be adjusted from two aspects. The first aspect is to fully satisfy the design, make a series of changes to the picture, especially filter effect processing, color adjustment and composition, etc. . The second aspect is the use of computer graphics to draw graphics, graphics and images in the computer is a very clear definition, generally divided into bitmaps and vector graphics. Bitmaps, as the name implies, are used to draw icons by bits, and vector maps are used to digitally record elements of geometric graphics. Bitmaps can be used to design the brightness of an image well, a vector diagram can completely show the original outline of a thing. In the text design can also be very good good good to use graphic design, operation and very simple, in some commonly used vector graphics software such as: CoreDRAW, Illustrator, general toolbar window will have“Font size”, “Color” and so on, we want to enter the text into the selected area directly after the art processing. The image design after processing these words will change a lot, in the visual impact of the effect has been greatly enhanced, making more vivid, so that the audience can more intuitively accept.

4 COMPUTER GRAPHIC AND IMAGE DESIGN METHOD BASED ON VISUAL COMMUNICATION TECHNOLOGY

Text design is an important part of graphic design, but also the main form of conveying design information. In graphic design, text design has been occupying an important position, but its design center has long been placed on the aesthetic treatment of text, the lack of necessary artistic connotation. On the basis of visual communication, text design will take information transmission and artistic expression as the core, and text font, size, spacing, combination of forms are only for the design of the basic part of services. As a result, text design can be more widely used in all kinds of billboards, highlighting the delivery of advertising information.

For goods, beautiful and attractive packaging is often a driving force to stimulate consumers to buy, so when plan design is applied to the design of goods packaging, we must pay full attention to the Visual communication, so as to

improve the attractiveness of packaging to consumers. In fact, the application of Visual communication design in packaging design has been more mature, and has gone deep into all aspects of packaging design. For example, magazine covers in newsstands, leaflets on the streets, moon cake gift boxes in shopping malls, and boxes of digital products are all based on Visual communication, the corresponding graphics and images are designed and processed by computer technology. These graphic images in as much as possible highlight the image itself beautiful at the same time, but also with the packaging itself, will focus on the performance of the information itself.

Film and television design has always been the main place of application of plan design. Whether it is the traditional film and animation, or television advertising is essential, or now the network video, the visual communication based on the design plan has a strong dependence. Movies, anime, TV series, network video, and so often need to have a certain degree of artistic and artistic conception, and the screen is to show its artistic and artistic conception of the main form. In film and television design, the use of graphic design to design and process the screen, including the composition of the screen, color, near and far, etc. , can play a very good role in enhancing the artistic effect of the screen, furthermore, it has positive promoting significance to the overall promotion of the artistic quality and creative artistic conception of the film and television. Of course, the combination of Visual communication and graphic design has been used in numerous TV and web advertising applications. The design of images and forms of advertising can further highlight the creativity of advertising, thus display the advertisement and the product characteristic, fully attracts the audience's attention.

5 CONCLUSION

In order to optimize the graphic design system, designers should pay attention to the effective integration of computer graphic design and Visual communication design, and it is fully used in architectural design, clothing design, text design and packaging design and other fields. This method can not only improve the three-dimensional and aesthetic sense of the design works, but also maximize the appreciation and perception of the design effect. It can be seen that the above two design techniques have very high application value and application prospects, worthy of further promotion and application.

REFERENCES

- [1] Hu Bo, Chen Xiaodan, Liu Xiaoyan. Research on computer graphic image design and visual communication design [J]. Computer CD-ROM Software and Application, 2014, 17(18): 213+215.
- [2] Wen Jiaqi. Computer graphic image design and visual communication design [J]. Electronic Technology and Software Engineering, 2016 (07): 85.
- [3] Li Ping. The application of computer graphic image design and visual communication design in TV pictures [J]. Television Technology, 2018, 42(10): 40-42, 69.
- [4] Liu Yanling. Exploring the technical processing of computer graphic image design and visual communication [J]. Modern Industrial Economy and Informatization, 2016, 6(05): 86-87.
- [5] Hu Bo, Chen Xiaodan, Liu Xiaoyan. Research on computer graphics and image design and visual communication design [J]. Computer CD-ROM Software and Applications, 2014, 17(18): 213, 215.