Research on the Innovation of Multimedia Technology and Visual Communication Technology

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Abstract: Visual communication technology is widely used in the field of design. With the continuous advancement of science and technology, multimedia technology in China has also made great progress. The application of multimedia technology to visual communication technology is of great significance. Only by combining the two ingeniously and actively can it ensure the long-term development of visual communication technology and vitality. Based on this, this article will briefly describe the concept of multimedia technology and visual communication, analyze the impact of multimedia on visual communication technology, and propose innovative strategies for multimedia and visual communication technology for reference.

1. Introduction
From the perspective of the nature of visual communication design, it is to meet the needs of consumers through the use of design means, and the main purpose is to design and construct the appearance or shape of the object. Designers can make full use of multimedia technology to provide products with visual impact, while meeting the needs of the audience and obtaining valuable information. Visual communication workers need to innovate the relationship between multimedia and visual communication technology, present the information to be conveyed to the audience more clearly, and improve the value of visual communication products.

2. The concept of multimedia technology and visual communication technology

2.1 Multimedia technology concept
The fast-developing multimedia technology is mainly based on computer technology, combined with various advanced information technologies to form scientific and technological means. Applying multimedia technology to visual communication design can improve the visual effect of the designed product, expand the dimension of visual communication design, break through traditional text, color, graphics and other elements, innovate in the direction of video, audio, etc., and have strong practicality.

2.2 Visual communication technology concept
Visual communication technology is an image formed by text, graphics and other composite elements. With the continuous development of information technology, the development of multimedia technology has enriched the content of visual communication technology. The visual communication technology has been transferred from the traditional use of graphics or text. The form of giving to the audience is transformed into the form of using video to present to the audience through video to enrich the ways
and methods. At the same time, more designer’s emotions can be incorporated into the video, making the connotation contained in these works easier to be accepted by the audience. Visual symbols include stage design, photography, television, buildings, text, etc. Communication refers to the process by which designers use visual symbols to convey information to audiences. This kind of communication can make it possible to communicate between each other, between people and nature, and human and human.

3. Influence of multimedia technology on visual communication technology

3.1 The relationship between multimedia and visual communication technology

Multimedia technology and computer technology are inseparable. Driven by the information age, visual information is mainly selected by the audience in the way of communication. In addition, the application field of visual communication includes many fields, of which multimedia technology is also a part. First of all, visual communication plays a guiding role in multimedia technology, and it puts forward higher requirements for multimedia technology. Secondly, multimedia technology also affects visual communication technology. It provides more technical means for visual communication innovation and also adds new ways to convey information. In a word, multimedia technology and visual communication technology complement each other, including subordination, mutual influence and interactive development.

3.2 The characteristics of the application of multimedia technology

With the support of multimedia technology, the individual characteristics of visual communication design are gradually revealed, such as integration, humanity, and large information. The innovative integration of multimedia technology and visual communication technology not only enriches the design and development of visual communication, promotes its development in a diversified direction, and enhances the efficiency of visual communication and transmission, but also maximizes the visual impact of visual communication and enriches the visual communication technology. Information and communication development have had a profound impact on visual communication design.

4. Innovation strategies for the integration of multimedia technology and visual communication technology

4.1 Standardize the design principles of multimedia technology in the visual communication industry

For professional design in the field of visual communication, the most important part is to develop the basic elements of aesthetics. It should be noted that not only aesthetic elements occupy an important position in the design but also maintain the order of visual elements. For example, in the process of applying visual communication technology, practitioners must implement the characteristic of beauty as the fundamental principle from beginning to end. In particular, when technicians perform aesthetic re-creation practices, they first need to consider people’s thoughts. Different groups have different aesthetic understandings, so the beauty they create must conform to most people’s perceptions. The foundation of creation is people’s consensus on beauty. After determining the direction of creation, technicians need to conduct a targeted and systematic search for the appropriate aesthetic laws and aesthetic theories, so that the process of creation is carried out on the basis of scientific guiding theories. Secondly, the creative process and computer multimedia technology should be organically integrated. The fusion can be diversified. Multimedia technology can effectively analyze basic data and materials, and conduct targeted fusion of different elements, so as to create a more standardized and orderly visual element. Moreover, the application of multimedia technology can also make the finished products more three-dimensional, image and diversified display to maximize the basic functions of visual communication and make the field more realistic and universal.
4.2 Use dynamic and static multimedia methods to concretely innovate visual communication technology

Multimedia technology has a positive meaning in the continuous development of today’s technological level. The integration in visual communication with the original technical means has a more realistic significance. First of all, from the efficiency of design, the application of multimedia technology can make the effect of design communication reach the desired level more quickly, and multimedia technology can also have more advantages than traditional design in terms of visual effects.

For example, in the process of effective integration of multimedia technology and visual communication technology, a variety of design software can be used to upgrade the design method, such as Photoshop, illustrator, CorelDRAW, InDesign, C4D and others. The use of these software can significantly improve the quality of visual communication design. They can also use dynamic and static design methods that are more suitable to combine dynamic design elements with static elements to better present the required information and enhance its value. Analyzing from the perspective of design presentation mode, if the presentation mode is changed more interestingly, the attention of design can be greatly improved, and the value of visual communication can be improved. From the perspective of the combination of dynamic and static, it can be mainly used as a common design method in multimedia design schemes. If this method can be applied, it must be able to combine different animation elements and static images and text. It can make corresponding combinations, arrangements, and collocations so that designers’ basic design concepts can be better expressed. For people’s growing visual needs, the application of multimedia technology can also be better met. Figure 1 shows the 3D image reconstruction system of visual communication technology.

![Figure 1. 3D image reconstruction system of visual communication technology](image)

4.3 Enhance the creative attributes of visual communication technology to ensure the need for visual communication

The continuous development between multimedia design and visual communication can well promote the original creativity for a better upgrade. From the perspective of creativity, it is not only something that can be accomplished overnight. If multimedia technology can be used to communicate the original proportions, it can make the creativity more rapid and transform it into a physical design concept. The arrival time will be further shortened, which can better stimulate more industry’s attention to aesthetics.

For example, professional training can be carried out for designers first to guide them to open up and improve their thinking and creativity and have more diversified thinking to ensure that existing technical personnel can have the ability of innovative thinking. At the same time, it should be noted that
technicians can start from the original intention and fully understand the needs of customers before the creation. On this basis, they can innovate analysis to provide better design solutions for customers. The program must be based on the approval of relevant national documents, and the program focuses on aesthetics and general adaptability. If the innovative intention is to be realized, advanced technology should be applied for implementation. In the use of advanced technology, limitations of technology application should be avoided, so that advanced technology and operation methods can be effectively integrated, and a better realistic foundation can be provided for creative technology solutions. In the process of in-depth integration of creativity and technology, it is necessary to find out the common ground between the two and closely integrate. It can be found that if technicians can apply technology more proficiently, then the workload in the integration can be reduced, and the designer’s experience of different technology applications can be improved. The most important thing is that design creativity needs to start from people’s aesthetic reality, and effectively integrate their aesthetic reality with the previous design, so that the design intent can meet people’s actual aesthetic needs. Figure 2 shows the multimedia technology and visual communication technology diagram.

![Multimedia and visual communication technology](image)

**Figure 2. Multimedia and visual communication technology**

### 4.4 Appropriately optimize multimedia equipment

In the design of visual communication, the application of multimedia technology can upgrade the original design, but it is also necessary to pay attention to the optimization and transformation of different multimedia technologies, so that the multimedia technology means can be analyzed from multiple angles and all directions without ignoring the important role of software when upgrading hardware.

For example, in the process of multimedia technology upgrading and transformation, technicians need to start with the analysis engine. Because the analysis engine occupies an important position in the whole system, as the brain of multimedia technology. The analysis engine can connect the image acquisition system, user interface and output peripheral devices to give instructions and improve the integrity of the whole system. As for the image acquisition system, it can be designed as a new system composed of U/S, digitization, image server, image database, etc., to improve the comprehensiveness of the system. The user page can be composed of simpler, the display and input devices to make it more convenient in visual communication design. Meanwhile, the user interface can be connected to the analysis system to develop output peripheral devices. The output peripheral devices are mainly printers, web browsers and other output devices composition. The concept and inspiration of visual communication can be better turned into reality. Multimedia technology can play a better effect in the field of visual communication, and it can also lower the threshold for executives. As shown in figure 3 is the multimedia technology and visual communication technology system architecture.
5. Conclusion
In summary, the integration and innovation of multimedia technology and visual communication technology is the general trend of current development. It is a process that requires continuous improvement, perfection, mutual coordination, and running-in. First of all, relevant designers should use multimedia technology to coordinate the relationship between various elements to achieve a harmonious state as much as possible. Secondly, designers should pay attention to the transmission of information expressed in visual communication products to achieve the basic goals. Incorporating multimedia into visual communication technology, designers need to continuously innovate the application of multimedia technology, use multimedia technology to collect more information for visual communication design, and use multimedia technology to expand the publicity of visual communication products to meet the aesthetics of audiences demand. The integration and innovation of multimedia technology and visual communication technology will introduce new vitality into film and television, advertising and other industries.

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