



Visual Communication Design Based on Collaborative CAD and Visual Importance Under the Impact of New Media Art

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Abstract. With the growth of society, people have higher requirements for the environment everywhere. As a result, visual communication design has received more and more attention, and the growth of modern technology has contributed to the growth of multi-media art. Novel artistic creation methods make multi-media art more dynamic, and traditional visual communication methods are already relatively backward. Therefore, visual communication design needs to be continuously explored and reformed in order to keep up with the pace of the times. With the continuous improvement of artistic techniques, new media art emerges as time requires, which promotes the continuous progress of visual communication design. Therefore, this paper proposes innovative research on visual communication design under the impact of new media art.

Keywords: New media art; Visual communication design; Innovation research; Collaborative CAD

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1 INTRODUCTION

With the passage of time, people have a deeper understanding of the changes in the surrounding environment, and at this time, visual communication design has also received more and more attention [1]. Also, with the requirements of social growth, it must adapt to the growth of the times. When technology and art develop rapidly, they present a new morphological feature, that is, new media art [14]. The emergence of new media has played a strong role in supporting its growth, but at the same time, new media is constantly reminding it to constantly innovate and have the flavor of the times [6]. Influenced by new media, visual communication is sometimes referred to as "new media art." New media art is difficult to define in a short period of time, and the fields and disciplines it involves often lead to debates, and even in-depth research and discussion on new media art may not be accurate. However, this emerging, fashionable, and popular word is always in front of people's eyes, ears, and hands, so people must take it seriously. It is an indispensable transmission method

in human daily life. People should better understand and understand it, analyze it, discover its growth law, make better use of it, and make it better serve society [8].

Different from the creation of art, visual communication design is more in the form of a plane to convey and express relevant information [15]. It changes the communication characteristics of the original media to a certain extent, highlights the information-based visual art communication effect, and allows people to have a good interaction with the information generated under the new visual performance and then feel The application of new media art in different colors and form concepts [11]. In the traditional design process, visual communication design emphasizes the combination and structure of planes and pursues a functional visual image. Under the impetus of new media, its concepts and methods have also changed. On this basis, a visual design mode of individuality, versatility, and multi-perspectives has been introduced. In the process of browsing, all the content will be presented to the readers in a certain order according to the previous design materials so as to reflect their excellent design ability and unique visual effects [16]. Therefore, this paper expounds the innovative research of visual communication design under the impact of new media art and analyzes new media art and visual communication design in order to grasp the visual communication design under new media art and use graphic language in visual communication design to automatically arrange Algorithms, user evaluation results, in order to achieve scientific basis, lay the foundation for future visual communication design.

In today's information explosion and resource sharing, people have begun to consider how to obtain information more quickly and conveniently and make better use of shared resources [13]. New media is the result of technological growth in the new era, which provides a variety of communication methods for artistic creation. However, due to its relatively short time of birth, most people do not have a deep enough understanding of the high speed and directness it brings. It is expected that its resources can be more abundantly and effectively applied to the growth of communication. These visual and tactile feelings become clearer and faster through the information they transmit to the audience, giving people sensory stimulation and wonderful interactivity [3]. The emergence of new media is inevitable, and its impact on it will not stop. Individuals, the public, and social media are important carriers of new media, and they play an important role in the growth of new media art. Therefore, people must promote healthy growth. Under the role of this new media, people are looking for the future growth direction, but people can't always be out of touch with people and the times. Caring about people's needs, promoting the growth of society, and conforming to the growth of the times is not only new media, nor simple visual communication, but communication in multiple fields [20]. The multi-party reserves of designers, the in-depth feedback of the audience, the coordination of business and economics, and the social ethics all play a decisive role in the artistic growth of new media.

2 RELATED WORK

What exactly is new media? Although this notion is not very clear now, in new media, the word "new" is definitely relative to traditional radio, television, newspapers, etc. The interactivity of new media can be realized not only through digital, network, mobile, wireless communication, and other technologies but also through the interaction between people and machines through terminals such as computers, mobile phones, and digital television [17]. This is a communication that goes beyond words, pictures, and symbols.

Kim HC believes that the so-called new media art is actually a digital interactive media art. The multi-media artistic expression form produced under the social background of explosive growth [7]. Liu SW holds the view that the category of contemporary new media art is extremely broad, and with the progress of the times, more and more art types will be classified as new media art [10]. Strauven W explained new media art from two perspectives: a broad sense and a narrow sense. New media art is closely related to new media technology and is based on new media technology.

Artistic creation also includes those who rely on modern digital technology and Traditional works of art that can be copied and disseminated on a large scale [18]. Choi said that new media art is a new type of interdisciplinary art form. It is an innovative way of expressing new media in the field of art. Its representation process, comprehensive processing function, and new sensory experience characteristics all reflect The impact of the new media art form on the public [2]. Moreno MA believes that new media research can be divided into three stages [12]. Comunian proposed that new media art is related to many disciplines [4]. Zhao Y explained the relationship between new media art and technology and then gave a comprehensive introduction and explanation of graphic composition methods such as isomorphism, heterogeneity, and complex construction, as well as graphic creative methods such as disconnection and symbiosis. A window to understand new media art [21]. Fan Y's in-depth analysis of the connotation and evolution of visual communication design provides clues and provides a theoretical basis for studying the future trend of visual communication design in the new media era and the unification and integration of design and science and technology [5]. Tang S analyzed every detail and concept in new media design from the perspective of art design, focusing on the combination of theory and practice [19]. Li S mainly learned the theoretical basis of digital art design, the elements of digital art design, and the practice of technical special design used in digital art design [9].

3 METHODOLOGY

3.1 New Media Art

Before analyzing the concept of "new media," it is necessary to have a certain understanding of the concept of "media." The media can transmit information to the audience through various media, and the media that can be updated in function is the current "new media" of mobile phones. In the comparison between the new and the old, people usually have an inaccurate grasp of the concept of new media, treat new media and new media art as equals, and think that compared with traditional information dissemination methods, new information transmission channels such as the Internet and satellite It is new media, and can also be used as new media art (as shown in Figure 1). In fact, the form of media is constantly developing, and there will be various media in the future, such as biological media, and their names will also change with the change of media. The medium chosen by the artist is only a method of thinking and expression, and there is no difference between the old and the new.



Figure 1: New media art.

It can be said that there is an essential difference between new media art and emerging media art. Like digital media, it can convey the artist's ideas in the form of media and reflect the unique

characteristics of the times. In short, new media art is high-tech artwork. New media art has penetrated into every aspect of art.

The emergence of new media is both an opportunity and a challenge. New media breaks the defect that traditional media can only passively accept information and content so that users can feedback, evaluate, and interact with the delivered content, thereby forming new media content. New media is not only representative of emerging media but also of the innovation and transformation of traditional media.

First, compared with traditional media, new media has digital characteristics. Traditional media does not rely on digital media but on physical communication. Traditional media mainly use newspapers, radio, magazines, and television as the main carriers, and their communication media mainly rely on material carriers. They have certain advantages in the breadth and depth of content, but their speed of dissemination is slow, and the scope of dissemination is small. Greater impact. However, after human beings entered the computer age, the electronic technology of computers has completed the storage, processing, dissemination, and presentation of information, which has created favorable conditions for the emergence and rapid growth of new media. In addition, with the continuous growth of new media technology, traditional media have also been impacted to a certain extent, such as laser phototypesetting in newspapers, non-linear editing in TV editing, etc., all use digital production technology. New media presents digital characteristics that are different from traditional media in terms of communication media.

Second, compared with traditional media, new media has the characteristics of fusion. Information technology based on digital technology and represented by the Internet promotes the efficient integration of media, which is fully reflected in the tools, operations, and concepts. The integration of the tool level refers to the efficient combination of various media tools such as TV, Internet, and mobile phones. The integration of the operation level is the combination of media and business operations, and it is also the demand for journalists. Conceptual integration refers to the integration of various forms of mass communication, interpersonal communication, group communication, and organizational communication driven by new media technology. However, compared with traditional media, there is basic independence or relative isolation between different media, especially in the form of new media. Due to the constraints of practical conditions and other factors, it cannot be integrated into the form of new media. Therefore, integration is an important feature that differentiates new media from traditional media.

Third, compared with traditional media, new media has the characteristics of interactivity. Compared with new media, the interaction mode of traditional media shows the characteristics of single and linear. Due to its own entity and one-way characteristics, traditional media cannot communicate with audiences effectively and in real-time, and the means of interaction are relatively simple. For example, in paper publications such as books, printing, magazines, newspapers, packaging, posters, etc., the transmission of information is static, and readers should read according to the good performance of the media, and it is one-way. If you encounter any problems, you cannot communicate with the media in real-time. New media can allow two-way communication between content and audience. Through advanced technologies such as the Internet, users can interact with content and audience at any time. This is the difference between new media and traditional media.

With the help of new technology, new media art and traditional media art are in great demand, and they have four main characteristics:

(1) Diversity. The most prominent feature of new media art is its fusion of multiple media, which enables it to recreate and process its form and content. For example, in traditional opera, the content can be adjusted appropriately according to the social environment at that time, and different musical backgrounds can be added to express different roles so as to achieve the purpose of "old bottled new". This combination of three different art forms of literature, music, and drama can create a new

concept, which is incomparable to single-media art. Diversified and diversified artistic expressions of new media can bring greater growth space to the audience. The flexible interaction of media and the advanced technology of modern media can perfectly integrate art and technology so that the audience's aesthetics can be achieved. Further improvement will give the audience a more wonderful feeling and experience.

(2) Interactivity.

(3) Virtuality. Due to the growth of modern media technology, contemporary artists can use new technology to exert their imagination and make their art create more possibilities. The reason why virtual art is loved by many artists is that it can lay a solid foundation for the artist's creative path and create an incomparably broad space for them. With the support of modern information technology, artists can enjoy themselves. Give full play to your imagination and use virtual characteristics to create new artistic aesthetics that go beyond reality, space, and time. From another perspective, the virtual world is like another form of reality. It is impossible for artists to provide human beings with new perspectives and roles, so they can only virtualize virtual scenes, and the virtual world can use Computer and other new media to display 3D, 4D, IMAX, and other technologies, let the audience feel a unique artistic expression in the process of watching.

(4) Publicity. In today's global economic integration, new media art is based on the network, and it is committed to conducting borderless exchanges and sharing on a global scale, striving to allow people from all over the world and different cultural backgrounds real-time communication and interaction. The emergence of new media makes personal information more individualized and more open, and modern values also show the characteristics of diversity and the basic characteristics of new media itself, such as sharing, interactivity, and openness, constitute The dialectical relationship between publicity and individuality inherent in new media itself. The unique aesthetic characteristics presented by the new media era, on the one hand, enhance the publicity of art. On the other hand, they make art better integrated into people's daily lives so that the general public can participate in the growth of new media art. During the event, enjoy the charm of new media art. The public nature of new media art makes it gradually break away from the historical tradition of "high and low" and "a handful of people", making it closer to life and making art appreciation and creation an indispensable part of people's daily life.

3.2 Visual Communication Design

Visual communication design is an active behavior that conveys specific information to the target audience by designing various image elements (as shown in Figure 2). Its primary use is in vision, and it is primarily through the creation and representation of various graphic elements in secondary vision, including signage, typography, painting, and electronic installations. In short, visual communication design is the process of transmitting information to the target audience through the media platform. The designer is the direct communicator of visual information, and the audience is the direct receiver of visual information. Over time, its expression has also changed from the original 2-D to 3-D. The diversified growth of media can not only promote visual communication designers to choose appropriate expression methods according to their own needs but also make visual communication design more closely connected with other fields and have more diverse forms.

Visual communication design features are as follows:

(1) Connectivity and interactivity

With the rapid economic growth, network technology has been widely used in all walks of life, greatly promoting the growth of the entire industry. In the current era, the application of new media art in visual communication design also needs the support of information technology and the Internet.

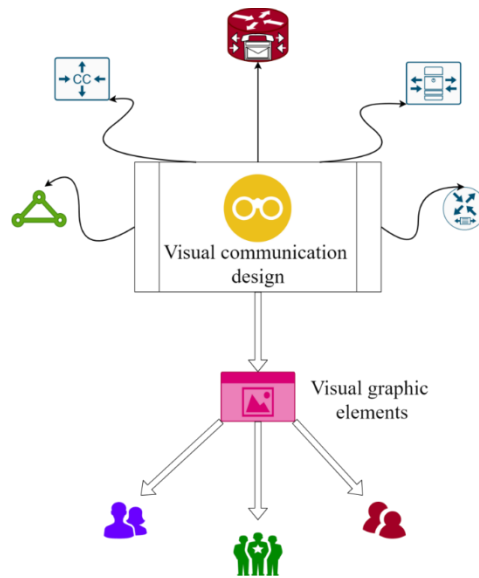


Figure 2: Visual communication design.

New media art can make full use of its own advantages to achieve information sharing and cultural interaction through the Internet and other technological means. Relevant people can create more works of art according to their imagination, and art workers can also construct a space environment through the Internet, create different art forms, and complete multiple tasks at one time, allowing different tasks to be connected to each other.

(2) Be communicative and expressive

In the process of visual communication design, the artistic function of new media has to go through five stages: connection, integration, interaction, transformation, and presentation. In the process of creation, new media art can truly build the interaction between the appreciator and the work.

(3) New media art can be understood as conceptual art in essence

The traditional way of art creation is monotonous and monotonous, while the application of new media art in visual communication design has many different forms of expression. However, even with new technologies, new ideas must have new ideas in order to enrich the creativity of new media. In addition, fundamentally speaking, new media art is actually a kind of conceptual art. The author must have strong thinking and imagination. When creating, it must pay attention to expressing his own character and characteristics and convey information in his own way. Let more people pay attention to the ideas that the new media wants to convey.

3.3 The Relationship Between New Media Art and Visual Communication Design

(1) New media art is a form of visual communication design performance

(2) New media art is an extension of the growth of visual communication design

Visual art performance itself is also constantly innovating. Whether it is communication design, display, etc., new technologies are constantly used so that the visual art media is constantly updated and innovated. The improvement and innovation this time have not only enriched the expression form of visual art but also increased its expression content and shortened people's cognition of information, making people choose new media more in work and life. New media art can combine sound, image, and video and provide people with a more comprehensive way of information dissemination through new technological terminals so as to achieve the purposes of publicity, beautification, and notification. Therefore, new media art can be said to be a combination of communication and expression of visual art. The ultimate goal of visual communication art is to achieve communication between people and serve people's work and life. The art of new media, on the basis of more participation and interaction, is closer to people's daily lives. In the process of listening and listening to the information, we can better enter the new media art, feel and integrate into it through the software client, and obtain happiness and joy from it. New media art can not only bring people a pure visual experience but also bring people a variety of different needs. This makes people more dependent on new media. This engaging and interactive art shows humane care that allows users to not only interact with customers but also communicate and collaborate with them. Such human-to-human communication is not only the goal of visual communication but also an interaction of the humanistic care and emotional needs of society.

3.4 Application of New Media Art in Visual Communication Design

(1) Visual innovation - focusing on the presentation of the expression effect of dynamic graphic design

Information dissemination is no longer limited to two-dimensional information but flows on a dynamic transmission level of three-dimensional or even four-dimensional information. In the design of new media, various kinds of information are transmitted in a dynamic form, which has advantages over traditional static design.

Specifically, various current mobile terminal applications will use "motion effect design," which can not only increase the fun of reading but also ensure that readers are in a happy mood and will not make people feel bored. With the help of new media technology, the design level of the 2020 Tokyo Olympic logo has been greatly improved. The logo is mainly spherical and displayed in a dynamic form. When the sphere rotates, the details of LOGO will change, highlighting the visual impact and creating a strong contrast. The design concept fully embodies the laws of the earth's operation, emphasizes the extension of the arena effect, and further promotes the fairness of the Olympic movement.

The effect of dynamic image design is much better than that of static effect, which can not only increase the visual pleasure but also deepen the audience's impression. Therefore, in the visual communication design of new media, dynamic image design is an important creative idea.

(2) Interactive innovation - strengthening the comprehensive experience by combining multiple senses

In the field of visual communication design of new media, with the continuous growth of digital media technology, creative design is constantly being carried out. Using new techniques or using more novel materials and installations, designers have linked vision with other senses, creating a new, integrated model that enhances the senses. This information dissemination method includes both visual information transmission and various sensory experiences, which ensures the diversity of the audience's perception experience. Today, with the continuous growth of modern digital

technology, the visual communication design based on user experience enhances the comprehensive experience of multiple senses and presents a more novel humanized feature.

For example, wearable smart devices, such as smart bracelets, smart hairbands, etc., will connect with the senses of different audiences, combining vision, hearing, and other senses. Such a smart bracelet will record the user's daily life, including sleep, diet, exercise time, heartbeat, and other information, so as to better realize the information exchange between the user and the machine. The device contains a variety of functions, such as voice, touch, and touch, and is a perfect combination of vision and touch. Of course, some multi-media interactive installations displayed at large-scale exhibitions also use new media visual communication that combines multiple senses. The design of the kitchenware experience center is a brand-new transformation of the interactive interface, which contains a lot of information and provides various information so that users can get a clearer and more comfortable feeling during use. On the interactive interface, the growth and growth of kitchenware brands are completed by trees, while at the other end, the various services and products of kitchenware brands are displayed from the perspective of the audience. Finally, there is the interactive area, which records the information of the experienced person and uploads it to the photo frame, which fully reflects the concept of the kitchenware brand, that is, "home." That is, new media visual communication design can not only transmit data but also connect visual information with other senses so as to obtain a richer experience.

(3) Artistic transformation - gradually optimize the design concept and way of thinking

New media art design, as the name suggests, is to express ideas and concepts through new digital technologies. That is, visual communication design is based on the concept of new media art, which is to realize the expression and transmission of data information.

The new media art design gradually replaces traditional artistic expression. By using new media, the traditional artistic language is made more modern so as to realize the renewal of the artistic language. As a new product of technological and artistic growth, visual communication design highlights the reverse transformation of design thinking. With the continuous growth of the economy, people's living standards have been greatly improved, and people's needs for art design are constantly updated, which means that people's aesthetic ability has been optimized to the greatest extent so that the expression of art design is more diverse and comprehensive. On the other hand, it will also improve the designer's design level, highlighting the designer's creativity and unique design style.

With the growth of new media art design, visual communication design has more and more diverse visual expressions, thus changing the thinking and concept of design and gradually moving towards a more positive and rational direction. Of course, as an important part of digital technology, plane vision has undergone continuous optimization and growth and has developed from multiple angles and all directions. With the progress of society, the art design of new media will be more and more used in new fields, and its application is more and more extensive. It is also constantly optimizing it to make it grow and develop.

3.5 Graphical Language Automatic Arrangement Algorithm in Visual Communication Design

(1) Calculation of graphic display size and position

The layout size XY is described X with and Y represents height and width, respectively. The number of layout layouts required to be the minimum and the surface utilization to be the highest, the layout objective function is as follows (1):

$$\min = (m-1)Y + h \quad (1)$$

(2) Graphical language description

It is the basis and core of realizing the automatic organization of graphic language. The grammar defines the relationship between primitive symbols, which contains abstract and detailed grammar. The abstract grammar defines the logical connection between the primitives, and the concrete grammar defines the appearance type of the primitives and the geometric position relationship between the primitives.

Grammar description based on rules: It defines the logical relationship between primitives and primitives through a set of rules and describes information such as the positional relationship of primitives through a set of rules. The formula of this description method is as formulas (2) and (3):

$$G = (Q, AG, CG) \quad (2)$$

$$AG = \{s \mid s(q_1, q_2, n); q_1 \in Q, q_2 \in Q\} \quad (3)$$

The expression CG is as the following formula (4):

$$CG = \{(q, render, layout) \mid p \in P, render \in R, layout \in L\} \quad (4)$$

In formula (4) it is R used to describe the set of primitive appearance types; L it is used to describe the set of primitive position relationships; $render$ it is used to describe the correlation between primitive elements; it is $layout$ used to describe different primitive classes P it is used to describe the primitive symbol system.

(3) Abstract state machine (ASM)

ASM is suitable for computer-based systems and can be used in actual communication design. ASM is proposed based on algebraic theory, and the key is to introduce a state transition system in algebraic theory to reflect the basic features of the model, that is, state transitions. ASM belongs to dynamic algebra, and the expression is as the following formula (5):

$$\Sigma = \{f_1^0, f_2^0, \dots, f_{kL}^0, f_L^1, f_{kv}^\pi\} \quad (5)$$

A superdomain is usually divided into several subdomains, and the subdomain segmentation is usually described by a feature function. If f defines a domain, the following formula (6):

$$f(a) = undef \quad (6)$$

In summary, add the following settings:

1) Separate several swim lanes in the visual communication design. Each graphic language will be carried out in a specific swim lane to highlight the participants of the activity. The direction of the swimlane can be vertical or horizontal.

2) Convert the primitive unit to the sub-stream format, which is convenient for editing.

3) Using parallelism and selection processes to automatically orchestrate graphical languages.

3.6 User Evaluation Results Test

Assuming that W is used to describe the internal relationship between cognitive style and attention level, and the amount of fixation and fixation time is described in turn by BH_{xy} and BC_{xy} , it can be described as formulas (7) and (8):

$$BH_{xy} = W(V_1, V_2, V_3 | \Gamma_1, \Gamma_2) \tag{7}$$

$$BC_{xy} = W(V_4, V_5 | \Gamma_1, \Gamma_2) \tag{8}$$

The independent variable of the relation function is the degree of membership of a particular cognitive style in the visual communication design, which ω_r is described by, $\omega_r \in (0,1)$.

The frame description of the experimental research problem is shown in Figure 3.

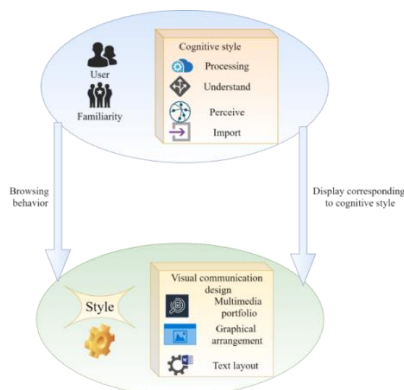


Figure 3: Framework of experimental research questions.

The user's degree of attention to the visual area H_{xy} and the membership degree of the user's cognitive style by the C_{xy} corresponding area adjustment coefficient α_{xy} in turn to obtain the first adjustment value BH_{xy} and, BC_{xy} then BH_{xy} divide V_{xy} the sum by the sum VC_x in turn, that is, the obtained value AH_{xy} of AC_{xy} the sum. The formula is described as the following formulas (9), (10), (11) and (12):

$$BH_{xy} = \frac{H_{xy}}{\alpha_{xy}} \quad (9)$$

$$BC_{xy} = \frac{C_{xy}}{\alpha_{xy}} \quad (10)$$

$$AH_{xy} = \frac{BH_{xy}}{VH_x} \quad (11)$$

$$AC_{xy} = \frac{BC_{xy}}{VC_x} \quad (12)$$

In the case of $x=0$, AH_{xy} and AC_{xy} describe the minimum value of the average fixation amount and fixation time in each area in turn. In the case of $x \neq 0$, the two variables average the amount of fixation and time in different layouts, Then there are the following formulas (13) and (14):

$$AH_{0y} = \frac{\sum_{x=1}^4 AH_{xy}}{g} \quad (13)$$

$$AC_{0y} = \frac{\sum_{x=1}^4 AC_{xy}}{g} \quad (14)$$

The satisfaction of the research subjects in the visual communication design can be obtained by formula (15):

$$S = \sum_{i=1}^n (n-i+1) S_i \quad (15)$$

4 RESULT ANALYSIS AND DISCUSSION

The number of experimental subjects was set at 330, and 305 valid questionnaires were recovered. Table 1 shows specific information on the research subjects, and Table 2 compares the algorithms.

Profession	Number of people	Age
Student	90	23.26 ± 2.93
Designer	90	47.16± 12.33

Edit	60	37.66 ± 5.63
Clerk	30	28.69 ± 8.33
Other	60	38.59 ± 18.15

Table 1: Research Object Information.

Index	The proposed algorithm	ACMR	PVO
Average fixation time/s	0.83	0.61	0.54
Average gaze volume	0.81	0.46	0.39

Table 2: The comparison of the algorithms.

The new media art is divided into traditional new media art and new new media art, and a comparative study is carried out on the recommendation effects of different new media art, and it is found that the advantages and disadvantages of new media art are compared through multiple evaluations.

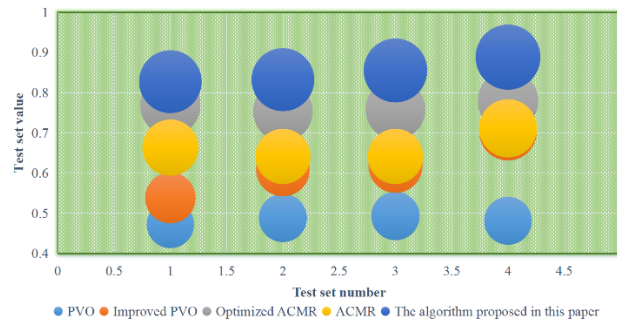


Figure 4: F1 value table of traditional new media art prediction results.

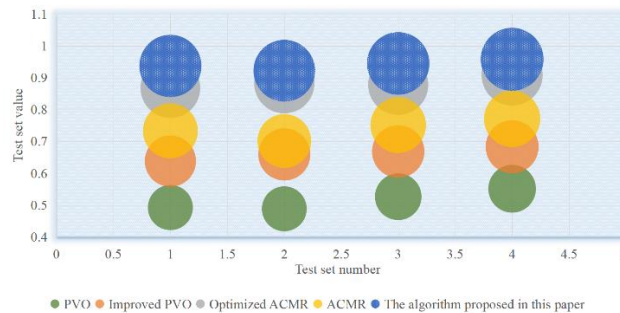


Figure 5: F1 value table of new media art prediction results.

From Figure 4 and Figure 5, as the proportion of the test set continues to decrease, that is, the proportion of the training set continues to increase, the algorithm model mentioned in this paper is generally better than the traditional new media art and new media art recommendation accuracy.

The other four algorithms. Specifically, when recommending traditional new media art, the F1 value is 8.6% higher than the other four algorithms as a whole, and it can reach 0.888 when the test set is 10%; when recommending new media art, the F1 value is higher than the other four algorithms. 5.6%, and it can reach 0.958 when the test set is 10%. The above results show that the algorithm mentioned in this paper is effective in improving the recommendation accuracy and improving the recommendation results.

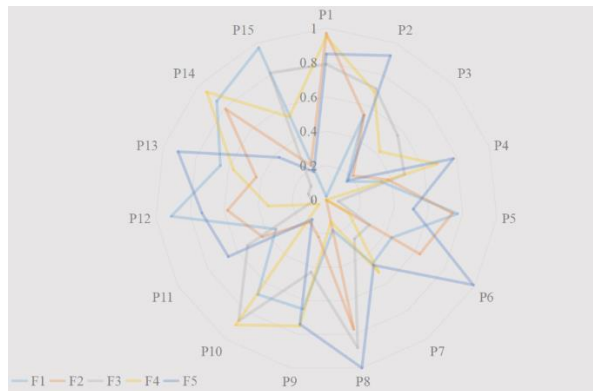


Figure 6: Online random satisfaction.

Figure 6 shows the results of satisfaction in visual communication design due to the large error of online random satisfaction. Therefore, the following is an example analysis of satisfaction in visual communication design. At the same time, the research group opened group A for satisfaction in visual communication design based on new media art and group B for visual communication design under traditional new media art. satisfaction. The study group divided testers into two groups, A and B: Group A had 717 testers, while Group B had 734 testers. Thirty-six testers were randomly selected to test the satisfaction of two groups A and B in visual communication design.

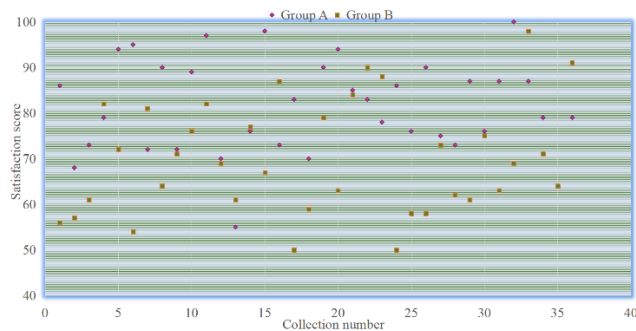


Figure 7: Group A and Group B's ratings of satisfaction in visual communication design.

As can be seen from Figure 7 above, the overall trend of the average scores of the testers is similar, and they are all between 50-100 points.

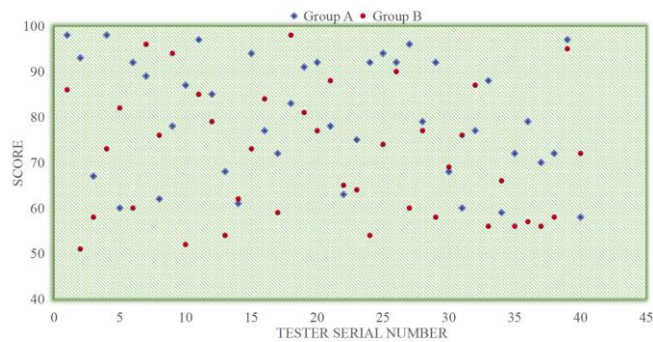


Figure 8: Scores of Group A and Group B.

As can be seen from Figure 8, the overall trend of the average scores of the testers in the two groups is quite different. The testers in Group A are significantly better than the testers in Group B. Of course, there are individual testers in group B who are more prominent. Excellent, but there are more testers in group B within 50-60 points, while group A testers have more testers within 90-100 points. The contrast is larger. The average score of testers in group A was 80.125 points, and the average score of testers in group B was 71.45 points. The highest score for A can be as high as 98, the lowest score is 58, and the lowest score in Group B is 51. It can be seen that the research effect of visual communication design innovation under the impact of new media art is very good and has been well confirmed.

5 CONCLUSIONS

To sum up, under the impetus of new media art, visual communication design has been further developed. The rapid growth of new media technology, the balance of technology and technology, its interactive, high-tech, and other characteristics can promote the generation of creative ideas, create a communication platform for popular art, and promote the growth of visual communication design. Ultimately, we should grasp the following innovative aspects:

(1) Dynamic vision

The traditional way of visual communication is static and vague. Today's visual communication design is gradually developing from a flat graphic design to a multi-dimensional dynamic direction. Compared with the traditional graphic expression, it uses more thinking space. Using new imaging technology to accurately convey visual information, people can gain new experience in dynamic vision. At present, this dynamic visual creative mode is gradually being widely used, and it has gradually formed a representative expression. And in the near future, this multi-dimensional expression and expression will be a brand new growth path.

(2) The use and collocation of color and text

The advantage of dynamic visual creativity is to make full use of multi-media technology to enable the audience to obtain more information. Through the analysis of images, we found that visual creativity requires a reasonable combination of color, text, and other content, and various devices are used to enable users to feel clear and dynamic processing. Visual coherence should be minimized. Each visual creation work must have its unique color-matching method and connotation so as to transmit more accurate information to the public and to achieve a better communication effect. In communication design works, the color and text should be based on the resolution of the device, processor, and other functions. The selection can perfectly display the picture, and at the same time,

there will be no problems, such as being stuck or unclear, so the expression of the work will be more fluent and clear.

(3) Dynamic text

Although the visual communication design is limited to the processing of images and videos, the dynamic creation of language is particularly important. Therefore, in the visual communication design, it is necessary to make full use of the influence of multi-media technology on the visual communication design to make it personalized and aesthetic so as to break through the traditional forms of expression and bring users a unique experience. In terms of text design, designers can provide appropriate text design for text design according to the feedback of different text forms collected from online channels. Also, fonts are designed with the screen resolution and precision in mind to prevent blurry text.

(4) Multi-sensory integration into visual communication design

In visual communication design, the study of multi-sensory design is carried out, and other senses are used to enhance the visual effect. For example, innovation in hearing and touch, the so-called "auditory innovation," is to allow the audience to understand and appreciate text, pictures, or related dialogues and music when making a visual communication work; tactile creativity refers to When the audience touches a picture, the work can make a certain response. For example, when a picture is clicked, the picture will have options such as "zoom in," "zoom-out," and "slide," which is a "tactile feeling". In today's increasingly mature touchscreen technology, it is possible to carry out human-computer interaction through the touch of fingers, and it will become a new growth direction in the field of visual communication in the future. Visual communication design within the dynamic landscape of new media art, particularly in the 5G era, has unveiled a transformative narrative. This study has sought to understand the evolving role and significance of visual elements in the digital age, where technology and connectivity have converged to reshape artistic expression.

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