

## *Retraction*

# **Retracted: Research on Diversified Visual Communication Design Based on Computer Digital Technology**

### **Advances in Multimedia**

Received 15 August 2023; Accepted 15 August 2023; Published 16 August 2023

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

### **References**

- [1] H. Liu, Z. Zhang, and Y. Pan, "Research on Diversified Visual Communication Design Based on Computer Digital Technology," *Advances in Multimedia*, vol. 2022, Article ID 2573027, 12 pages, 2022.

## Research Article

# Research on Diversified Visual Communication Design Based on Computer Digital Technology

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Received 1 August 2022; Revised 3 September 2022; Accepted 22 September 2022; Published 11 October 2022

Academic Editor: Tao Zhou

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In order to improve the effect of diversified visual communication, this paper combines computer digital technology to design a multidimensional visual communication system. In order to improve lighting performance, parts of the surface of the secondary processing visually conveyed image have been processed with different diffusing materials, and the effects have been compared in simulations. There are two types of simulations: external simulation and internal simulation. Moreover, the cutting method based on the shape of the lighting area can design a rectangular lighting area, and the diffusing material can improve the lighting performance to a certain extent. In addition to this, according to the shape of the set target plane, a cut visual communication image is obtained. Through multiple simulation experiments, this paper verifies that the diversified visual communication design system based on computer digital technology can effectively improve the visual communication effect.

## 1. Introduction

Design is constantly produced by the emergence of human beings, and it is constantly improving with the progress of the times. Bauhaus once put forward: “The purpose of design is people, not products.” Design should start from the ideological perspective of “people-oriented”, follow the needs of the audience, and at the same time, stimulate people’s perception of objectively existing things through the expression of the five senses. The main body of the expression of the five senses is “people”, and the original intention of the design is to serve people. By maintaining an open and receptive awareness in all fields of vision, hearing, taste, smell, and touch, we can express and transmit more “humane”, and express our attention to people to the extreme, so that respect for people also naturally arises.

In the visual communication design, as long as the visual communication design is finally completed by printing means, they will all abide by the design principles of authenticity, accuracy, and science. “Precision” has become a standard generally recognized by the public, while the opposite

of “fuzzy” is not recognized by the public and is not valued [1]. In fact, “fuzziness” exists objectively, and it is hidden in graphic design and even all design arts, and it is used unconsciously by people. Specifically, the ambiguity of visual communication design means that the design works have a certain tolerance in terms of vision or form, and even use methods, and play different roles for different people in different periods [2].

Uncertainty is about certainty. The so-called certainty refers to the stable characteristics of things. The so-called uncertainty refers to the unstable characteristics of things. Certainty is temporary; it is only a stable form here and now, not a stable form then and there. In the time of stability lies the factor of instability. This unstable factor continues to grow and reaches the saturation level, and it will break through the threshold of stability, and the phenomenon of instability will appear [3]. When we look at certainty dialectically, we will find that certainty itself has many intermediate and moving links. They are constantly sublated from each other, and the sublated itself is sublated. This is the flow process of negation. Finding affirmation in constant

self-denial and returning to the original point. When viewing affirmation dialectically, affirmation is not only just for sure. Then, the cyclical state of negation of these intermediate links to affirmation and negation is the indeterminacy of the dialectics [4].

There are two types of chaos in visual communication design. One is illusory in appearance and vague in outline. Through the grand and powerful demeanor, the insignificance of human beings is contrasted, and it is more meaningful and has a Zen artistic conception. Failure to grasp it as a whole will reflect the mental confusion and trance, and take the form of the spirit, and have both form and spirit [5]. Another form of chaos is the chaotic and disordered appearance. The elements that need to be expressed can be presented in the way of disorderly superposition in the picture, and the details of the elements are not concerned. It can be a combination of different elements or a repetition of the same element, reflecting the confusion and confusion within. Expressing dissatisfaction with the current society, as a vent, reflects rebelliousness in spirit; this artistic trend of thought is manifested in various types of art, and there are many such works in graphic design, which are especially sought after by young designers [6].

With the rapid development of high-tech means and the advent of the information age, the visual communication art has transitioned from a simple examination of artistic value to the popularization of the whole society's cognition of visual communication art and the analysis and application of art. The continuous production of high-tech and the rapid development of modern vision have caused a huge impact on the traditional visual communication art form, which not only leads to the modern renewal of the traditional art form in the past [7] but also creates a large number of novel art forms, which are presented in various fields of development. Various and colorful artistic phenomena, these new art forms and phenomena quickly spread to people's daily life and show strong vitality, and also feed back the traditional visual design art teaching and scientific research work to a certain extent. The social development situation, in response to the requirements of the national education undertaking to serve the economic construction, better organically combine the visual art undertaking with the development of productivity and demonstrate its important role in the development of the cultural industry while carrying out the application and research of traditional visual communication art, and it is a necessary way to seek for the development of visual design art disciplines and the needs of social and local economic development [8].

In the environment where socialist technology, information, media, and other industries are fully developed, many formats are changing towards diversification. Visual communication art has also become a beneficiary and is developing towards a diversified trend. From creativity, early planning, and production process, in order to control the application of these new achievements in visual design behavior, accurately grasp the role of related technologies in the design process [9] and make visual communication design in promoting cultural. It plays an important role in the development of the industry. We must quickly integrate

advanced technology, new artistic perspectives, broadened forms of communication, and other factors with traditional visual communication art, so that the design methods of visual communication art can be healthy and long-term diversified. Only in this way can we occupy the forefront of the cultural and creative industry, and the sustainable development brought about by obtaining new information and absorbing new nutrition will lead to the irreplaceability of this major in the forefront of the cultural market [10].

Design language refers to the unique artistic processing method adopted by the designer to the image works itself when creating. The pursuit of goals by many designers, the design language, has become more and more international and common, and its fundamental connotation lies in the design thinking of the designers themselves [11]. Traditional graphic design thinking is to analyze objects, extract representative elements, and change and combine elements in shape and color, while postmodern visual design makes full use of and adopts some research results in other fields. Design thinking also shows a rich and stacked atmosphere [12]. While people use modern equipment, modern technology, and modern scientific and technological means to create product functions, they also give it a certain form, and the form can show a certain character, just as it has vitality; this form needs to go through a systematic process. Accurate visual communication design process will make the product's vitality continue, that is to say, the visual design works and products should have not only clear functions and reasonable materials but also the visual effects such as the shape of the products should be like the inner life of natural creatures. Information technology is the key to promoting the general trend of visual design development in the new century, that is to say, design not only uses its own methods to study the world, but more importantly, design studies the impact of science and technology on the environment and people's way of life, which requires us. It is necessary to draw on the strengths of others and enrich their own design thinking, so that they can form their own unique design language, thus endowing the design works with vigorous vitality [13].

The thinking and design methods of visual design are changing to diversification, which means that the two-dimensional expression of traditional graphic design is also developing to three-dimensional or even diversified development, which is consistent with the integration and integration properties in the cultural field. With the rapid development of science and media technology, in the context of the advent of visual culture and the era of images, information communication media has become more diverse and comprehensive, and people's mentality, way, and angle of viewing images have undergone tremendous changes [14]. Under these conditions, we gradually found that today's graphic design is not the activity of two-dimensional space in traditional graphic design but has broken the single form of expression and production method in the past and began to transform silently. It can be summed up as visual communication design. Its external form completely deviates from the so-called two-dimensional art form of traditional graphic design and begins to develop

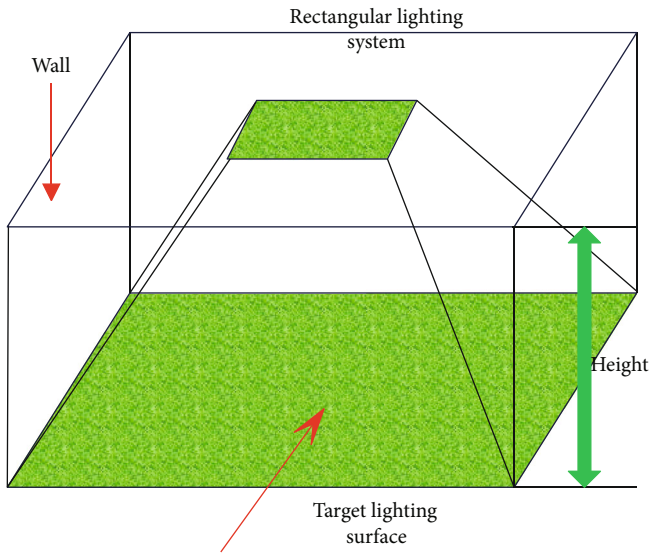


FIGURE 1: Schematic diagram of rectangular lighting based on cutting visual communication images.

towards multidimensionality. In fact, this multidimensional artistic expression has been unconsciously used by visual communication art workers. It is adopted and gradually growing into the latest and most effective expression of contemporary visual art. Although there has been a multidimensional development trend in the traditional graphic design form, the forms presented by these multidimensional development have not been defined and summarized by people. The “multi-dimensionalization” of visual images and other elements in the visual communication art is still a relatively new concept [15]. There is no complete framework system. Visual art designers can only accurately grasp the pulse of the development of visual culture, rationally use the theory of the application and dissemination of visual art in social development, comprehensively think and draw on the internal and external factors of visual design, and combine other disciplines. Only in this way can a multidimensional creative form be formed and provide reliable all-round support for the final completion of creative works [16].

This paper combines computer digital technology to design a multivisual communication system to promote the intelligent development of multivisual communication.

## 2. Visual Communication Cutting Method Based on Target Surface Shape

**2.1. Base Model.** The visual communication art that integrates technology and the essence of other art disciplines is called the application and research of posttransformation visual communication art, which belongs to the category of postmodern visual design. This kind of dissemination method that accommodates research results from multiple disciplines has attracted more attention and has been gradually adopted by all walks of life. From the perspective of domestic development, the one with earlier application and more situation should belong to the exhibition industry. The rapid development of the

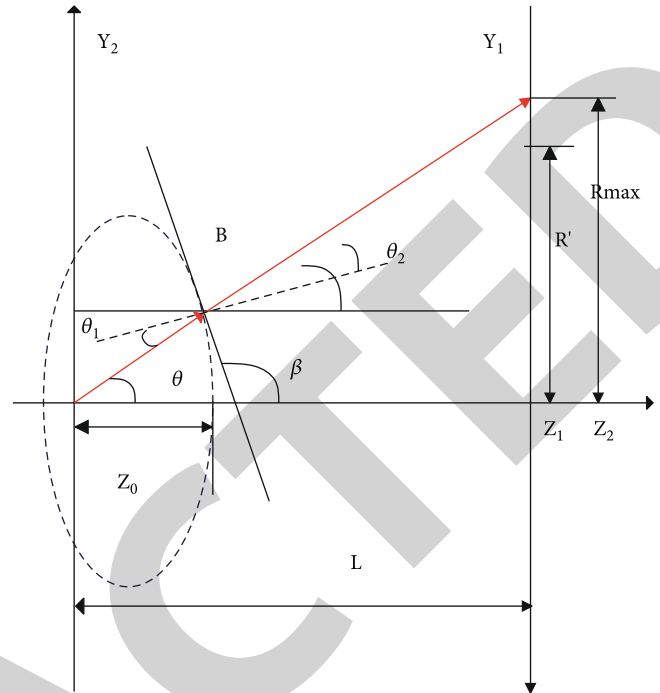
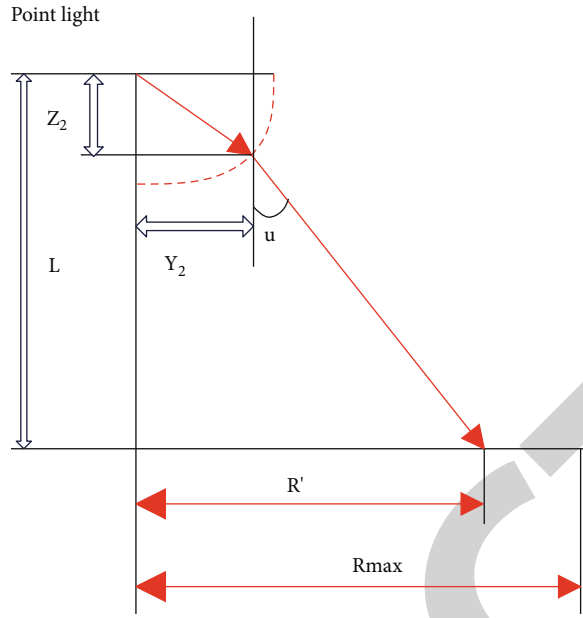
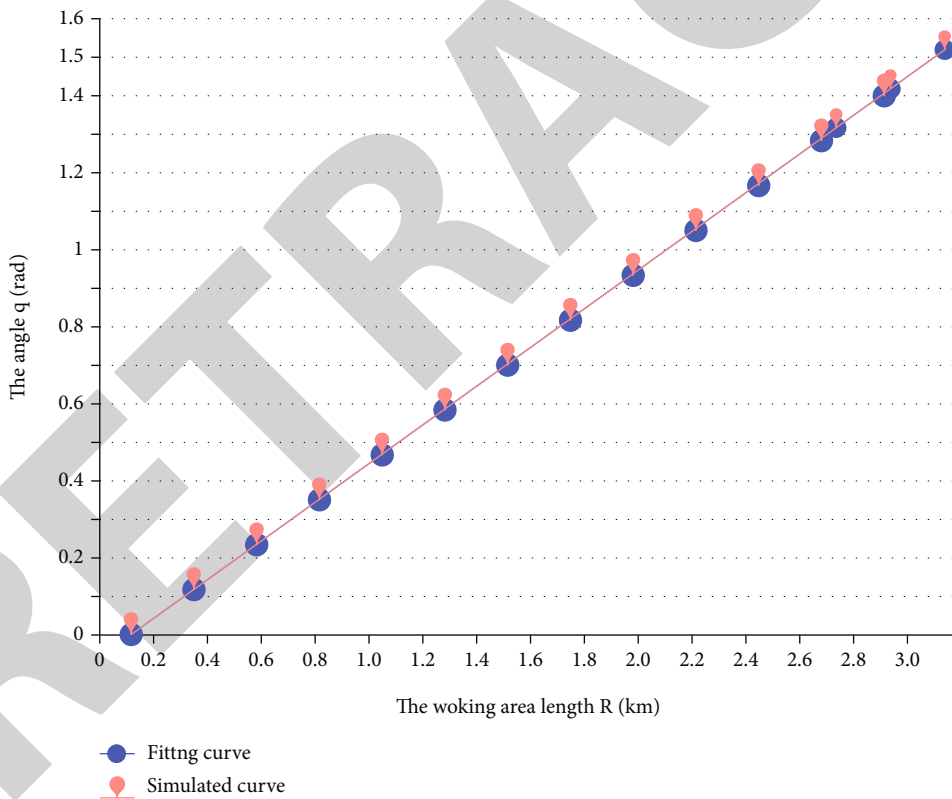


FIGURE 2: Light path diagram of LED lighting system.

socialist economy brings both opportunities and challenges to enterprises and institutions, and the market competition intensifies. Therefore, owners are competing to find novel and effective results display methods, racking their brains to plan product promotion activities. In these exhibition activities, the exhibition boards and pictures completed by inkjet and printing in the past are rare. Instead, the two-dimensional effect is three-dimensional and spatialized. The most representative is the Shanghai World Expo. In this expo, most of the national pavilions have adopted this method. The creators make full use of various technical means, combined with media technology and dynamic production technology, to move the two-dimensional original graphics in the corresponding space. Its color can also be changed according to music, temperature, interaction, and other factors. Moreover, in these designs, the elements of traditional visual design, including representative elements, graphics, colors, and meanings, are still intact. It is just that the creator further gave life to these elements, making them come off the paper and become more lifelike. Imaging technology, animation production, and other means enable the visual design to be more flexibly conveyed to the outside world and easier to be perceived and digested by the audience. At the same time, this kind of work itself has a strong sense of the times, and it is a guide of a trendy cultural experience. In addition, this kind of comprehensive visual production design behavior is often seen in other fields, such as logos and advertisements. In the past, luggage advertisements mostly relied on product photos, model displays, etc. to promote. But now at the new product launch site, we have often seen this comprehensive visual design impact on the viewer’s eyeballs. We can make the logo of the product



(a) The geometric relationship between the light-emitting angle  $\theta$  and the spot length  $R'$



(b) The variation between the light-emitting angle  $\theta$  and the light spot length  $R'$

FIGURE 3: Simulation of luminous parameters.

dynamic and anthropomorphic and use the auxiliary graphics to simulate the effects of dynamic two-way continuity. Moreover, we can recombine traditional posters, characters in posters, product images, as well as color, text, and other factors depending on the designer's mastery of other knowledge. For example, we use real models to replace poster characters, use computer dyeing lights to fill

the space behind the models with the background colors of the posters, and use holographic projection technology to suspend the products around the models in 3D. Even, we can interact with the on-site personnel using interactive means such as infrared and somatosensory. In this way, the promotion effect of the product is bound to be a hundred times better than that of traditional poster

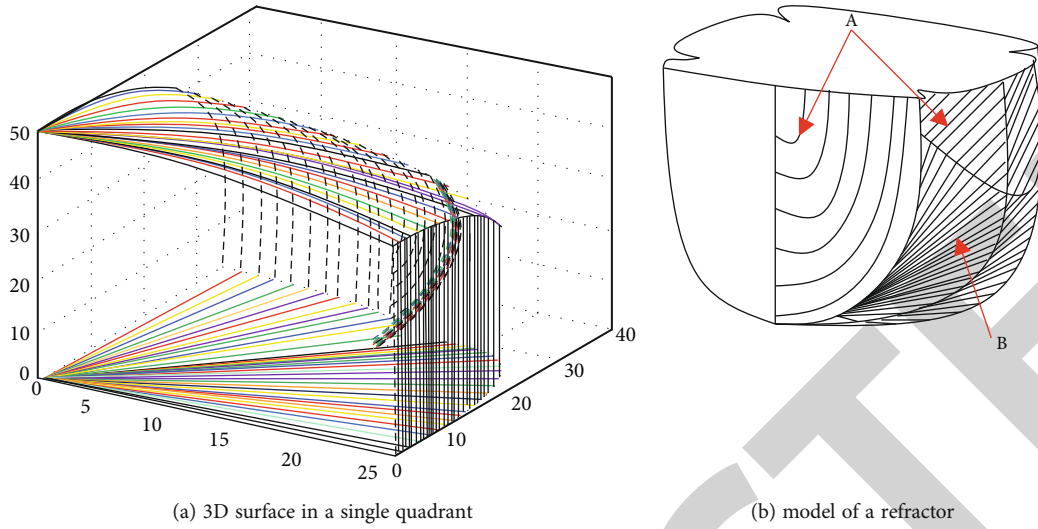


FIGURE 4: Refraction simulation.

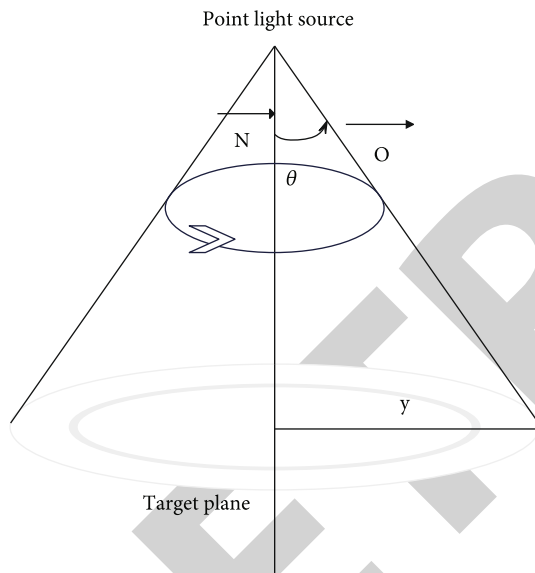


FIGURE 5: Energy distribution diagram.

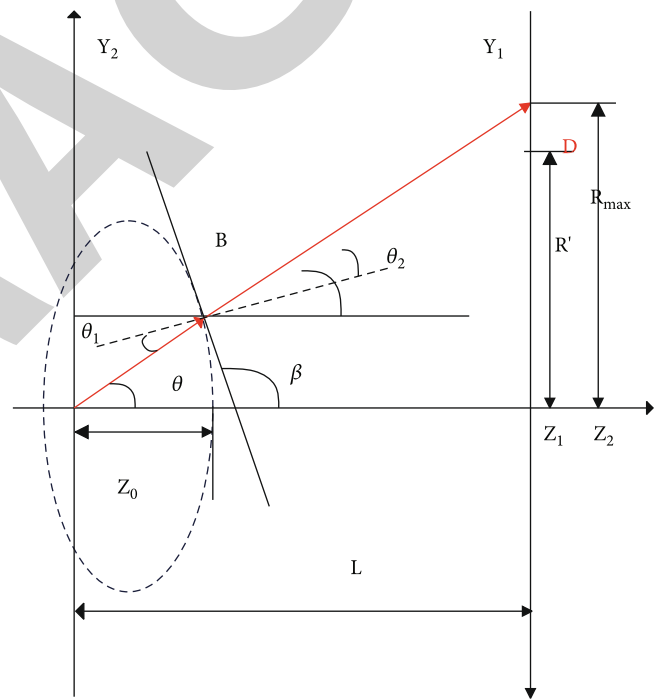


FIGURE 6: Light path diagram of LED lighting system.

printing. Moreover, the most suitable candidates for the arrangement of these scenes, the model performance area, and the 3D imaging area are visual communication designers who have mastered, compatible with some other disciplines, and have cross-thinking creativity. Its creative roots are still these elements of traditional visual design and then combined with technical means through creative thinking. This design method is not only applied in the exhibition industry, product launches, and other occasions but will continue to penetrate and play a role in many industries such as conferences, catering, entertainment, and theaters.

According to the needs of the visual scene and the requirements of the lighting system, the area type of the lighting area is determined, and the light of the LED is irradiated on the target detection plane through the refraction of the visually conveyed image. The mathematical

model of the lighting system is established based on the Lambertian luminescence characteristics of the point light source LED and the uniform distribution of the illuminance on the lighting surface. Therefore, achieving a rectangular illumination area with high uniformity is the main goal. The mathematical model is used to construct a free-surface partial differential equation system, and the Runge-Kutta equation is solved to generate a two-dimensional curve. Repeat the above process to obtain two-dimensional curves in multiple directions. After that, 2D curves in different directions were imported into Solidworks for modeling. Finally, the solid model of the light

source system is imported into the optical simulation software TracePro for nonsequential ray tracing, and the irradiance distribution uniformity of the target detection plane is simulated to verify the correctness of the mathematical model and the shape design of the free-form surface.

According to the partial differential method and the boundary conditions of the illumination area, the secondary recognition visual communication image is cut and obtained. In order to improve the lighting performance, part of the surface of the secondary identification visually conveying the image has been identified with different diffusing materials, and the effects have been compared in simulations. There are two types of simulations: external simulation and internal simulation. Moreover, different simulation effects are obtained according to different simulation conditions. Schematic diagram of rectangular lighting based on cutting visual communication images is shown in Figure 1.

Before building a diffuse lighting system, the light field of the LED needs to be analyzed. The common LED chip radius is generally between 1 mm and 3 mm, and the entire system size is 5 times larger than the LED chip radius. Therefore, a single LED chip can be approximated as a point light source in the entire diffuse lighting system.

In the lighting system, the basis for the establishment of partial differential equations is on two coordinate axes, as shown in Figure 2:

The plane where the  $y_1$ -axis is located is the illumination area, and the plane where the  $y_2$ -axis is located is the starting point of the light, that is, the location of the light source.

The optical design is divided into two parts; the first part is the free-form surface design of circular lighting, and the lighting surface can cover the required target plane; the second part is designed by precisely cutting the visual communication image method, and finally, the cut visual communication image is obtained.

In an ideal state, the visual communication image only has a refraction effect on light. According to the law of conservation of energy, the distribution function  $E(y)$  is shown in Equation (1), and  $d\Omega = 2\pi \sin \theta d\theta$ ,  $I_0$  is the light intensity in the vertical direction of the light source.

$$\int_0^y E(y) 2\pi y dy = \int_0^\theta 2\pi I_0 \sin \theta \cos \theta d\theta. \quad (1)$$

The design produces uniform illumination, so  $E(y)$  can be regarded as a fixed value  $E_0$ , the boundary conditions denote  $\theta = \theta_{\max}$ , and the radius of the spot on the illuminated surface is  $R_{\max}$ . Then, Equation (1) can be transformed into the following equation:

$$E_0 = \frac{I \sin^2 \theta_{\max}}{R_{\max}^2}, \quad (2)$$

$$y = \frac{R_{\max}}{\sin \theta_{\max}} \sin \theta. \quad (3)$$

Figure 2 shows that the tangent on the surface intersects the axis  $z$ , the angle is  $\beta$ , and  $y_2 = f(z_2)$  is the equation of the free-form surface, and its relationship can be expressed as

$$\tan \beta = \frac{dy_2}{dz_2}. \quad (4)$$

In addition, according to the refraction of light on the free-form surface (blue line in Figure 3), the following equation can be obtained by the geometric relationship in Figure 2:

$$\pi = \beta + \left(\frac{\pi}{2} - u + \theta_2\right), \beta = \theta + \left(\frac{\pi}{2} - \theta_1\right). \quad (5)$$

By solving Equation (5) and importing Snell's law,  $y_2 = f(z_2)$  can be transformed into a differential equation:

$$\frac{dy_2}{dz_2} = \tan \beta = \tan \left( \theta + \arctan \frac{-n + \cos(\theta - u)}{\sin(\theta - u)} \right). \quad (6)$$

The relationship of the curve can be expressed as Equation (7), and Equation (8) is obtained by differentiating  $\theta$  by Equation (7):

$$y_2 = z_2 \tan \theta, \quad (7)$$

$$\frac{dy_2}{d\theta} = \frac{z_2}{\cos^2 \theta} + \tan \theta \frac{dz_2}{d\theta}. \quad (8)$$

The point of the illuminated surface is  $(y_1, L)$ , and the point of the free-form surface is  $(y_2, z_2)$ , so the angle  $u$  can be expressed as

$$u = \arctan \left( \frac{y_1 - y_2}{L - z_2} \right) = \arctan \left( \frac{\sin \theta}{L - z_2} \left[ \frac{R_{\max}}{\sin \theta_{\max}} - \frac{z_2}{\cos \theta} \right] \right). \quad (9)$$

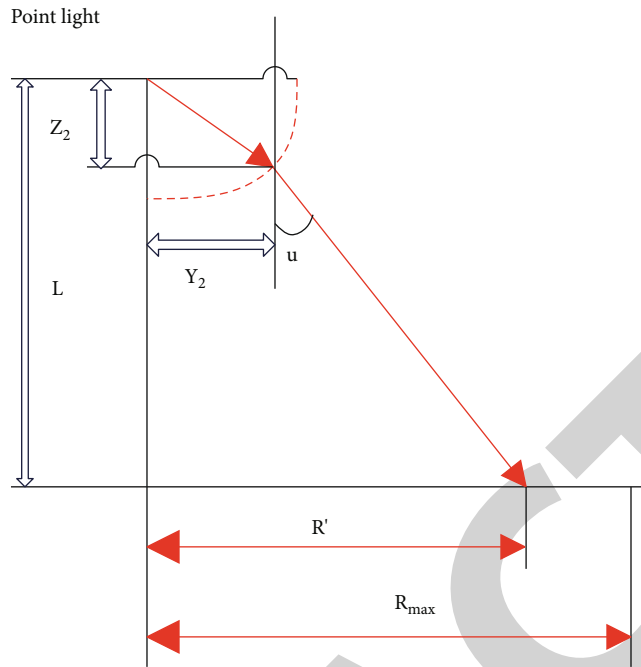
By dividing Equation (8) by Equation (6) and then substituting Equation (9) into it, the partial differential equation for a two-dimensional curve can be obtained:

$$\partial = F(\theta, L, z_2, R_{\max}, \theta_{\max}, n). \quad (10)$$

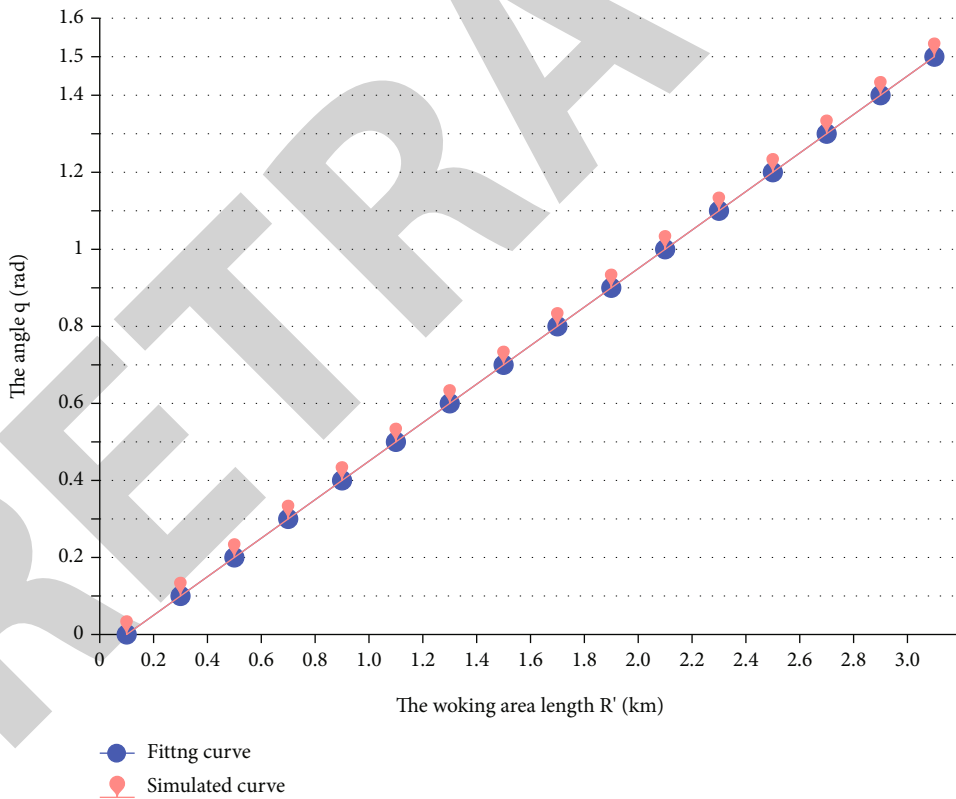
Figure 3(a) shows the relationship between the working area length  $R'$  and the deflection angle of light  $\theta$ , the red line represents the reidentification surface, and  $R'$  can be expressed as

$$R' = y_2 + (L - z_2) \tan u. \quad (11)$$

After the distance  $L$  is determined, the relationship between the length  $R'$  and the deflection angle  $\theta$  can be shown by Equation (10), Equation (11), Equation (12), and Figure 3(b). It can be represented by the illuminance distribution of the workspace:



(a) The geometric relationship between the light emission angle  $\theta$  and the spot radius  $R'$



(b) The change of the light emission angle  $\theta$  and the spot radius  $R'$

FIGURE 7: Continued.



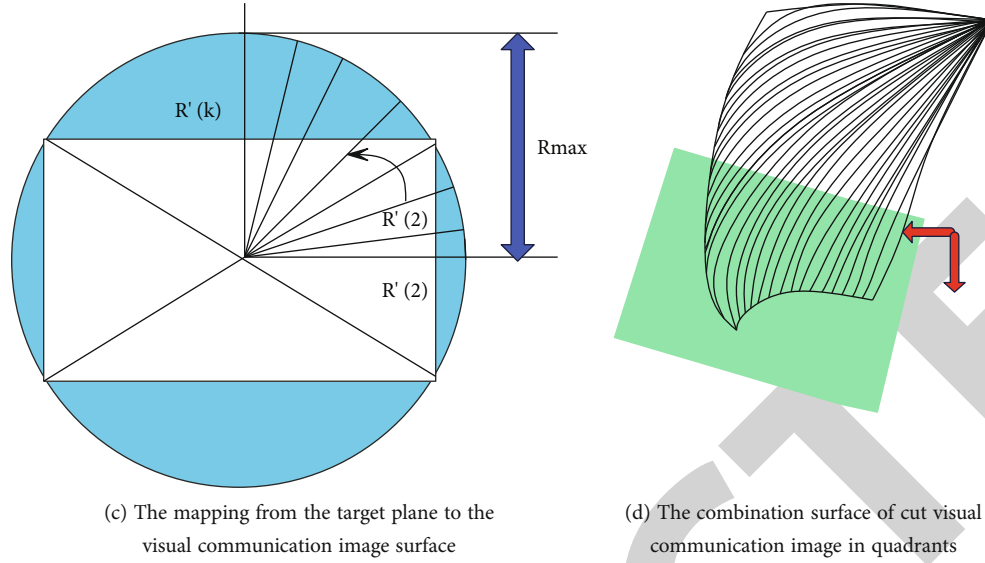


FIGURE 7: Curve visual simulation.

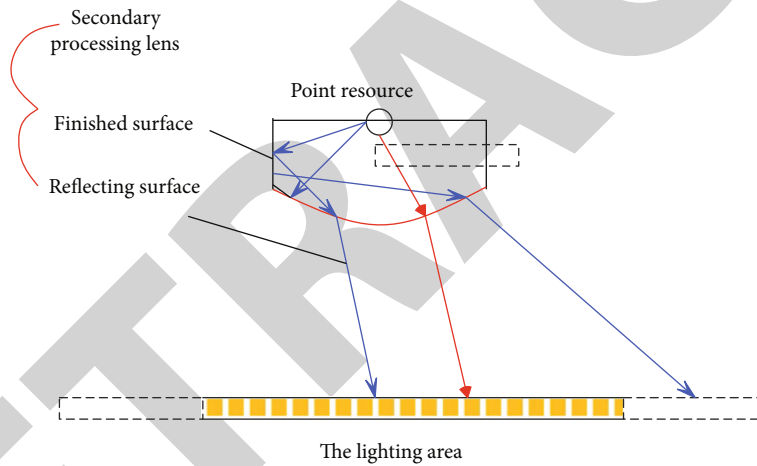


FIGURE 8: Optical path diagram of secondary recognition visual communication image (DR) in outdoor simulation.

$$O(R') = a_1 R'^4 + a_2 R'^3 + a_3 R'^2 + a_4 R' + a_5, \quad (12)$$

$$a_1 = 0.0597, a_2 = -0.2886, a_3 = 0.4763, a_4 = 0.0792, a_5 = 0.0322. \quad (13)$$

The variable-length illuminated surface determines the angle  $\theta$  by Equation (12), then Runge-Kutta is used to solve Equation (10) in Matlab to obtain each curve. Figure 4(a) shows a 3D surface composed of curves in quadrants. In order to smooth the surface, the connection requires a large number of lofted curves. Figure 4(b) shows the refractor model. Taking a quadrant as an example, the visual communication image is divided into two surfaces; the surface A is directly obtained by cutting, and the surface can be processed with other materials, and the surface of B is a refraction surface, and its refraction properties are determined by the visual communication image itself.

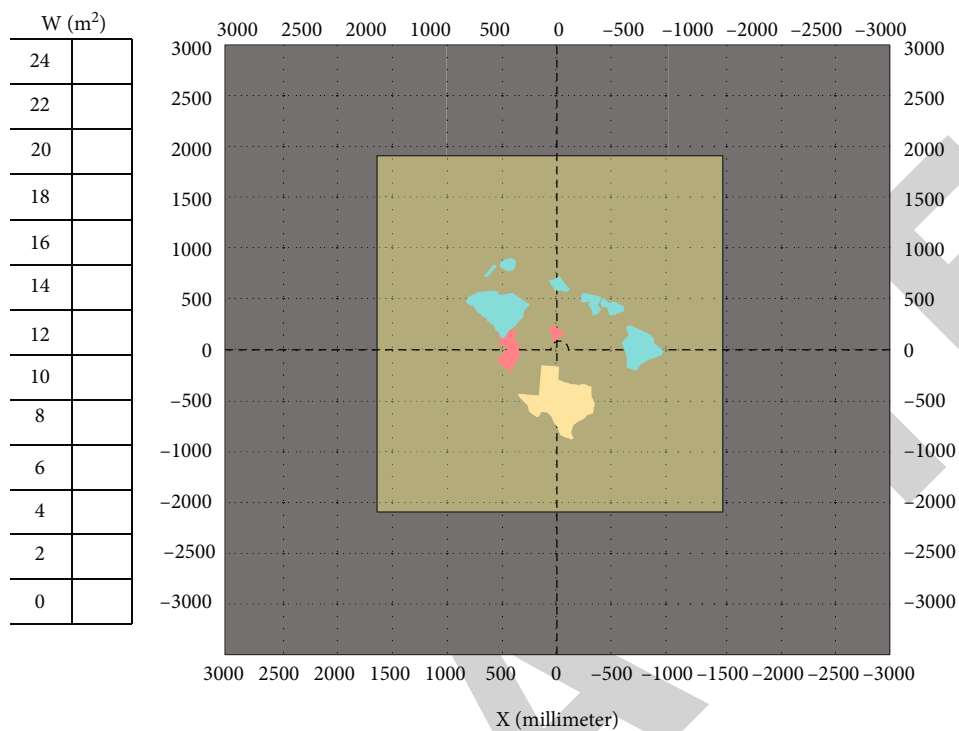
**2.2. Build Mathematical Models.** The optical design that composes the visually conveyed image is divided into two parts. Part of it is to form a cutting visual communication image. A cut visual communication image is a visual communication image in which the surface of the free-form surface is cut according to the shape of the area to be illuminated; in this case, the area is a rectangular plane. Another part is optimizing the lighting by forming a lofted surface.

Ideally, a visually conveyed image has no absorption of light energy. The energy distribution function ( $y$ ) is shown in Equation (14):

$$\int_0^y E(y) 2\pi y dy = \int_0^\theta I_0 \cos \theta d\Omega. \quad (14)$$

Figure 5 shows the shape of this energy distribution. The emission of luminous flux at solid angle  $\Omega$  ( $d\Omega = 2\pi \sin \theta d\theta$ ) is equal to the received luminous flux on the target plane of

Total. muninance map abserbed flux block 1  
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Min: 0.20724 Max22.533 Ave: 9.452  
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(a)

FIGURE 9: Continued.

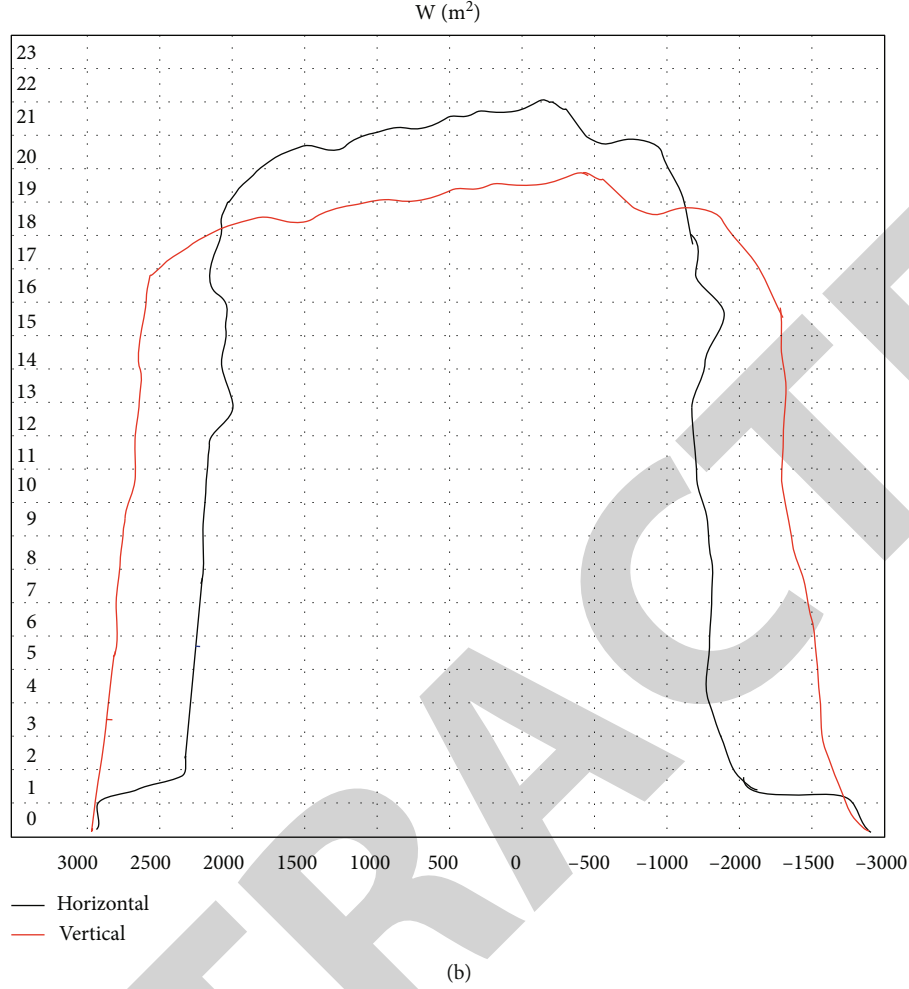


FIGURE 9: The lighting performance display of the secondary recognition visual communication image (DR).

radius  $y$ , where  $I_0$  is the luminous intensity in the normal direction, and  $\theta$  is the angle between the normal vector ( $\vec{N}$ ) degrees and the emitted light ( $\vec{O}$ ).

Equation (14) is transformed into the following equation:

$$E_0 = \frac{I_0 \sin^2 \theta_{\max}}{R_{\max}^2}, \quad (15)$$

$$y = \frac{R_{\max}}{\sin \theta_{\max}} \sin \theta. \quad (16)$$

Figure 6 shows that the tangent on the curved surface intersects the axis  $z$ , the angle  $\beta$ ,  $y_2 = f(z_2)$  is the equation of the free-form surface, and its relationship can be expressed as

$$\tan \beta = \frac{dy_2}{dz_2}. \quad (17)$$

In addition, according to the refraction of light on the free-form surface, the following equation can be obtained by the geometric relationship is

$$\pi = \beta + \left( \frac{\pi}{2} - u + \theta_2 \right), \beta = \theta + \left( \frac{\pi}{2} - \theta_1 \right). \quad (18)$$

By solving Equation (18) and importing Snell's law,  $y_2 = f(z_2)$  can be transformed into a differential equation:

$$\frac{dy_2}{dz_2} = \tan \beta = \tan \left( \theta + \arctan \frac{-n + \cos(\theta - u)}{\sin(\theta - u)} \right). \quad (19)$$

The relationship of the curve can be expressed as Equation (20), and Equation (21) can be obtained by differentiating  $\theta$  from Equation (20):

$$y_2 = z_2 \tan \theta, \quad (20)$$

$$\frac{dy_2}{dz_2} = \frac{z_2}{\cos^2 \theta} + \tan \theta \frac{dz_2}{d\theta}. \quad (21)$$

The geometric relationship between the light emission angle  $\theta$  and the spot radius  $R$ , and the change of the light emission angle  $\theta$  and the spot radius  $R$  is shown in Figures 7(a) and 7(b). By combining these different curves following the distribution angles of Figure 7(c), the surfaces that

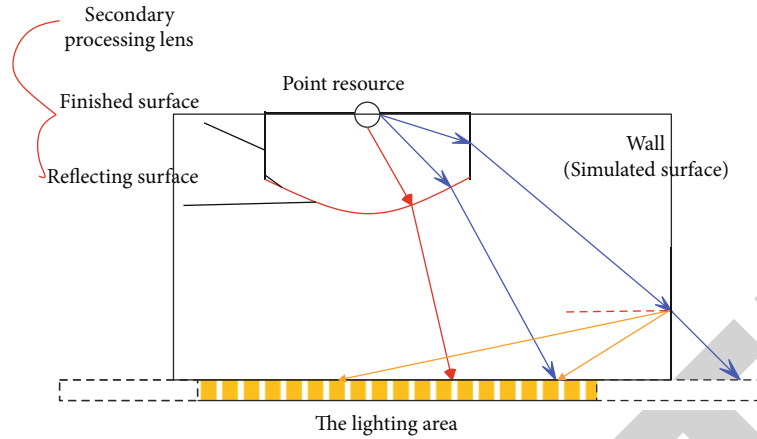


FIGURE 10: Optical path diagram of secondary recognition visual communication image (DT) in indoor simulation.

TABLE 1: The research on diversified visual communication design based on computer digital technology.

Number	Visual communication	Number	Visual communication	Number	Visual communication
1	85.44	15	85.56	29	85.75
2	85.91	16	83.34	30	84.91
3	84.03	17	87.19	31	86.15
4	88.74	18	84.56	32	85.26
5	87.02	19	88.78	33	88.60
6	83.78	20	87.64	34	85.59
7	86.00	21	83.49	35	83.63
8	83.82	22	85.15	36	88.81
9	84.40	23	83.69	37	88.36
10	85.85	24	87.40	38	85.44
11	84.49	25	83.33	39	84.37
12	83.30	26	88.87	40	86.84
13	88.79	27	85.14	41	88.48
14	85.15	28	84.55	42	87.07

cut the visually conveyed image are obtained in quadrants, as shown in Figure 7(d).

### 3. Experiment Analysis

Secondary recognition visual communication image surface is divided into recognition surface and refraction surface. Red light rays hit the illuminated area through the refracting surface, and blue light rays hit the illuminated area through the treated surface, as shown in Figure 8.

The irradiance uniformity of secondary recognition visual communication images is higher than other visual communication images in a very intuitive way. It is relatively inefficient due to the effect of cutting visually conveying images. The visual communication image is then treated with a diffusing material. The surface of the DR visual communication image is treated by diffuse reflection material, and the surface of the DT visual communication image is treated by diffuse transmission.

Figure 9 shows a relatively standard rectangular illumination area produced by a secondary recognition visual

communication image (DR). In appearance simulation, the performance of secondary recognition of visual communication images (DR) is improved.

When simulating in an indoor space, the properties of the wall need to be considered if it has some effect on the illuminated area. In this paper, walls are considered to be imitation surfaces with composite properties.

Figure 10 shows the light path diagram of the secondary recognition visual communication image (DT) in the interior simulation; the blue light is irradiated on the wall and then scattered out according to the characteristics of the wall.

On the basis of the above, the effect evaluation of the research system of diversified visual communication design based on computer digital technology is carried out, and the simulation results shown in the following Table 1 are obtained.

The above multiple simulation experiments have verified that the diversified visual communication design system based on computer digital technology can effectively improve the visual communication effect.

#### 4. Conclusion

This paper believes that the connotation of the application and research of visual communication art is no longer the traditional category of graphic design. In order to improve lighting performance, parts of the surface of the secondary processing visually conveyed image have been processed with different diffusing materials, and the effects have been compared in simulations. There are two types of simulations: external simulation and internal simulation. Moreover, the cutting method based on the shape of the lighting area can design a rectangular lighting area, and the diffusing material can improve the lighting performance to a certain extent. In addition to this, according to the shape of the set target plane, a cut visual communication image is obtained. At the same time, people have questioned many traditional art forms, and the curiosity about some emerging art forms and the various artistic phenomena around them has also changed from curiosity to the stage of examination and selective acceptance of art. In order to make the visual communication profession move forward well and fast, we need to seek a reform path. This paper combines computer digital technology to design a multivisual communication system to promote the intelligent development of multivisual communication. Finally, through multiple simulation experiments, this paper verifies that the diversified visual communication design system based on computer digital technology can effectively improve the visual communication effect.

#### Data Availability

The labeled datasets used to support the findings of this study are available from the corresponding author upon request.

#### Conflicts of Interest

The authors declare no competing interests.

#### Acknowledgments

The study was supported by major entrusted project of the 2019 Heilongjiang art and science planning project, research on design, and development of cultural and creative products with regional characteristics of Longjiang (2019F002).

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