Hindawi
Mobile Information Systems
Volume 2022, Article ID 2205362, 10 pages
https://doi.org/10.1155/2022/2205362

Research Article

Innovation of Visual Communication Design Based on Wireless Virtualization Network Architecture

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Received 25 June 2022; Revised 28 July 2022; Accepted 8 August 2022; Published 25 August 2022

Academic Editor: Shadi Aljawarneh

With the continuous development of the times and the continuous development of science and technology, embedded technology is constantly improving and more and more innovative methods have broken the situation of traditional multimedia use and combined visual language with design models, which has promoted the development of culture and the development of science and technology. The purpose of this experiment is to design a new structure by combining it with an image processing system based on embedded technology. In the experiment, we will use the QT graphics interface to connect with another same system interface, according to the characteristics of embedded technology data and image processing, design a new interface model, make the image binary, and then use calculations to prove the new feasibility of the way. In this report, we showed some of the programming steps and fully explained the design and results of the model, but it took a long time. The result of the test is that the embedded technology has a long-term experimental value and application value because the system can process images in real time and collect and store data faster; the resolution of the obtained images is also higher, and less energy is lost.

1. Introduction

With the continuous development of the times and the continuous development of science and technology, embedded technology is constantly improving, and the technology that people use to process images is also constantly developing, so more and more people are focusing on embedded technology [1]. Before wireless network systems and computer technology have been widely promoted, people often transmit collected pictures and data through analog circuits and then use other systems to organize the data. Since the world's first computer came out in the 1940s, the world's science and technology are developing faster and faster, and more and more people are focusing on the upgrading of intelligent technology [2]. The collection and analysis of image data are one of them. The collection and analysis of image data have an important position in many fields because this technology must be used in security monitoring or network teaching. Therefore, image data acquisition and analysis technology have become an important part of social development and research progress. Nowadays, the 4G era is gradually replaced by the rapid development of 5G. The rapid development of 5G has brought about major changes in Internet technology and has also produced major changes in people's lifestyles, but it has also produced many problems. Moreover, the research and update of the network system is too complex, so the development of embedded technology is not plain sailing. The network data processing time is too long, the amount of information is too large, the system is unstable, and other problems need to be solved [3, 4]. In the era of rapid development, visual technology has been combined with science and technology to become a comprehensive discipline, which can not only diversify the development of model design but also promote people's innovative thinking. Nowadays, people have abandoned traditional design models and have carried out new model designs in multimedia systems and other aspects. Electronic products have gradually replaced the original models, and the newly developed models have also brought huge benefits to the development of multimedia under the Internet. With changes, printed products such as newspapers and magazines have gradually become less popular.

2. Related Work

Some research pointed out that, with the continuous advancement of science and technology, the country's comprehensive capabilities have made significant progress, the society is constantly developing, people's quality of life has been significantly improved, and the improvement and development of new design technology has continuously made art [5]. The land is progressing, and we must seize the opportunity to create a better future. There are different design methods and design thinking in different periods, and the continuous development of science and technology has played a role in promoting visual design in various fields, and more and more methods can be applied to visual technology. Nowadays, people are not only entrepreneurs but also occupy a certain position in the embedded technology level. Each field needs to update and upgrade the new model according to the characteristics of its field, so as to achieve the development of technology. More and more types of multimedia technologies provide great convenience for us to conduct experiments, but they also face certain challenges. So, we have to extract the advantages of traditional culture and combine it with new designs to create the best modern civilization. We must seize the opportunity, open up our minds, and use high technology to achieve innovative development. Some research believes that if we want to innovate a certain system, it must be affected by science and technology and social culture, so when we carry out scientific and technological reforms and Internet technology updates, some new designs will appear. With the increase of new technologies and new multimedia, social civilization is constantly increasing, people's spiritual power is constantly accumulating, and society is constantly changing. Some research shows that, through data surveys, we can know that, in the last few decades, science and technology have penetrated into every part of the world, and we are now inseparable from science and technology. More and more people use the Internet, regardless of whether it is industry, agriculture, or handicraft, all rely on high-tech products to operate [6]. Today, more than 4.5 billion people worldwide are using the Internet, but there are also many problems. The Internet has higher and higher requirements for data storage systems and signal transmission systems. The internal procedures of the Internet system are becoming more and more complex. We no longer use traditional methods, and gradually increase service functions to improve network security. Some research proposes that today's image analysis technology is more modern, and the collection and analysis of image data are applied in various fields, including aviation, agriculture, and industry. The rapid transmission of data is the prerequisite for data analysis, so we must tell the importance of the rapid transmission of data. Some research proposed that the way of information transmission has undergone tremendous changes. Since the rapid development of multimedia technology, the traditional transmission method has become a thing of the past. Nowadays, most people use advanced multimedia for communication and the transmission method of the visual system, which has changed greatly compared with the past. For model builders, we need to have a long-term vision, use visual language in a flexible way, and combine visual information with the information conveyed by pictures to make data transmission more efficient and effective. Users were given better experience. Some research pointed out that the development of wireless network technology nowadays still needs a certain amount of time to complete because the number of Internet users has become more and more, and more and more functions are needed. At the same time, 5G technology needs to be more perfect. The existing network management model can no longer meet the needs of users, so the combination of virtualization technology and Internet technology is our best choice.

3. Wireless Network and Embedded Digital Image System Design

3.1. Related Research on Wireless Network Virtualization. The traditional Internet model framework has no way to promote the development of network virtualization technology. Therefore, if we want to carry out the original cellular data at night, we must introduce a wireless network system and build a new model based on wireless network technology. This is an important link in the development of virtualization technology.

We can combine the wireless network system with the virtualized structure and divide the virtualized structure into three levels: data collection plane, joint cooperation plane, and virtualized control plane [7]. The new frame structure in the wireless network system and the different manifestations and functions of each level are shown in Figure 1.

3.1.1. Data Collection Plane. The data collection plane refers to the connection of interfaces in different wireless network systems, and data collection stations in different regions can transmit data through similar contacts. We can combine advanced technologies such as 5G, WLAN, Wi Max, and their respective transmission equipment, so that the equipment can quickly transmit data and ensure the normal progress of the experiment [8]. The main function of the data collection plane is to store the information and data in the wireless network system in this plane. In the environment of the wireless network system, each plane is allowed to store wireless resources and use virtualization technology to realize resource allocation.

3.1.2. Joint Cooperation Plane. In the joint cooperation plane, we have carried out real-time monitoring of the information and data in the plane, which can not only make reasonable allocation of resources in wireless network technology but also analyze the specific situation more flexibly. For example, we can use the situation, information status, and geographic location that are monitored. The joint cooperation plane can more accurately detect the quality of the network signal [9]. Through the different ways everyone

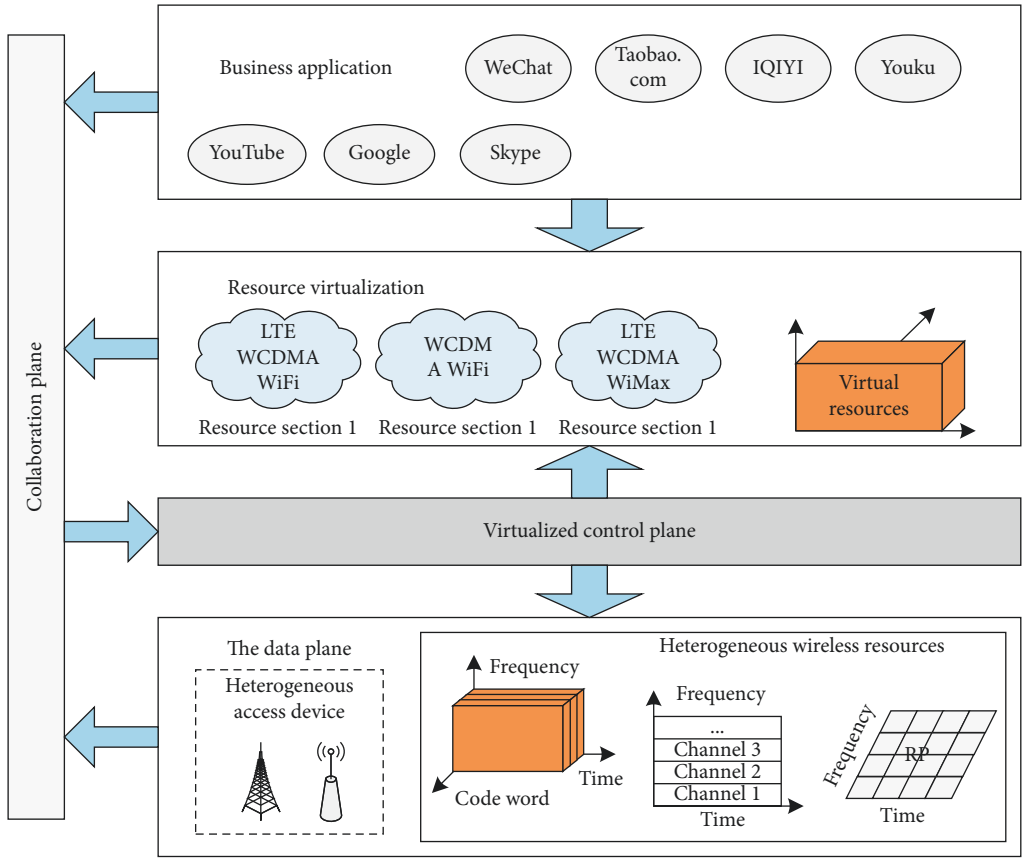

Figure 1: Wireless virtualized network architecture.

use, it can classify the virtualization technology information differently and can also simplify the information interface.

3.1.3. Virtualization Control Plane. The virtualized control plane combines the user's information with the network status. Through the division of wireless network technology functions, different network chips are obtained to form different data partitions. Network chips include the rapidly developing 5G system, which makes network services more complete and enables the use of wireless network technology.

Virtualization technology has many functional advantages and can be applied to various fields. Our main requirement in this network technology is to detect the classification of virtualization technology information. This is an important link in the rapid development of virtualized networks. We can divide this more complex task into multiple models for processing and then classify them and perform data analysis [10, 11]. In addition, for the embedded structure and virtualization technology under different models, the processing methods and required resources are also different, and the difficulty in the solution process is also different. In this case, we divide this technology into two aspects: satisfying node resources and link resource services, so as to minimize the resources consumed in the experiment process, minimizing the cost invested in the experiment process, and making the experiment process maximize the benefits gained from the system, making the system management procedures more perfect and balancing the two service systems.

When we study virtualization technology, we should focus on the links of nodes in the virtual technology system. Through the connection between each node and basic equipment, data can be transmitted and analyzed.

(1) Mathematical Model. The mathematical model is to allocate different resources according to different needs. The specific allocation model is shown. We use appropriate equipment to reasonably classify data and information and then enter it into different business layers. Users can choose different service systems according to their needs, and then the system will provide corresponding services according to users' choices [12, 13]. Because the digital model is a combination of network resources and virtualization technology, in order to achieve experimental results, we need to focus on the measurement of whether the data output is accurate and develop personalized services. Virtual network resource allocation is shown in Figure 2.

(2) Performance Evaluation Model. In the process of resource allocation of science and technology, our requirement is to reduce the use of energy as much as possible, shorten the time used in the experiment, and speed up the processing of information, while maintaining the maximum benefit. The specific benefit obtaining formula is shown as

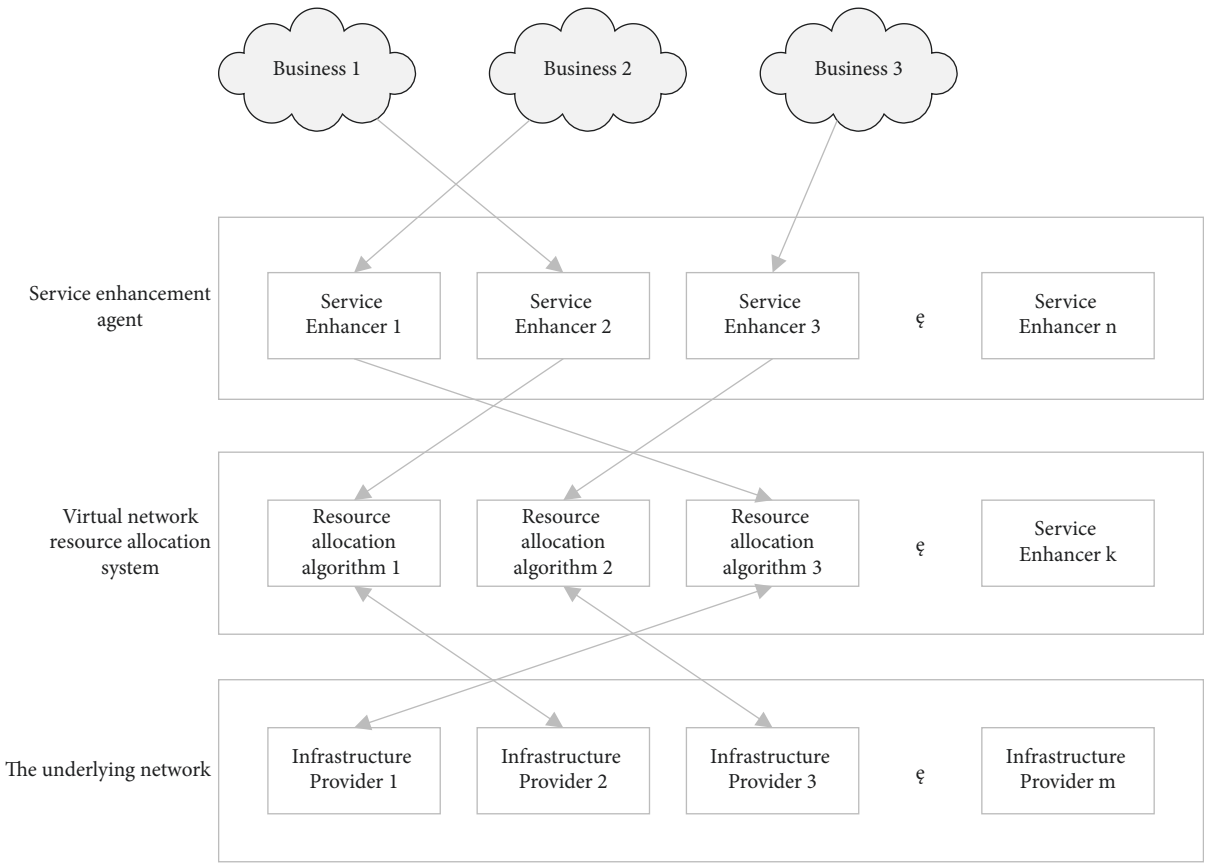

Figure 2: Virtual network resource allocation problem business model.

$$\text{Revenue}\left(G^v, t\right) = \alpha_R \sum_{n^v \in N^v} \text{CPU}\left(n^v\right) + \beta_R \sum_{l^v \in L^v} Bw\left(l^v\right). \quad (1)$$

In the above formula, R is the weight. The specific function is to connect the node with the basic device, and the obtained data can be used as a sample to be brought into the next formula. The specific calculation formula is as follows:

$$\lim_{r \longrightarrow \infty} \frac{\int_{t=0}^{T} \sum_{G^N \in G^N(t)} \text{Revenue}\left(G^v, t\right)}{T}. \quad (2)$$

If we want to ask for the amount of resource consumption required in the virtual technology, we have to reach the node output value and the time used. The specific formula is as follows:

$$\text{Cost}\left(G^v, t\right) = \alpha_R \sum_{n^v \in N^v} \text{CPU}\left(n^v\right) + \beta_C \sum_{l^v \in L^v} \text{hop}\left(l^v\right) \cdot Bw\left(l^v\right). \quad (3)$$

The VI shown in the formula refers to the amount of data successfully passed through the system, and C represents how much energy the node consumes, so the solution formula for the total consumption is as follows:

$$\lim_{r \longrightarrow \infty} \frac{\int_{t=0}^{T} \sum_{G^N \in G^N(t)} \text{Cost}\left(G^v, t\right)}{T}. \quad (4)$$

We compare the energy required during the experiment with the energy required for data classification, we can know the energy consumed by the average network system, and the specific formula is as follows:

$$\lim_{r \longrightarrow \infty} \frac{\int_{t=0}^{T} \sum_{G^N \in G^N(t)} \text{Revenue}\left(G^v, t\right)}{\int_{t=0}^{T} \sum_{G^N \in G^N(t)} \text{Cost}\left(G^v, t\right)}, \quad (5)$$

where T represents that, in the continuous operation mode, the energy required after the node is connected to the basic equipment is

$$\text{Load}\left(N^S, 1\right) = \frac{1}{\left|N^S\right|} \sum_{n^s \in N^S} \left(\frac{\sum_{R^v \uparrow R^E} R\left(n^v\right)}{c\left(n^s\right)} \right). \quad (6)$$

In the above expression, we can know that SN represents the total number of nodes in the system, and the pressure that each node can bear is as follows:

$$\text{Load}\left(L^S, 1\right) = \frac{1}{\left|L^S\right|} \sum_{l^s \in L^S} \left(\frac{\sum_{l^v \uparrow l^E} \text{BW}\left(l^v\right)}{\text{BW}\left(l^s\right)} \right). \quad (7)$$

After the experimental data is successfully transmitted, the proportion of the successfully transmitted data in the overall data is the data transmission success rate. The specific solution formula is as follows:

$$\text{acceptance ratio} = \lim_{r \longrightarrow \infty} \frac{\int_{t=0}^{T} G_B^V(t)}{\int_{t=0}^{T} G^V(t)}. \tag{8}$$

Nowadays, the wired network is developing well, and the wireless network technology needs to be strengthened. There are many problems waiting for us to solve. The specific problems are as follows:

(1) The transmission of wireless signal is poor, and there are often intermittent signals, which affect the transmission of information and uneven resource allocation

(2) The stability of the wireless network is poor, the signal is often interrupted, and the information and data are damaged or lost

(3) Difficulty in the allocation of lines, too long allocation time, and low efficiency

(4) The distribution of resources is unbalanced, and errors sometimes occur in the calculation process, leading to incorrect data results and the entire experiment failure

(5) In the case of poor environmental conditions, wireless networks are often affected, causing signal interruption and resource loss

3.2. Wireless Virtual Network Mapping Algorithm Based on Node Aggregation Centrality. The formula for calculating the energy required by each node is

$$\text{Avail}\left(n^S\right) - \text{CPU}\left(n^S\right) - \sum_{\forall R^V \uparrow R^E} \text{CPU}\left(n^v\right) + \sum_{\forall R^V \uparrow R^E} \text{Rel}\left(\text{CPU}\left(n^v\right)\right). \tag{9}$$

The energy of the remaining nodes in each resource is

$$\text{Avail}\left(l^S\right) - \text{CPU}\left(l^S\right) - \sum_{\forall t^V \uparrow r^E} \text{CPU}\left(l^v\right) + \sum_{\forall t^V \uparrow r^E} \text{Rel}\left(\text{CPU}\left(l^v\right)\right). \tag{10}$$

There are interference signals between each line, so the quality of service will be reduced. The specific interline interference index is

$$\text{LI}\left(l^s\right) = \frac{\gamma . d_i\left(l^S\right).\text{Avail}\left(n_i^S\right) + \omega d_j\left(l^S\right).\text{Avail}\left(n_j^S\right) + 1}{\left(d_i\left(l^S\right) + d_j\left(l^S\right)\right).\text{Avail}\left(l^S(i,j)\right)}. \tag{11}$$

If the energy consumption between the lines is too large, the energy given to other resources will be relatively reduced, so the energy required by the system will increase, and the required cost will increase relatively, so that the load between the lines will also be increased. We can use the following formula to calculate the cost of the line as

$$\text{price}\left(l^S\right) = \frac{\eta}{\text{Avail}\left(l^S\right)}. \tag{12}$$

In the virtual network, the newly constructed VG system can reduce the complexity of the VNC system, and we can calculate the result in two steps. In the first step, we need to select a node that meets the system. The second step is to connect the node and the device in the virtual system to meet its geographic constraints and bandwidth resource constraints. The specific constraint data are as follows:

$$\text{dis}\left(\text{loc}\left(n^v\right)\text{Joc}\left(n^s\right)\right) \le D\left(n^v\right). \tag{13}$$

Figure 3 reflects the mapping process and mapping results of virtual network technology.

In virtual network technology, we have to consider the importance of nodes. In order to enable each node to connect with its neighboring nodes, we need to upgrade the network system so that the database can store more resources so that the nodes can be linked. The signal is better, which is conducive to the experiment. The specific definition is as follows:

$$\text{DC}^v\left(n_1\right) = \sum_{t^N \longrightarrow \infty} l^v(i). \tag{14}$$

In virtual technology, we have to consider the overall development, so the stronger the connection between the node kernels, the more data can be processed. The kernel strength of the nodes in the virtual technology system is defined as

$$\text{BC}^v\left(n_1\right) = \frac{P_1}{p}. \tag{15}$$

The relationship between a node and its neighbors is close, and the evaluation formula for the importance of a node is

$$E^V = \begin{bmatrix} BC_1DC_1 & \frac{a_{12}BC_2DC_2DC_2}{2m} & \cdots & \frac{a_{1n}BC_nDC_1DC_n}{2m} \\ \frac{a_{21}BC_1DC_2DC_1}{2m} & BC_2DC_2 & \cdots & \frac{a_{2n}BC_nDC_2DC_n}{2m} \\ \vdots & \vdots & \cdots & \vdots \\ \frac{a_{n1}BC_1DC_nDC_1}{2m} & \frac{a_{n2}BC_2DC_nDC_2}{2m} & \cdots & BC_nDC_n \end{bmatrix}. \tag{16}$$

The specific experimental results are as follows:

$$\text{BAC}^v\left(n_1\right) = \sum_{j=1}^{n} E^v(i,j) = \text{DC}^v\left(n_1\right)\text{BC}^v\left(n_1\right) + \sum_{j=1, j \ne i}^{n} E^v(i,j). \tag{17}$$

In the physical network structure, we need to consider the problem comprehensively, so we combine the distance between the nodes and the tightness of the node kernel, and the formula is

$$\text{CC}^s\left(n_1\right) = \sum_{j=1}^{n} \text{CPU}^s\left(n_1\right) \times e^{-\left(d(i,j)LI^R(i,j)/\text{MwBw}^s(i,j)\right)}. \tag{18}$$

Through the above analysis, we used the distance between the nodes and the connection between the node kernels to measure the physical network structure, and the obtained node evaluation method is

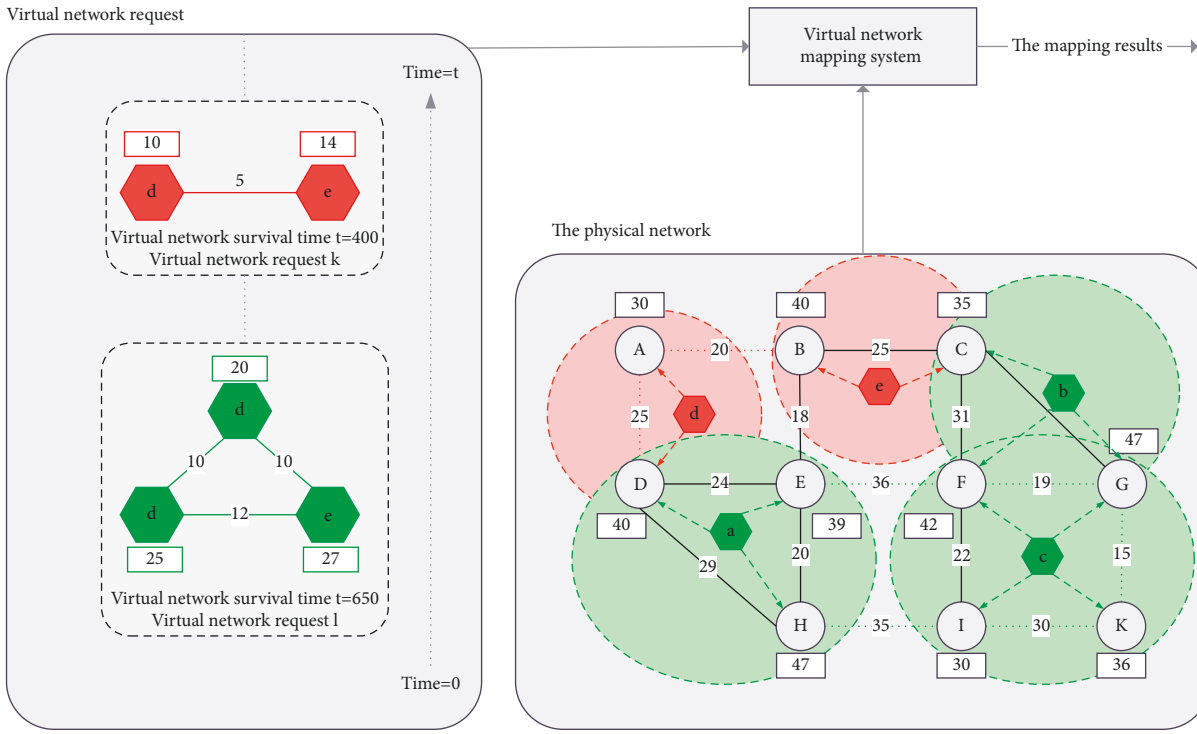

Figure 3: Virtual network request mapping scheme.

$$E^V = \begin{bmatrix} CC_1DC_1 & \frac{b_{12}CC_2DC_2DC_2}{2e} & \cdots & \frac{b_{1h}CC_hDC_1DC_h}{2e} \\ \frac{b_{21}CC_1DC_2DC_1}{2e} & CC_2DC_2 & \cdots & \frac{b_{2h}CC_hDC_2DC_h}{2e} \\ \vdots & \vdots & \cdots & \vdots \\ \frac{b_{h1}CC_1DC_hDC_1}{2e} & \frac{b_{h2}CC_2DC_hDC_2}{2e} & \cdots & CC_hDC_h \end{bmatrix}. \quad (19)$$

Through the interconnection between nodes, the kernel distribution density of physical nodes is obtained as

$$\mathrm{CAC}^v(n_1) = \sum_{k=1}^{h} E^S(k,g) = \mathrm{DC}^S(n_k)\mathrm{CC}^S(n_k) + \sum_{k=1,g\neq k}^{h} E^S(k,g). \quad (20)$$

In order to expand the bandwidth distance between nodes, we obtain the definition by the following formula:

$$\mathrm{Local}(n^v) = \mathrm{Avail}(n^v) \times \left(\frac{\sum_{t^v \in t(N^T)}^{t^v} \mathrm{Avail}(l^v)}{d(L(n^v))} \right). \quad (21)$$

Based on the data obtained, the virtual node mapping priority variable is solved:

$$\mathrm{EP}^v(n^v) = \mathrm{Local}(n^v) \times \mathrm{BAC}^v(n^v). \quad (22)$$

We sort these nodes and then operate according to the order and select different data according to different node characteristics. The formula for expanding the distance between nodes is as follows:

$$\mathrm{Local}(n^s) = \mathrm{Avail}(n^s) \times \left(\frac{\sum_{t^s \in t(N^s)}^{t^s} \mathrm{Avail}(l^s)}{d(L(n^s)\mathrm{LI}(I^s))} \right). \quad (23)$$

We can learn from the calculation formula of the node and process the mapping priority variable of the physical node according to the physical network. The specific formula is

$$\mathrm{EP}^s(n^s) = \mathrm{Local}(n^s) \times \mathrm{CAC}^s(n^s). \quad (24)$$

The acceptance rate calculated by different algorithm formulas is different. The NACA structure is obviously better than other calculation methods because the NACA structure comprehensively analyzes the connections and characteristics between nodes from a global perspective, which not only makes the experiment process more reasonable but also makes the results of the experiment more accurate [14]. Figure 4 shows the comparison of the load intensity of the underlying node structure of the physical network. It can be seen from Figure 4 that the load intensity of the NACA structure is smaller, which is conducive to resource conservation and utilization. Average mapping overhead is shown in Figure 5.

Figure 5 shown above compares the NACA structure with another model. The NACA structure mainly analyzes the resources used between nodes. In order to make the results of the experiment more in line with the requirements, we can choose a suitable location and enrich the data resources. At the same time, in order to reduce resource consumption and prevent signal interruption, we can calculate the load level through the cost of node connection.

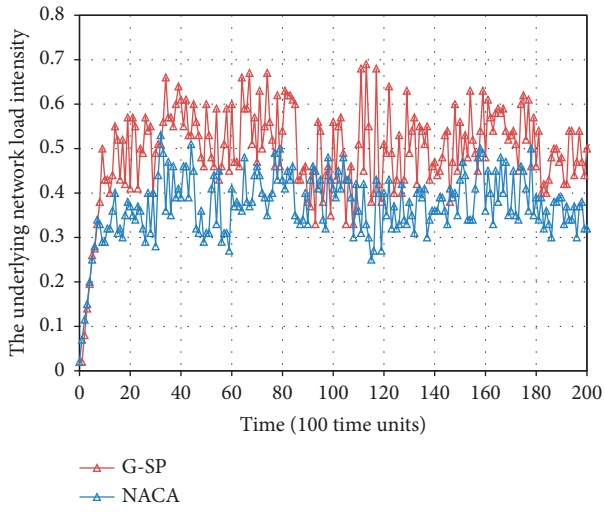

Figure 4: Underlying network load intensity.

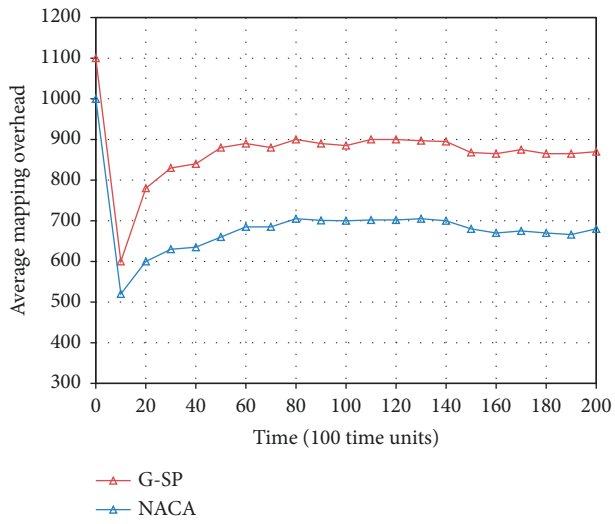

Figure 5: Average mapping overhead.

3.3. Zynq Embedded Platform and Key Technologies. The processor systems can be connected through different interfaces to make the signal of each link better, and the processor system can also analyze data faster [15]. We can divide the functions of the processor system into functional interfaces and hardware interfaces. The former can control signal transmission and the latter can program the processor system to realize data exchange. Various interface performance is shown in Table 1.

In order to make the signal more stable and reduce the dependence on the system during data transmission, we use the AIX interface as the main transmission tool. Classification of AXI protocol is shown in Table 2.

The summary of specific data transmission methods is shown in Table 3.

The specific signal changes are shown in Table 4.

4. Innovation and Development of Visual Communication Design

4.1. Practical Innovation of Visual Communication Design. With the development of multimedia technology, visual technology has also been greatly improved, and people have begun to use new methods to replace traditional methods for communication and interaction. The visual communication design in the new media era is a continuation of the traditional printing design, but it is not limited to pure beautification and information transmission, but more people are involved to interact and communicate with it.

The dynamic design under the multimedia technology has increased the frequency of people's interaction. The dynamic design is getting better and better at any time, and the user experience is getting better and better. In new media, the "dynamic" of dynamic design not only refers to the dynamic performance of visual elements but also the dynamics of information dissemination media. Broadly speaking, the process of new media dissemination of information is dynamic, which reflects the strong interaction of new media dissemination [16]. Through the visual dynamic design, the people's attention reception rate is significantly increased, so that visual information can be presented more accurately. The combined moving and changing graphics carry a richer amount of information, allowing people to stay focused on the changing images for a long time, so that visual information can be accurately and effectively delivered to the audience.

We can communicate not only with images but also with words, so the font design can stimulate people's eyeballs and be more artistic. Font design is the use of styling rules and expression skills for the connotation of fonts through in-depth creative thinking development, so that it has both innovative aesthetic vision and better semantic transmission. Image design is an analysis of text. Through media, dynamic design is more valuable and can also promote the development of commercialization [17, 18]. At present, the application of visual image design is more extensive, from books and magazines to the current digital media such as web pages and mobile apps. As the media changes, its artistic language and expression space have also changed, not only for traditional static but also for more infectious dynamics.

4.2. Thinking and Prospect of Visual Communication Design. Multimedia technology is a derivative of the development of science and technology and has a bright future and a research value. We must overcome difficulties and improve visual technology. The development of media technology has injected fresh blood into art design and brought new directions to the research of visual design in the new era. In terms of its nature, new media is a new thing born of scientific and technological innovation and development. It is full of vigor and vitality and has bright and unlimited development prospects.

With the continuous development of multimedia technology, intelligent systems and digital systems occupy a dominant position, and their forms are becoming more and

Table 1: Various interface performance of PS and PL.

Interface	Types	Interface bit width (bit)	Interface time type (MHz)	Read/write bandwidth (MB/S)	Number of interfaces	Total bandwidth (MB/S)
AXI_GP	Slave interface	32	150	600	2	2400
AX1_GP	Main interface	32	150	600	2	2400
AXI_HP	Slave interface	64	150	1200	4	9600
AXI_ACP	Slave interface	64	150	1200	1	2400
DDR	External storage	32	1066	4264	1	4264
OCM	Internal storage	64	222	1799	1	3557

Table 2: Classification of AXI protocol.

Interface	Characteristic	Similar agreement
AXI4	Address/burst data transmission	PLBv46, AHB
AXI4-stream	Only transfer data, burst transfer	Local link, FIFO
AXI4-lite	Address/single data transmission	PLBv46-single. APB

Table 3: Comparison table of PS and PL data transmission methods.

The way	Advantage	Disadvantage	Suggested use	Estimated throughput rate
CPU control I/O	Simple software, minimal logic resources, simple logic access	Lowest throughput rate	Control function	<25 MB/s
PS part controls DMAC	Minimal logic resources, medium throughput rate, multiple channels, simple logic interface	DMAC configuration is difficult	When PL's DMA is not enough	600 MB/S
DMA in AX1_HP and PL	Highest throughput rate, multiple interfaces with FIFO buffer	Can only access DDR/OCM. Complex logic design.	High-performance transmission of large blocks of data	1200 MB/S
AXI_ACP and DMA in PL	The highest throughput and lowest latency can be selected as cache consistency	Large block data transfer causes cache problem, shares CPU bandwidth, and more complex logic design	High-speed data transmission directly related to small blocks and cache	1200 MB/S
DMA in AXI_GP and PL	Moderate throughput rate	More complex logic design	The module used for PL to control the PS accesses the I/O peripherals of the PS part	600 MB/S

Table 4: VDMAIP core system signal.

Signal name	Input/output	Function description
m_axi_mm2s_aclk	Input	AX14 read clock
m_axi_s2mm_aclk	Input	AX14 write clock
m_axis_mm2s_aclk	Input	AXI4-stream read clock
m_axis_s2mm_aclk	Input	AXI4-stream and clock
axi_resetn	Input	VDMA reset

more diverse. They have brought tremendous impetus to the development of society, and more and more people are thinking about problems with innovative thinking. New ideas have been imported into the world. One thing we need to admit is that the continuous development of multimedia technology and the continuous digitization and informatization of the world are all important foundations for the dissemination of advanced cultures and also important factors for promoting cultural diversity. When we are immersed in the convenience brought by the continuous development of multimedia, some problems also arise, such as how to make the system more complete and more efficient. Science and technology are our means of survival and are our indispensable tools. Therefore, if we want to develop visual technology, we must combine visual technology with science and technology to better complete the experiment.

The development of science and technology is the guarantee of people's lives and the foundation of national development. Therefore, the emergence of new multimedia is the fundamental reason for promoting the development of visual technology, and it is an important embodiment of science and technology in the field of art. The development of visual technology is based on the development of science and technology. On this basis, innovative thinking and human aesthetic requirements are added to enable its functions to meet people's needs and provide convenient conditions for people's lives. With the continuous development of the times, there have been great changes in visual technology. People combine their innovative thinking with computer networks, multimedia functions, and various software and platforms to design more distinctive models. Making the connection between art and science and technology closer, not only promoted social changes but also changed the traditional communication methods, replacing traditional paper information exchange with multimedia technology and making the art field gradually become the main industry of social development.

5. Conclusion

With the continuous development of the times and the continuous development of science and technology, embedded technology is constantly improving, and the technology that people use to process images is also constantly evolving, so more and more people are focusing on embedded technology. In terms of image processing technology, these two technical methods have become very popular research projects at the moment and are used in many fields, including agriculture, industry, and medicine. In virtual systems, the development of wired networks is relatively mature, so more and more people are focusing on wireless network systems, but there are still many difficulties in developing wireless network systems. With the broadening of people's thinking, more and more innovative methods have broken the situation of traditional multimedia use and combined visual language with design models, which has promoted the development of culture and the development of science and technology. The purpose of this experiment is to design a new structure by combining it with an image processing system based on embedded technology. In the experiment, we will use the QT graphics interface to connect with another same system interface, according to the characteristics of embedded technology data and image processing, design a new interface model, make the image binary, and then use calculations to prove the new feasibility of the way. In this report, we showed some of the programming steps and fully explained the design and results of the model, but it took a long time. The result of the test is that the embedded technology has a long-term experimental value and application value because the system can process images in real time, collect and store data faster; the resolution of the obtained images is also higher, and less energy is lost. We will continue to work hard to make the embedded technology more perfect.

Data Availability

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

Conflicts of Interest

The author declares no conflicts of interest.

Acknowledgments

This work was supported by the Research on the Innovation Path of Henan Intangible Cultural Heritage Promoting Rural Revitalization under the Background of Agricultural, Tourism, and Cultural Integration, Henan Soft Science Research Plan Project, under project no. 222400410416; ZhengzhouB usiness University , Cultural Tourism and Rural Revitalization Integration Innovation Research Team, under project no. 2021-cxtd-06; and Research on the Activation and Inheritance Path of Traditional Village Culture in Rural Revitalization under the Background of Cultural and Tourism Integration, A School Level Project of Zhengzhou Business University.

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