

## *Original Paper*

# Research on the Current Situation and Development Trend of Computer Network Communication in the New Era

Min Duan<sup>1</sup>

<sup>1</sup> Xihua University, Chengdu 610039, China

Received: October 29, 2023    Accepted: November 18, 2023    Online Published: November 23, 2023

doi:10.22158/asir.v7n4p139

URL: <http://doi.org/10.22158/asir.v7n4p139>

### **Abstract**

*With the increasing social demand for information, computer network communication is also developing. The development of social economic and cultural activities in the information age cannot be separated from the support of computer network communication. In today's society, the network has penetrated into all fields of society, and the application scope of computer network communication technology has expanded significantly, providing a strong support for the development of emerging industries and social and economic progress. The development of computer network has brought great convenience to people's life. The integration of computer network technology and communication technology will meet people's needs to a greater extent. Therefore, computer network communication will be the trend of the new era, and the integration of the two is of great significance to the development of computer network. This paper analyzes the development status of computer network communication in the new period, introduces the development trend of computer network communication in the new period, and lays a good foundation for the improvement of computer network communication technology.*

### **Keywords**

*New period, Computer network communication, The current situation, Development direction*

### **Introduction**

The application of computer network has become an indispensable part of people's spiritual world. It not only changes the way people live and work, but also greatly promotes the overall development of society. With the rapid development of network technology and communication technology, computer and information technology are gradually applied to every field of society. With the rapid development of national economy, people's requirements for the level of computer network communication technology are also increasing. This directly affects the development of the national economy, the

security of all kinds of information, as well as people's living standards and quality. Therefore, it is particularly important to further improve and perfect the computer network communication technology. The rapid development of information technology drives the development of network communication. Information technology such as computer network communication technology has been widely used in the field of information. In this information age, the degree of development of computer network has become one of the standards to measure the degree of development of a society. In order to realize the global sharing of computer network resources and maximize the efficiency within the limited cost range, the integration of network communication has become the inevitable trend of the development of computer network communication in the new era. Under the current social situation, how to give full play to the advantages of computer network communication and grasp its development trend is an important issue in the course of social development.

First, the current situation and problems of computer network communication in the new era

In modern society, with the continuous improvement of people's living standards, the requirement of network communication ability is getting higher and higher. The traditional way of information dissemination has been unable to meet people's needs, so it is necessary to reform the way of information dissemination according to the current situation. In recent years, we will find that optical communication technology has developed rapidly and has been widely used in computer network communication systems. This technology greatly improves the information processing capacity and the speed of information transmission. In addition, it also has a certain impact on lifestyle. If we look closely, we will find that optical communication technology is indispensable in all aspects of our lives, which brings us great convenience. With the continuous development of communication technology and computer network, multimedia technology has also made new progress. Traditional imaging, voice, mass storage and wireless technologies are all evolving. These achievements can be combined with computer network communication technology to better serve people's needs. With the development of cloud computing, multimedia technology has been greatly improved, such as the emergence of new technologies such as large-capacity storage and wireless technology, which makes traditional image and voice functions more mature, but also makes multimedia technology become the most representative symbol in the field of communication. The development of multimedia technology provides more possibilities for the development of computer network, which can better serve people's needs.

Second, the trend of innovation and development of computer network communication technology

In view of the current situation and future development trend of computer network communication technology, especially in the development process of computer network communication technology, security problems and technical reasons are easy to appear. In the future development process, we must focus on solving the problems of network communication, host security and firewall, so as to make computer network communication more convenient, efficient and secure. Mobile networks are gradually developing from traditional networks to 4G and 5g. At present, 4G networks have been

widely used, and 5g networks have become the main task of social promotion. With the continuous improvement of network communication technology, people continue to experience the convenience of mobile network communication, such as communicating with family, friends, colleagues, etc. It is not affected by the region, so as to meet the needs of people's life and work for network communication. At the same time of rapid development, it has also promoted the rapid development of computer-related industries, and further solved the defect that WiFi can not be fully covered. Combined with the rapid development of mobile network technology, it not only brings convenience to people, but also better meets people's needs. Therefore, more network technology is integrated into our life. Therefore, computer network communication technology is more closely integrated with people's real life and work.

As a new communication mode, quantum communication is based on quantum theory and information theory and supported by quantum entanglement effect. It mainly involves quantum remote docking and quantum cryptographic communication. Quantum communication technology represents the development trend of computer network communication technology to a certain extent, and has the characteristics of strong practicability, high transmission security factor, and strong timeliness. At present, the computer network communication technology has made rapid development in the society. The integration of optical communication technology, mobile network technology and multimedia technology is the development trend of computer network communication technology in the future. By better combining the advantages of these three technologies, multi-network convergence technology can make people's communication more diversified and convenient, and also reduce the capital investment of scientific and technological development. At present, the wide application of WiFi technology not only promotes the development of wireless networks, but also provides opportunities for the development of wireless networks. The advancement of wireless network technology has also promoted the development of the communication industry and provided convenience for people's communication. On the other hand, it also indicates that WiFi will become the development trend of the future society, which also lays the foundation for the rapid development of science and technology. In the important direction of network communication reform, wireless communication technology has been widely concerned, and the development of WiFi has also been recognized by the public. This is a new development in the market, making limited network cable communication an open and flexible way of wireless network communication. However, wireless communication technology has been greatly improved after extensive use and trial operation. Therefore, increasing the research and development in this field will make wireless communication get better development.

Third, the strategy of computer network communication development

For the problems existing in network communication, users can load and uninstall system modules through the server console, install and uninstall software, more secure. For network servers, you can set passwords to lock server controls to prevent unauthorized users from modifying the system, damaging data, and deleting important information. In the aspect of network information, the system also

provides the function of limiting server login, increasing security measures and reducing the problems existing in network communication. In the computer network communication system, the host is in the leading position in the world. Before data and information transmission, the host needs to collect and analyze all information sources, so ensuring the security of the host is very important. Since the host is vulnerable to external intrusion, regular maintenance of the host should consciously carry out daily work, and assign a special person to be responsible for the security management and monitoring of the host to ensure the security of the host. In line with the principle of safe use, timely repair the vulnerabilities of the host, upgrade the host system version, so that the host is always in a healthy state. In the current situation, WiFi has become an indispensable part of life, it is hard to imagine life without WiFi. It can be said that the development of WiFi has provided us with a new field and promoted the development of wireless communication technology in our country. Under the influence of WiFi, the distance between people is greatly shortened, and communication becomes frequent. Today, the use of WiFi has become very common, beyond our imagination. Reasonable and correct use of WiFi can effectively promote the development of China's science and technology industry, but also bring great convenience to computer communication equipment. In a word, wireless network communication promotes social and economic development.

Concluding remarks:

To sum up, it is not difficult to see that under the new development trend, the computer network communication system has brought earth-shaking changes to our lives, and people can communicate anytime and anywhere without the restrictions of time and region. The computer network communication system has a wide range of functions to enable people from different regions, countries and skin colors to communicate with each other. In a sense, it is also a way of cultural exchange. Only by solving the problems existing in the development of computer network communication technology, can we explore the new development trend of communication technology. The progress of computer network communication technology has not only brought about great changes in people's way of life, but also accelerated the pace of people's life and work, making the communication between people more frequent, close and convenient. In the development of computer network communication, it is necessary to strengthen the security construction management, so that the computer network communication system can achieve a qualitative leap. On the basis of clarifying the current situation, advantages and disadvantages of computer network communication, it actively explores the development trend of computer network communication in the new era, strengthens the research efforts, improves the technical level of computer network communication, and better serves the society.

## References

- Chen, G. (2017). Research on current situation and development trend of computer network communication in the new era. *Digital World*, 2017(05), 129.

- Chen, H. H. (2018). Research on current situation and development trend of computer network communication in the new era. *Communications World*, 2018(10), 62-63.
- Di, C. F. (2016). Discussion on current situation and development trend of computer network communication in the new era. *Tomorrow Style*, 2016(20), 328.
- He, S. (2015). Research on the status quo and development trend of computer network communication in the new era. *Information and Communication*, 2015(05), 255.
- Hou, S. (2015). Discussion on the current situation and development trend of computer network communication in the new era. *Shandong industrial technology*, 2015(16), 222.
- Li, P. (2015). Research on current situation and development trend of computer network communication in the new era. *China New Communications*, 17(03), 23.
- Liu, G. S. (2019). Research on the status quo and development trend of Computer network communication in the new era. *Software*, 44(04), 152-154.
- Liu, Y. P., & Tang, H. R. (2020). Research on the Status quo and Development Trend of Computer Network Communication in the New Era. *China New Communications*, 22(07), 12.
- Motingi. (2014). Research on Current Situation and Development Trend of Computer Network Communication in the New Era. *Computer Optical Disc Software and Application*, 17(10), 296-297. (in Chinese)
- Pan, Q. M. (2015). Analysis of current situation and Development Trend of Computer Network Communication in the new era. *Electronic Technology and Software Engineering*, 2015(12), 41.
- Shen, G. Q. (2016). Research on current situation and Development Trend of Computer Network Communication in the new era. *Science and Technology Outlook*, 26(25), 11.
- Song, J. H. (2017). Research on the status quo and development trend of computer network communication in the new era. *China New Communications*, 19(12), 25.
- Tian, X. L., & Xiong, Y. (2016). The research status and development trend of computer network communications in the new era. *Computer programming skills and maintenance*, 2016(24), 72-73.
- Wang, Y. P. (2014). Research on Current Situation and Development Trend of Computer Network Communication in the New Era. *Computer Optical Disc Software and Application*, 17(11), 105-106. (in Chinese)
- Xiong, M. M. (2015). Research on the current situation and development trend of Computer network Communication in the new era. *Science and Technology Innovation and Application*, 2015(14), 80.
- Yan, J. (2015). Research on current situation and development trend of computer network communication in the new era. *Computer Optical Disc Software and Application*, 18(02), 299-300.
- Yang, J. X. (2013). Research on the current Situation and Development Trend of Computer Network Communication in the New Era. *Information Security and Technology*, 4(03), 6-7.

- Zan, J. J. (2020). Research on the present situation and development trend of computer network communication in the new era. *Information recording materials*, 21(4), 67-68.
- Zhang, H. W. (2021). Research on current situation and development trend of Computer network communication in the new era. *Information recording materials*, 22(02), 67-68.
- Zhu, Q. H. (2016). Analysis of current situation and Development Trend of Computer Network Communication in the new era. *Scientists*, 4(06), 73-74. (in Chinese)