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Research on the Application of Computer Network in Electronic Information Communication Engineering

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Abstract

With the development of information technology and the popularization of computers, the application of computer network is related to people's daily life and work. The development of computer network technology has innovated the way of obtaining information, and users can obtain the information they need in a short time, which is conducive to greatly improving users' work efficiency. The construction of electronic information and communication engineering is related to people's daily communication. In the information age, it is particularly important to promote the innovation of this kind of engineering. Electronic information and communication project is a highly professional communication construction project. Through the construction of this project, we can ensure the normal operation of China's communication network and promote the production and development of the country and society. As the main carrier of communication engineering, computer network can not only transmit and process information, but also receive and send information, so that every customer who uses the network can experience better information transmission service. Based on the development of computer network in China, this paper analyzes the practical application of computer network in electronic information and communication engineering, introduces the significance of computer network in electronic information and communication engineering, and analyzes the application of computer network in electronic information and communication engineering, thus playing a good data reference role for the construction and development of electronic information and communication engineering.

Keywords

Computer network, Electronic information communication engineering, Applied research

1. Introduction

With the continuous development of social economy, people have higher and higher requirements for the level of informatization, and electronic information and communication engineering, as a

professional technology that permeates people's life, work and education, has a very important impact on people's life and work. The computer network is the most important technology in the current human development process. Because of the continuous expansion of its application fields, it has promoted the economic benefits of all walks of life. By studying the effective application of computer network in communication engineering, we can not only realize the innovation of related technologies, but also further optimize people's lives and work, change people's lifestyles, make it more in line with the development needs of society and build a more information-based society. Computer network is the product of the rapid development of information technology, which conforms to the trend of economic and social development and meets the information needs of different groups of people. It is a brand-new development opportunity for many industries. As a product of the information age, electronic information and communication engineering is closely related to the development of computer networks. Strengthening the application of computer networks in electronic information and communication engineering will not only benefit the development of electronic information and communication engineering, but also provide experience accumulation for the optimization and perfection of computer networks.

2. Overview of Electronic Information Communication Engineering

The upgrading and innovation of information and communication technology have created favorable conditions for the development of electronic information and communication engineering. Electronic information communication engineering has gradually become a systematic engineering technology, including communication technology, information technology and electronic technology. With the improvement of related technologies, the functionality of electronic information and communication engineering also presents a diversified development trend. Strengthening the construction and application of electronic information and communication engineering is of great significance to China's economic and social development. In order to ensure that the development of related technologies can meet the needs of industrial development, it is very important to promote the combination of computer network and electronic information and communication engineering.

2.1 Computer Networks

Computer network is a comprehensive embodiment of computer network technology, and its main significance is to provide customers with information browsing channels and platforms. Computer network is an abstract collection, and its function is to realize information transmission between information terminals. And in the whole transmission process, the security and speed of information transmission are guaranteed. At present, computer network is an important technology for every country to survive in the process of construction and development, which not only promotes the development of all walks of life, but also creates huge economic benefits, allowing each different field to realize the functions of intelligent regulation, intelligent data collection and intelligent data analysis through the interconnection of computer networks, which improves the convenience of people's lives

and work.

2.2 Electronic Information and Communication Engineering

Electronic information communication engineering is a technology that specializes in Internet communication business. Its function is to collect information and forward it after the electronic information engineering system processes the corresponding information, so as to achieve the purpose of improving the effective utilization rate of information. The most important embodiment of the electronic information communication project is the communication network of the national communication network, including the signal transmission and information transmission of China Mobile, China Telecom and China Unicom. In the whole process, the information transmission and integration of terminal equipment based on network traffic is an effective embodiment of electronic information communication engineering, which not only promotes modernization, but also strengthens people's life experience. So that people can further strengthen the effectiveness of information transmission and use through the use of communication networks and communication functions in their daily lives.

3. An Overview of Computer Network Technology

Computer network technology uses network communication technology to realize the connection between different computers, which can meet the information acquisition needs of different people. The application of computer network technology is inseparable from related hardware equipment, which needs to keep up with the development trend of the industry in order to meet the operating needs of computer networks. Using computer network technology can build a network structure system and help users to integrate and deal with different resources. Powerful information storage and processing function is a great advantage of the wide application of computer network technology.

4. The Concrete Application of Computer Network in Electronic Information Communication Engineering

4.1 To Build an Interactive Environment

The early electronic information communication project was just an information processing tool, which could work for different user groups. However, with the development of economy and society, users' information processing needs became more and more diverse. In order to meet the needs of different groups of people, electronic information and communication engineering needs constant innovation and upgrading. The use of computer network can help from the technical level, optimize communication work for different communication links such as information storage, information transmission and information sharing, and create conditions for the construction of interactive environment. The construction of a good interactive environment can not only provide timely user feedback for engineering construction and application, but also optimize the user experience.

4.2 Maintaining Information and Data

The security of information and data is related to the development of post-communication work, and it is an important prerequisite for post-communication work. Combined with the construction and application of electronic information and communication engineering, as a systematic project, many factors need to be considered comprehensively in the construction and application of this kind of engineering, and the maintenance of information data is a major focus in electronic information and communication engineering. Using computer network technology can not only innovate the way of information maintenance, but also improve the pertinence of information data maintenance and avoid the problem of information data leakage. Identity authentication technology is one of the representatives. Only after completing identity authentication can we communicate and access related resources. The application of related technologies can effectively avoid the invasion of some lawless elements. Although the computer network can undertake the function of information transmission, if the transmitted information is not encrypted in the process of information transmission, it may lead to information transmission leakage and serious losses. Through the effective application of computer network technology, the information transmission of electronic information communication engineering can be safely packaged, and the security of information transmission can be guaranteed on the premise of improving the information processing speed. The effective application of computer network related technologies can prevent the disclosure of private documents, protect relevant documents and deliver them in time, and play an important role.

4.3 Promoting Resource Sharing

The biggest feature of the Internet is openness and resource sharing. People can search for all kinds of information they want on the internet, and the effective application of computer network in electronic information communication engineering can be reflected in resource sharing. Through the transmission of information between devices, the transmission of information content can be realized, so as to achieve the purpose of using the information. From a professional point of view, combined with the characteristics of TCP/IP protocol, a comprehensive layered system is built to allow information to be transmitted between different layers, so as to achieve the purpose of collecting, transmitting and using information.

Secondly, through the effective application of computer network resource sharing, it can play a certain supporting role in the construction of electronic information and communication engineering system. By analyzing various problems encountered in the process of construction optimization and putting forward corresponding optimization measures, it can ensure the effectiveness of the system application of electronic information and communication engineering.

In the information age, resource sharing has gradually become a major development trend in the information industry, as well as in the construction and development of electronic information and communication projects. It is difficult for the traditional communication transmission mode to achieve the ideal goal of resource sharing, so it is very important to strengthen the application of computer

network in this kind of project. Strengthening the application of computer network in electronic information communication engineering can, on the one hand, change the direction of information transmission and provide different information transmission modes for users with different needs, on the other hand, it can greatly improve the storage space of information data, and users can realize multifunctional storage. In addition, the use of the confidentiality of computer networks can also effectively improve the information security of electronic information and communication engineering. Users can use information data protection technology according to their own information security needs, complete the permission setting work, and provide more possibilities for the development of electronic information and communication engineering, which is a major development trend of information and communication engineering in electronic brain. Network teaching is one of the representatives. By using computer network, teaching resources can be shared, and students' learning is no longer limited by time and space, and they can learn by themselves.

4.4 Transmitting Information and Data

The traditional electronic information communication engineering has low adaptability, low transmission efficiency of information and data, and lack of effective protective measures, and it is gradually difficult to meet the information communication needs in the current era. In order to greatly improve the transmission efficiency of information and data, it is very important to strengthen the application of computer networks. Intelligentization, speediness and high speed are the remarkable characteristics of computer network. Using computer network can greatly improve the integrity and reliability of information and data transmission, thus realizing long-distance safe transmission, and the anti-interference ability of communication transmission channels has also been significantly improved. With the increase of network users, the demand for information transmission has greatly increased. The application of 5G network communication technology not only greatly improves the efficiency of information transmission, but also creates great convenience for people's daily work and life. As the transmission channel of information and communication engineering, the main function of computer network is to undertake the road of information transmission. At this stage, people are demanding higher and higher information transmission speed. In order to improve the speed and effectiveness of information transmission, it is necessary to optimize the transmission channel in combination with the computer network and further enhance the stability and efficiency of hardware transmission to achieve the goal of rapid information transmission.

5. Conclusion

To sum up, computer network and electronic information communication engineering system are interdependent. The effective application of computer network resource sharing, information transmission and information security encryption features can help the development of communication engineering system and expand related functions, thus ensuring the quality of information transmission and improving the speed of information transmission. So as to play a certain role in promoting the

construction of confidence communication in China. The application of computer network in electronic information and communication engineering is not only the requirement of the construction and development of electronic information and communication engineering, but also a brand-new demand in the information age. Industry staff should strengthen the accumulation of work experience in the daily work process, constantly change their work concepts, improve their professional knowledge, exercise their professional skills, and contribute to the construction and development of related projects.

References

Cheng, Y. Y. (2023). Research on the Application of Computer Network Technology in Electronic Information Engineering Home appliance maintenance, (10), 28-31.

Dong, L. L. (2023). The application of computer network technology in electronic information engineering. *Information and Computer (Theoretical Edition)*, (17), 192-195.

Fang, C. H. (2023). Analysis of the Application of Computer Network Technology in Electronic Information Engineering Information recording materials, (06), 113-115.

Guo, P. (2021). Application of Computer network Technology in Electronic Information Engineering. *Electronic Technology and Software Engineering*, *2021*(08), 20-21. (in Chinese)

Hao, J. (2024). Exploring the application research of computer network technology in electronic information engineering. *Brand and Standardization*, (01), 134-136.

Li, C. (2023). Exploration of the Application of Computer Network Technology in Electronic Information Engineering Information Record Materials, (07), 205-207.

Lin, Z. K., Zhang, Y., Liu, J. B., Xu, Li, H. L., & Xue, X. R. (2022). Research on the Application of Computer Network Technology in Electronic Information. *Engineering Network Security Technology and Applications*, (09), 173-174.

Liu, H. Y., Dai, K., Ji, F., & Ma, G. S. (2023). The application of computer network technology in electronic information engineering. *Integrated Circuit Applications*, (10), 218-219.

Liu, X. D. (2023). Analysis of the Application of Computer Network Technology in Electronic Information Engineering Electronic Components and Information Technology, (02), 187-190.

Lu, H. H. (2022). Research on the Application of Computer Network Technology in Electronic Information. *Engineering Information and Computer (Theoretical Edition)*, (21), 59-61.

Luan, W. N. (2022). The application of computer network technology in electronic information engineering. *New industrialization*, (10), 334-337.

Lv, Z. H. (2023). The application of computer network technology in electronic information engineering Software, (05), 121-123.

Song, Y. X. (2022). The application of computer network technology in electronic information engineering. *Electronic Components and Information Technology*, (09), 200-203.

Tang, Y., Mu, C. D., Guo, S. L., Wu, X., & Liu, J. Q. (2022). The application of computer network technology in electronic information engineering. *Electronic Technology*, (12), 133-135.

Tu, P. (2022). The application of computer network technology in electronic information engineering, *Jiangxi Metallurgy*, (06), 115-118.

Wang, F. (2023). The application of computer network technology in electronic information engineering. *Integrated Circuit Applications*, (10), 224-225.

Xiong, M. Z. (2021). Research on Application of computer network Technology in Electronic Information Engineering. *Modern Industrial Economy and Information Technology*, *11*(06), 115-116+119.

Xu, L. J., & Song, Z. W. (2023). The application of computer network technology in electronic information engineering. *Inner Mongolia Science and Technology and Economy*, (09), 98-101.

Xu, R. Y. (2022). Research on the Application of Computer Network Technology in Electronic Information Engineering (eds.), *Proceedings of 2022 Academic Forum on Engineering Technology Application and Construction Management (ETACM 2022)* (Vol. 1, pp. 247-249). Zhejiang Tiantai Landscape Construction Co., Ltd.

Yang, X. (2021). On the application of computer network technology in electronic information engineering. *Electronic World*, *2021*(11), 184-185.

Yu, W. J. (2021). On the application of computer network technology in electronic information engineering. *China New Communications*, *23*(09), 106-107.

Zhan, X. T., & Bi, Y. D. (2019). Application of computer network in electronic information engineering. *Information Recording Materials*, *22*(06), 161-162. (in Chinese)

Zhang, F. L., & Hu, X. Y. (2021). Application of computer network technology in electronic information engineering. *Electronic World*, *2021*(17), 148-149. (in Chinese)

Zhang, W. Y. (2023). The application of computer network technology in electronic information engineering. *Digital Technology and Applications*, (10), 145-147.

Zhang, Y. (2023). Research on the Application of Computer Network Technology in Electronic Information Engineering Information recording materials, (02), 94-96.

Zhou, X.-H. (2021). Application of computer network technology in Electronic Information Engineering. *Heilongjiang Science*, *12*(18), 106-107.

Zuo, R. J. (2023). The application of computer network technology in electronic information engineering. *Shihezi Technology*, (04), 77-78.