

A Brief Discussion on the Application of Computer Communication Technology in Electronic Information Engineering

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Keywords: Computer; communication electronics; information engineering; application background; security problems

Abstract: In the 21st century, information has become the epitome of this era, which is also the key to modern society's development. Whether it is successful individuals, business elites or white-collar office workers, they cannot do without the word "information". It can be said that in modern society, possessing information is indirectly possessing the "weights" of success. The application of computer communication technology in electronic information engineering is developing a series of functions of information, such as fast information retrieval, application of information, and big data processing, which has become popular in recent years. In summary, the potential of modern computer communication technology in electronic information engineering is evident.

1. Introduction

Electronic information engineering as a field involves a wide range of technical applications, including but not limited to communication systems, data processing and information transmission. With the development of computer science, the field has undergone an evolution from basic electronic engineering to complex communication networks^[1]. With the increasing dependence of modern society on data, the importance of electronic information engineering has increased significantly. As a core component of electronic information engineering, the development and application of computer communication technology directly affect the efficiency of information processing, the reliability of the system and the innovation of technology. Therefore, in-depth understanding of the application of computer communication technology in electronic information engineering is of great significance for promoting technological development and meeting social needs^[2].

2. Application background of computer communication technology

Electronic information engineering in the field of WAN communication can achieve rapid, "seamless" access to the user enterprise network, which is an important part of electronic information engineering. Computer communication technology for trunk and access lines can use coaxial cable as the transmission medium of the "transfer station", to ensure that private lines and public lines can be differentiated at the same time using the public WAN trunk. PSTN trunk lines, or PSDN of every public data network, operate mostly on the basis of the X.25 protocol. Transmission over optical fiber

media facilitates port fluency. The speed of each port of the computer can reach 5MB/s, or X.25 and frame relay network protocols are "big improvements" that designers can take advantage of the low transmission performance of the computer to transfer data over media^[3]. The computer can correct the data repeatedly in real time. Node retransmission of data is a means of automatic error analysis in the case of errors that cannot be corrected by the computer. The application of computer network makes the data transmission system of LAN-WAN in enterprise network in addition to ATMLAN as local trunk. This structured system transmission is realized by frame relay FrameRela on computer protocol and using SDH standard. Therefore, computer operation must be optimized for data transmission because of its low transmission rate.

3. Platform integration between computer communication technology and electronic information engineering

Talking about computer communication technology in the application of electronic, information engineering platform problems have to mention the computer hardware equipment, in order to efficiently apply computer technology must have a hard equipment platform, because the computer storage is mostly "TCP/IP native" computer operating system. In the "OS" platform we are familiar with, computer communication technology to have hardware compatibility, but also need to have "ARPAnet TCP/IP, IBM SNA, DEC DECnetNovell" and other platform equipment, in the major computer manufacturers in the network architecture and network protocol "work". Due to the lack of unified network architecture and communication protocol standards for computers, the operation and communication of important related operating systems such as "IPX, Ale Company" and "AleTalk" of some computer companies and computer NOS platform of some international hosts or computer servers have become complicated and difficult to achieve. In the mid-20th century, computer network operating systems such as "SUNOS, SolariewSCOUNI, UnixWare", in addition to the NOS platform, were UNIX "derived" systems, the use of which changed the "UNI" host or computer running "UNIX" server optimal service system. History can always be witnessed, when the International Organization for Standardization "ISO" and the International Telecommunication Union ITU made efforts to interconnect computer networks, the modern "big data" concerned that the "reference model" of the communication structure of the computer network system was already the initial look of the "OSI" hierarchical architecture.

4. The specific application of computer communication technology in electronic information engineering

4.1 Application of information transmission

In the development of modern society, People's Daily life and production work will produce a large number of information resources. Based on these information resources, frequent information transmission, resource sharing and comprehensive application are carried out, among which information resource transmission based on computer communication technology occupies the main part. When people carry out electronic commerce and other activities, the use of electronic information technology can realize the efficient transmission and application of information resources, and can effectively ensure the application security of information resources. The research and application of the industry hope to further improve the development effect of the industry itself. In practical applications, electronic information technology has the characteristics of high efficiency, convenience, science and precision, and has a very good information transmission effect, and can be applied in mobile phones, computers, smart devices and other diversified systems.

4.2 Network Security Management

The deep integration of computer communication technology and electronic information engineering has promoted the transmission efficiency of information resources to be significantly improved, but at the same time, it is also necessary to pay attention to information security. If the information security problem is not timely and effective security management, it may lead to very serious security problems, which will have a negative impact on social stability and development and security management. Therefore, relevant personnel must pay attention to network security management issues, conduct in-depth research and analysis of possible security problems, find out the essential reasons for the occurrence of problems, and formulate scientific and reliable optimization solutions based on the actual situation. At this stage, the security problems often occur in the following two aspects, that is, the line transmission problem and the system vulnerability problem.

4.3 Related technology applications

In electronic information engineering, the fusion application of computer communication technology involves wide area network technology, which has a very wide range of applications. Wan communication system includes optical cable, coaxial cable and other structures, relevant managers must focus on and manage it. From the current development situation analysis, optical cable technology has become the inevitable trend of the development and application of electronic information and communication technology, and has obvious technical advantages in practical applications, that is, the information data transmission speed is fast, the transmission bandwidth is relatively wide, the information transmission quality is relatively high, the environmental factors around the optical cable have relatively little impact on its operation effect, and can achieve long-distance signal transmission. It also has a very good application effect in the field of emergency communication. In the future development, as the number of WAN users continues to grow, people will have higher and higher requirements for broadband technology, which requires technical personnel to carry out further innovative research, in order to promote the continuous development and progress of electronic information engineering.

4.4 Information Resource sharing

When conducting information transmission in electronic information engineering, it is necessary to carry out targeted information data transmission based on the content of the internal communication protocol of the system. The application of computer communication technology can achieve hierarchical processing of communication protocols, thereby ensuring the coordinated and orderly operation of internal network modules, protocol interface modules, and application modules in the system, achieving precise information data transmission and instruction execution at the communication level, and ensuring more accurate and reliable protocol management in electronic information engineering, further improving the efficiency and quality of information data sharing under communication protocol constraints.

5. Security issues related to computer communications and electronic information

The design of solutions to some of the thorny problems of computer communication technology Civic is nothing more than the problems of computer line transmission and system vulnerabilities in security problems. Hackers attack some electronic devices, the most stable and serious computing information security, these tricky computer information and data leakage problems are urgent to solve,

to maintain the system regularly and in the computer Intranet and external network to deal with is an effective way to solve the security problem. These computer information system vulnerabilities can seriously harm the "interests of users", but also cause interference to the entire computer protection system, the protection of computer communication security and Internet network for the construction of a computer protection barrier is not contradictory, data insecurity has seriously affected the social and economic development. The relevant data show that researchers establish a complete and effective "protection network" is an important means to reduce the harm of electronic information optimization hardware and software.

The new generation of cellular mobile communication technology, especially 5G, for electronic information workers. The process field has had a significant impact. The introduction of this technology facilitated electronic communication. The rapid development and diversified application of the information system. The speed and low latency characteristics make it possible to implement complex numbers in electronic information engineering. According to analysis and real-time control is possible. For example, in automation and robotics. In the field of technology, 5G supports high-speed data transmission and real-time feedback for achieving precision. It is essential to ensure control and efficient operation. In smart manufacturing and Industrial Internet of Things. In applications, the high connection density of 5G networks can support more devices and transmission. Sensors are connected in real time, enabling a more intelligent and flexible production process. 5G networks also provide a stronger foundation for electronic information engineering. It supports the development of technologies such as big data, cloud computing and edge computing. The combination of some technologies improves the efficiency and flexibility of data processing for electronic messages. The various fields of information engineering bring new opportunities. Therefore, the new generation of cellular mobile communication technology has promoted technological progress in the field of electronic information engineering. The development and innovation of the industry provide strong support.

6. Computer communication technology in electronic information engineering "equipment development"

The main electronic information engineering equipment development technology is the combination of computer technology and electronic information engineering technology, which involves communication network and communication carrier communication design. Communication network is mainly the establishment of communication network system in electronic information engineering, and the network has interconnection, so the development of equipment in electronic information engineering must establish a perfect network system and protocol standards, so as to realize the information transmission between computer networks, and must work hard on the security of information transmission; The development of equipment in electronic information engineering must also develop a set of systems and network systems to protect information transmission on the basis of the use of computer technology, so as to ensure that the information exchange between electronic information engineering and computers can be absolutely guaranteed in security. The development of equipment in electronic information engineering is mainly to solve the efficient transmission of information, but the information transmission must have information buttons, and it is also the key to ensure and supervise the successful development of equipment in electronic information engineering. The second is the application of the communication carrier in the development of electronic information engineering equipment. The communication carrier mainly plays the service of mail transmission, resource sharing and information query in the development of electronic information engineering equipment, and the computer technology it is applied to is also a large part. Basically, the main technical information services are completed by computer technology.

7. Conclusion

Computer technology and equipment development in electronic information engineering have technical commonality, but the application of computer technology must be built on the basis of equipment development in electronic information engineering. The future development of computer technology is unpredictable, but the current momentum of its rapid development makes us yearn for it. Computer technology and electronic information engineering want to develop rapidly, we must take the computer technology this "speedboat", I believe that in the near future, China's electronic information engineering development will be further advanced.

References

- [1] Zhao Ziwei. *Analysis of computer communication technology in electronic communication from the perspective of intelligent driving. Application analysis of information engineering [J]. Digital Communication World*, 2018(2):109,148.
- [2] Hongting S. *Application of Computer Network Technology in Electronic Information Engineering[J]. Digital Technology and Application*, 2018.
- [3] Li Kai. *Application of Computer Communication technology in Electronic Information engineering [J]. Wireless Internet Technology*, 21, 2018 (19): 3-4.