Research on Computer Network Remote Control Technology

Wenwu Tan

Jiangxi University of Engineering, Xinyu, Jiangxi, 338000, China

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Abstract: With the rapid development of electronic information technology and network technology, computer network remote technology has been widely used in people's life, work, and learning. Based on this, this paper briefly summarizes the computer network remote control technology, then discusses the principle and composition of the remote control technology, and finally focuses on the application of remote technology in computer networks.

1. Introduction

At this stage, it is an information society, and the development of information technology is closely related to the computer network. While the computer network enriches the information, it facilitates the acquisition of information, but it has hidden security risks for information security. In such a social context, information security is very important. The application of remote technology in computer networks provides technical support for information security. It provides convenience for people's life and work, and also enhances work efficiency and reduces work. Capital investment. With the deepening of research in the field of computer network remote technology, network remote communication technology and network remote control have gradually matured and have been widely used in various fields of society. Computer network remote technology can remotely monitor different kinds of information such as text, data, audio and video, and can capture and monitor this information in the first time by means of the network, which greatly enhances the security level of information and realizes remote network. Communication and control functions.

2. Overview of computer network remote control technology

Under normal circumstances, automatic control does not rely on human operation, and automatically runs according to the program equipment set in advance. With the rapid development of computer technology, the generation of remote technology can automatically control the system and conditions, and enhance the operation of the whole system. Reliability and stability levels. Therefore, in the process of data acquisition, transmission, application, etc. of the computer control system, the whole system can operate safely and efficiently, which provides an important guarantee for the automatic control of the system. It is not difficult to see that in the era of information network, the effective combination of computer network and control system is an inevitable trend of social development and plays an important role in promoting human and social economic development. In practice, computer remote control mainly includes two aspects: computer hardware control and software control. Among them, computer software is mainly compiled by means of computer language, which can ensure that the system runs according to the preset program, which reduces security. The occurrence of accidents; computing hardware mainly includes computers, control objects, related equipment, etc., and its types and functions are relatively more, effectively ensuring the performance of automatic control systems. At this stage, the operation guidance control system, the direct teaching control system, the supervisory control system, and the fieldbus control system are the most commonly used systems for computer network remote control technology, occupying an important position in people's life, work, and learning, and also in China. The future development trend of information technology and network technology.

From the perspective of technical realization, computer network remote communication and control technology is to use the Internet to realize data communication between different computer

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terminals, and complete the control function of the computer terminal. In this process, the technician needs to establish a good communication line between the computer terminals through the TCP/IP network communication protocol, and split the data to be transmitted, and carry the data content through the communication link in the form of datagram. Multi-directional transmission, in order to avoid the validity of data transmission, the receiving end needs to verify the integrity of the data. Compared with the TCP/IP network communication protocol, there is also a UDP network communication protocol. Because the protocol has certain limitations on the effectiveness of data transmission, it causes unstable factors of network remote data transmission, which limits the UDP network. Application of communication protocols.

3. The main technology of computer network remote control

The main technology of computer network remote control includes four parts, namely Sockets technology, Magic Packet technology, Activex technology and Web technology. Sockets technology mainly relies on VC++ programming program settings to realize information transmission and information transmission in the remote monitoring process. This technology is fully matched with TCP/IP protocol to improve overall performance; Magic Packet technology can also be called network. Wake-up technology mainly refers to the computer being turned off, and can also be remotely monitored by setting the wake-up packet to the extent, so that the corresponding operation can be started; Activex technology is more common, mainly including Activex control, document, server framework, script and ava. The five aspects of the virtual machine are the earliest technologies developed. The technology is relatively mature, mainly used in servers and client terminals. Web technology is developed from Geneva. The main technical support is hypertext protocol. , Application Layer Protocol - Hypertext Transfer Protocol and Presentation Layer Syntax - Hypertext Markup Language is the two main key technical indicators. The above four technologies are different in application direction and field, have different characteristics, can be applied independently, or can be used in some cases, thereby improving the overall performance of computer network remote control.

The monitoring system part of the computer network remote control system is mainly composed of two parts: the control room and the outdoor monitoring. The monitoring of the indoor part is the monitoring of equipment in the computer room, such as remote monitoring host, video display and server, and wireless transmitting system equipment. The monitoring host is the main component, and the server software is configured to realize the whole computer network monitoring system. The wireless transmitting device has the functions of adjustment and channel. After the system is automatically set, the monitoring data obtained by the monitoring device is transmitted to the administrator computer device terminal through the computer transmitting device, thereby realizing remote monitoring and dynamic regulation. Outdoor monitoring is mainly for some monitoring equipment installed outdoors in the interior, such as cameras, alarms, etc. The configuration of these monitoring devices is mainly to achieve full coverage of monitoring, so as to obtain corresponding data according to certain procedures and equipment control, and then Realize the purpose of outdoor remote monitoring.

Remote control of computer network can respond to the running condition of computer network in time, provide a stable and reliable network environment, and ensure the effective operation and operation of the computer under certain conditions. The remote control technology realizes automatic risk control and identification through the server of the remote terminal, thereby collecting and feedback information, and then repairing and managing to ensure the security of the computer network environment.

4. Design and application of computer network remote control system

First, the design and application of the computer network master terminal. The computer network master terminal is a key element. Whether the master terminal is stable and safe depends mainly on the performance of the configured network server. Many factors are involved in the

whole network monitoring process of the computer. The user classification and permission setting are the original settings of the network monitoring terminal. In the initial stage of configuration, the network environment should be checked one by one in strict accordance with the standard operation to determine whether there is network configuration. Then assign an IP address, set a standard domain name and password, and after making the above configuration, send a network connection request to the computer network terminal, thereby implementing the connection of the network master terminal. After the network connection is completed, all information and data can be transmitted, thereby realizing network resource sharing. This is how we often say how to connect to the Internet and transmit on the Internet.

The second is the design and application of controlled networks in computer network remote control. The application of the controlled network is mainly reflected in the transmission and processing of the client receiving end. On the one hand, the controlled network must ensure absolute control of the degree, so as to ensure that the computer network can be used and managed at any time during use; on the other hand, the corresponding service port should be configured and the corresponding files should be configured to ensure timely response. After the above two steps are completed, a network connection can be made to implement data transmission. The final step is to summarize and assemble and organize and feedback all the data received. The network service provided by the controlled network is a very basic work, and it must be operated according to the process. The specific process includes: First, to find a remote screen, find the remote screen through the computer copy and paste function, and transfer the required information to the main control data server through the computer; the second step is to achieve remote boot and shutdown; The step is to remotely control the mouse and keyboard, which is the main device to ensure subsequent remote monitoring; the fourth step is to open the remote file transfer management; finally, the remote service application and shutdown. Through the remote monitoring operation, you can fully understand the overall process of remote monitoring of the computer, so that it can be better applied in daily work.

With the rapid development of computer technology and Internet technology, coupled with people's dependence on computer network technology, various services provided by computer network remote communication and control technology have been favored by people. For example, the operation of an unmanned supermarket is an example of combining computer network remote communication and control technology. The infrared sensor is installed inside the supermarket, which can basically provide customers with a series of door opening and closing services, and with the help of intelligent video. The monitoring terminal can not only restore the situation inside the supermarket, but also know the consumption situation of the supermarket items in real time, and transmit the item consumption information to the control center. The control center replenishes the goods according to the supply and demand situation of the unmanned supermarket. From the perspective of the enterprise, combining remote technology with computer network can effectively enhance the operational efficiency of the enterprise and reduce the cost investment. Taking Lenovo as an example, in the early stage of development, Lenovo's after-sales service was mainly based on traditional methods. After-sales service stores were set up throughout the country. Although the after-sales service efficiency was ensured, a lot of money was invested. After the remote technology is applied in the computer network, Lenovo uses the special software to diagnose the product remotely, and provides users with targeted after-sales service options based on the diagnosis results. For the simple "soft fault", it can be solved directly online. The hardware fault problem can choose two ways of express delivery or on-site service, which greatly enhances the after-sales service efficiency and reduces the input of service cost. It is not difficult to see that the application of computer network remote technology has changed the traditional enterprise operation management mode, while reducing the economic cost of enterprises, it also enhances the efficiency and comprehensive competitiveness of enterprise operation management.

5. Conclusion

The widespread popularity of computer network remote technology has not only changed

people's work, life and learning methods. With the improvement of computer network remote communication and control technology, the level of informationization and intelligence of computer network remote technology will continue to increase. It is promoted and used in various fields of society.

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