

Analysis of Common Interference and Control Measures in Electronic Communications

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Abstract: In response to the current situation of electronic communication in China, analysis can be conducted from the perspectives of influencing factors and solutions. With the rapid development of society and technology in our country, we have broken through new development rates. Based on the continuous efforts of relevant technical staff, China's electronic communication technology has achieved milestone development in recent years. As the most important assistance facility, the utilization rate of electronic communication has been fully covered. Within the entire society, most areas have been covered by electronic devices, bringing great convenience to our lives. Especially nowadays, the reliance on electronic communication equipment in China is becoming increasingly strong, such as the high installation rate of WiFi, which has achieved coverage in most regions. Based on this, this article analyzes the current situation of electronic communication and common interference and control measures.

Keywords: Electronic Communication; Interference Issues; Control Measures

Introduction

Due to hardware, configuration, and other factors, interference with electronic communication has been formed, greatly reducing its work efficiency, making it both unsafe and unstable. If these disruptive factors are analyzed and controlled, then solutions and means can be found. With the rapid development of economy and technology in recent years, the development speed of electronic communication technology has become increasingly fast, becoming an essential tool for everyone in China to use. Especially in recent years, people have paid great attention to the security of electronic communication technology. It is precisely because of the strong interference of security on electronic communication technology that we should pay more attention to common interference items in electronic communication and control them. This article starts from two perspectives. Identify common interference reasons and set targeted control measures based on the interference reasons.

1. The importance of anti-interference in electronic communication

In our daily lives and work, more and more people are using computers and smartphones to connect to wireless networks. The frequency of wireless network usage is increasing, and many interference situations often occur, among which electromagnetic interference is the most common. The specific manifestation of electromagnetic interference is that when using mobile phones for communication or computer networking, there is often noise around, and there is even a high possibility of disconnection. At the same time, there is relatively large noise in the earpiece and microphone. The above situations are often encountered in the process of using electronic communication technology for communication, which not only interfere with our lives but also bring many impacts to our convenience. Currently, with the rapid development of modern electronic information technology and the continuous reduction of the degree of electromagnetic interference in innovative research, there are still some interfering factors. For example, the academic community places great emphasis on new breakthroughs in the application and production process of electronic communication technology. And conducted in-depth research on the interference problem of electronic communication technology and conducted corresponding investigations. At present, the common interference factors in electronic communication mainly include conducted

interference in electromagnetic interference and interference generated in the s spectrum, which are very common interference items in people's use of electronic communication technology. Not only has it brought great inconvenience to our lives, but it also affects the quality of communication, and may even lead to significant communication security issues. If anti-interference items can be set for electronic communication technology, it can improve the security rate of people using electronic communication technology, and also improve the anti-interference ability of electronic communication technology, providing corresponding convenient services in people's lives.

2. Common interference factors in electronic communication

2.1 Interference issues with equipment hardware facilities

The hardware interference problem of devices mainly refers to the occurrence of many failures in the carrier equipment that undertakes information transmission during the operation of the communication system. These problems not only cause continuity of internal information, but also cause asymmetry in the transmission instructions and information received by the information terminal system. From the perspective of the entire hardware system, it not only includes display equipment, but also includes line and server equipment. If a certain link of these equipment encounters a problem, it will cause radio transmission interruption, or cause significant faults in some critical locations, and may even cause the entire network to be paralyzed, leading to information loss and distortion. The hardware and facilities issues mentioned here are diverse, and in addition to the aforementioned issues, there are also other issues. The entire troubleshooting process must follow the operational characteristics of the electronic communication system. Only after investigating the interference factors one by one and ensuring the integrity of various data information during operation can the parameter errors presented in the electronic communication network be detected through the information network. This can effectively improve the efficiency of hardware equipment usage and also eliminate many interference items.

2.2 Interference from Communication Noise Environment

The interference caused by communication noise cannot be avoided, and this interference has a wide impact on the operating environment of the entire electronic communication network. At the same time, it is also difficult to identify the factors of fault interference. The main factor causing this type of interference problem refers to the devices that undertake the operation of electronic communication systems. If they are affected by unstable voltage sources and cause irregular interference to signal transmission, it will affect the entire communication environment. For the normal working environment, if there are interference signals or the superposition of interference signals, the entire system will face the problem of distortion. If the data is distorted, it will affect all subsequent work. Therefore, for digital communication, if the voltage value is in a certain state, the voltage noise caused during this process will also have a significant reversal phenomenon, which will face important communication problems for the entire system.

3. Control measures for common interference factors in electronic communication

3.1 Hardware interference and its control measures

The first thing that needs to be investigated is often the hardware part, because the hardware part is related to the main links and steps of the entire electronic communication. Generally speaking, common hardware failures mainly include hardware device failures and network connection failures. Hardware device failures are relatively easy to handle, usually when there are few access points or clients for maintenance. If the network environment is complex and there are a large number of clients and access points, once a failure or error occurs, So the retrieval program will be quite cumbersome and may be affected by some other factors. However, if all hardware devices cannot achieve network connection, it is necessary to inspect and repair the hardware of the access point, so as to confirm whether there are problems in this part. If it is uncertain which part has a problem before conducting maintenance, it is necessary to determine the specific location before taking targeted repair measures. For hardware interference and control, the main focus is on its access point. Generally, the detection method is to input corresponding instructions on the computer client, connect to the specific IP address, and then conduct maintenance to determine whether there is a fault, Whether it can be connected normally. If the access point is in a

normal operating state, it indicates that there is a high probability that the interference factor is a hardware failure in the original equipment.

3.2 Reducing Configuration Interference

In response to the interference caused by configuration issues in the electronic communication system, it is necessary to verify the signal transmission value of the current network access point through the wireless network card after connecting to the network. By detecting the strength of the signal, it is possible to accurately verify the weak signal sources in the current electronic communication system. If a problem is identified in a certain part, it should be repaired and explored. This process can also adjust the wireless channel and determine the difference value between the wireless terminal and the device itself through the optimization of signal detection mechanism.

3.3 Reducing Source Interference

Generally speaking, if a signal generates certain interference during transmission, then in the process of querying for such problems and identifying the true cause of the operating mode of the electronic communication system, control measures can be used to change the transmission frequency of the current electronic communication system. This can determine the content and problems that occur at different frequencies in different states, and also detect the impact caused. When inspecting and repairing it, the main focus is on debugging the device, which is mainly connected to the computer signal transmission system to identify the types of interference present in the current information transmission process. This can effectively determine which type of organization has problems or interference sources, and gradually identify and repair the interference sources and problems.

Conclusion

In summary, modern science and technology are developing rapidly nowadays, and the economic and technological development of society has brought many conveniences to people. Of course, electronic communication technology is also an indispensable part of people's daily lives. However, people gradually discover that electronic communication technology is not without problems in the process of using it. Electronic communication technology may even encounter various interference factors during use, leading to inconvenience in people's lives. In order to solve these problems, it is necessary to analyze the interference items or problems that may occur in electronic communication technology, conduct maintenance and inspection, and nip them in the bud before they occur. This can effectively improve the ability of electronic communication technology and enable people to obtain more information through electronic communication technology.

References

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