

# Electronic Technologies in Communications Engineering

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**Abstract:** The influence of modern electronic technology on communication engineering is explained in this paper. Based on the development status of communication engineering, the characteristics and application strategies of modern electronic technology in communication engineering are discussed, including the optimization and improvement of wireless communication system.

**Keywords:** Electronic technology; Communication engineering; System optimization

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## 1. Introduction

In recent years, with the progress of society, China's information construction has also made great progress. The rapid development of information technology provides a new development opportunity for Chinese communication simulation engineering. Besides, the application of electronic technology is also increasing, which improves the quality and efficiency of communication. In the application of electronic communication technology, the shortcomings of traditional communication methods are overcome. The working principle of electronic communication technology mainly includes two parts: one is transmitting data and the other is to receive and send electrical signals. When applied to electronic communication equipment, it can promote the receiving ability and transmission speed of information technology through the effective circulation and transmission of signals and improve the quality of information exchange and communication. With the advent of the big data era, information interaction between people is increasingly frequent, which puts forward higher requirements for the development of communication simulation technology<sup>[1]</sup>. To solve this problem, it is necessary to strengthen the application of electronic technology in the field of communications engineering, so as to effectively realize the security and reliability of information data transmission.

## 2. Overview of electronic technology

Electronic technology has been continuously developing along with computer technology and industry optimization and innovation, so as to improve the quality of people's lives. In recent years, with the continuous progress and development of economy and society, our country has entered the information age. In view of the information age, with the development of information technology, electronic technology portrays the characteristics of the current times, and it leads the trend of technological development. Compared to traditional production technology, the use of electronic technology can effectively improve the quality, efficiency, and operability of computer-related technology. In the context of big data, electronic

technology attaches more importance to the quality and efficiency of information data transmission, and is committed to providing people with more efficient, convenient and intelligent services. For example, the application of electronic technology makes daily communication more convenient. The application of electronic technology in industrial development can help industrial enterprises save a lot of raw materials, which in turn reduces costs, so as to improve the economic and social benefits of enterprises and realize energy conservation and high efficiency [2].

### **3. Overview of communication engineering**

With the rapid development of information technology in our country, the original traditional communication engineering technology can no longer meet the needs of people's daily lives, and the demand for communications technology is also increasing. Therefore, to achieve sustainable development of communications engineering, enterprise should continue to upgrade themselves so that they can keep up with the times. In recent years, our country's communication services and optical fiber technology have been developing unprecedentedly [3]. In this context, enterprises are transformed through the development of communication engineering, communication business, and optical fiber technology, which not only help them keep up with times, but also allow effective transmission of information and realize information sharing and real-time exchange.

### **4. Analysis of the relationship between electronic technology and communication engineering**

Electronics has been widely used in the field of communication engineering, and they drive the development and progress of communications engineering. There is a close relationship between communication engineering and electronic technology. The development of communication engineering depends on the development of electronic technology, and the development of electronic technology in turn drives the development of communications engineering [4].

For example, the popularization of mobile communication technology has greatly promoted information exchange and communication and also strengthened the application of electronic technology in communication engineering. At the same time, the network broadband equipment, communication equipment, and image processing equipment, which are often used in our daily lives are all created through the combination of electronic technology and communication engineering. Therefore, electronics and communications engineering go hand in hand.

In order to achieve sustainable development of information engineering, information technology should be fully utilized in information engineering. The development of communications engineering has driven the development of our information technology to a certain extent, and the progress and development of information technology has also promoted information exchange and communication, and accelerated the speed of information transmission and sharing.

#### **4.1. Analysis on the advantages of electronics' development in the environment of big data**

People's demands are increasing along with the emergence of big data, which provides endless power and support for the development of electronic communication technology. Therefore, electronic communication technology has become an important part of science and technology. It also effectively promotes the progress and development of our tertiary industry. Electronic communication is the core of the development of information technology, and it has contributed greatly to our economic growth [5]. Electronic information technology is important in many enterprises and industries. Therefore, it can not only promote our economic and social development, but also meet the daily needs of the people, so as to improve the quality of production and quality of life. Therefore, in the big data environment, the integration of electronic information technology and communication engineering allows communication engineering to develop to

the greatest extent, which will in turn promote the long-term development of the country's information industry. Electronic devices are becoming increasingly important in human life. Therefore, it is very important to innovate and optimize electronic technology to maximize the advantages and value of electronic devices.

#### **4.2. Electronic technology is compatible with big data technology**

In recent years, big data technology has been used to exchange information and communicate. Big data technology has good compatibility, and electronic technology is also compatible with big data technology. Not only can the compatibility of electronic technology be improved through the development of big data, but it also can achieve internal integration with other equipment and software. The development of electronic technology has resulted in much innovation. Besides, it also satisfied the diversified demands of information of people. Many devices and software can be created through electronic technology, resulting in the improvement of electronic communication and increase in the speed of information transmission <sup>[6]</sup>.

#### **4.3. Benefits of electronics technology in the big data environment**

With the continuous progress of our country's economy and society, the development of electronic technology made life much more convenient. Especially in the big data environment, people's for information technology in communication is increasing. Therefore, electronics and big data should be combined to meet the demands of people. Besides, relevant units and enterprises should also combine electronic technology with big data technology in their daily operation. In this way, the diversity of electronic technology can be truly reflected.

#### **4.4. Anti-interference ability of electronics in big data environment**

Because the development of electronics was not ideal, it is difficult to improve the quality of electronics. With the help of big data, electronic technology is being improved and upgraded. In terms of information transmission, electronic technology is highly secure, fast, and convenient. If there are interferences during information transmission, the information transmitted by users will be hampered, and the security of the data might even be affected. The integration of big data technology and electronics can overcome the defects of electronics in the transmission of information and enhance the anti-interference ability of electronics. The specific application of information technology in big data environment was analyzed. Electronics includes two parts, one is power electronics, the other is information technology. Both power electronics and information technology can be applied to communication engineering to realize their respective values. In communications, electronics is more about information. In the big data environment, information and telecommunication technology achieves effective transmission and sharing by its effective regulation and transformation of communication data. As far as communications engineering is concerned, it is necessary to achieve reasonable allocation and utilization of resources and improve the transmission effect of information and data. Usually, in communication projects, nodes in the network are effectively used for transmission, so as to achieve effective allocation of network resources. However, because we are in an era of information explosion, if a communication project is faced with relatively large data resources, the efficiency of resource allocation will decline, and it is costly to improve the communication system. In order to prevent that from happening, electronic technology should be integrated into communications engineering to fully display the value and advantages of electronic technology, so that information can be disseminated and distributed quickly when faced with huge information data resources, thus reducing the cost and improving the efficiency of information distribution. In addition, in the face of massive information and data, system failure of communication engineering may occur, causing loss of information. Therefore, it is necessary to improve and optimize electronic technology, integrate electronic technology into

communication engineering, and develop an electronic control system. An electronic control system can not only prevent system paralysis, but also effectively complete the information saving, thus preventing loss of information. Generally speaking, communication engineering prefers information electronic technology in electronic technology, but in the development of communication engineering IC, but pay more attention to the power electronic technology in electronic technology, so as to ensure the normal operation of communication engineering.

In the big data environment, electronics and communication technology will develop simultaneously. Communication technology and electronics are mutually reinforcing and complementary. Electronic technology should be further developed in the big data environment, which promotes the application of electronic technology in the field of communications engineering, improve the rate and quality of information transmission, to achieve the purpose of optimal configuration, improve the stability, security, and reliability of integrated circuits. Communication technology must also adapt to the basic requirements of social development in the new period. Besides, the service function should also be optimized, and the quality and the quality of electronic technology application should be improved, so as to promote the continuous progress and development of electronic technology in our country. Communications engineering and electronic technology play important roles in mobile communication, communication network, graphic communication and network broadband, and they are closely related to our daily lives. At the same time, the synergistic development of electronics and communications engineering will also help improve human understanding of artificial intelligence <sup>[7]</sup>.

## 5. Conclusion

In summary, under the background of big data, the integration of electronic technology into communication engineering can not only fully reflect the value of electronic technology, but also improve the service quality of communication engineering. In order to promote the long-term and healthy development of Chinese economy and society, we must effectively integrate electronic technology and communication engineering, and continuously analyze the relationship between them, so as to optimize the performance of the system, so as to meet the actual development demand of Chinese economy and society.

## Disclosure statement

The author declares no conflict of interest.

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