



The Application of Electronic Information Engineering Technology in Intelligent Communication

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Abstract

At present, intelligent technology is being widely used in the process of continuous development. In various fields, this not only greatly promotes public production and quality of life, but also serves as a significant symbol of social progress and development. Electronic information engineering technology is a derivative of global information and provides the technical support needed to achieve the sustainable development of China's economy. It has unique advantages in terms of information transmission distance, as it is not limited by time and space, and enables instant communication anytime and anywhere. The emergence of electronic information engineering technology has enhanced the global connectivity of information and contributed to the development of China's electronics industry to some extent. In terms of information capacity, it has a strong core inclusiveness. The application of electronic information engineering technology in intelligent communication has achieved the objective of a wireless intelligent communication network. Through research on the application channels of electronic information engineering technology, China has enhanced its technological innovation ability and accelerated the realization of the goal of "smart city and smart life."

Keywords

Electronic information engineering technology, intelligent communication, application

Introduction

At present, intelligent technology is being widely used in the process of continuous development. In various fields, this not only greatly promotes public production and quality of life, but it is also an important symbol of social progress and development. Used for electricity. Sub-information engineering is the result of the continuous growth of the social economy. Evaluating the level of national science and technology development also plays an important role. In the field of electronic information engineering automation design, the application of intelligent technology can enhance efficiency and effectiveness. Complementary to the limitations of traditional data modeling in addressing labor cost and time constraints. Cost savings and automation requirements for electronic information engineering. Strong and intelligent guarantees ensure a high degree of automation in electronic information engineering. Accounting skills have steadily improved, enabling better adaptation to the current trends and promoting efficient electricity consumption. The automation design of sub-information engineering is continuously improving and advancing at a faster pace.

The history of electronic information engineering technology in intelligent communication can be traced back to the 1980s, when the emergence of new electronic information engineering technologies such as digital circuits,

microprocessors, digital signal processing and communication networks. Then, in the 1990s, a new generation of electronic information engineering technologies emerged, including the Internet of Things, drones, and optical communication sensors. Since the early 2000s, with the advent of 5G, artificial intelligence and big data analysis methods, electronic information engineering has been further applied to implement complex security protocols, as well as the optimization of voice, video and image transmission.

1. Overview of electronic information engineering technology

As an important discipline in the field of science and technology, electronic information engineering combines electronics and informatics with related technologies to form a new engineering system. According to the current overview of electronic information engineering, it encompasses technologies and theories from various fields. Comprehensive processing is actually the main feature of electronic information engineering operation. Only under the premise of comprehensive processing can information processing, information transmission, and information interaction be realized. The application of computer network technology in electronic information engineering allows for the integration of different links and systems, establishing a comprehensive engineering system. It facilitates the connection between various information systems, enabling resource information sharing and improving the efficiency of information transmission and analysis. This has significant implications for the application of electronic information engineering in various industries. In addition, computer network technology helps to ensure the authenticity and accuracy of the information content. Traditional working patterns rely too heavily on manual labor, which is prone to errors. Errors in information content can cause significant and irreversible damage. With the support of computer network technology, advanced data processing and analysis software is integrated into electronic information engineering. This integration allows for accurate analysis of relevant information content and helps to avoid operational errors. The application of electronic information engineering in data information processing can greatly improve the accuracy and efficiency of the process.

2. Characteristics of electronic information engineering technology

Electronic information engineering technology mainly encompasses intelligence, digitalization, integration, and convenience. First, intelligence. The integration of computing and functionality through electronic information engineering technology is a key direction of development. This technology enables the computer operation end to enter the stage of behavior simulation mode and collect and process data. Second, digitization. The advantage of applying electronic information engineering technology to modern intelligent communication lies in its powerful capacity for handling big data [1]. Through the integration of communication technology, efficient information circulation is achieved, ensuring the retention and storage of information over time. Third, integration. Integrated semiconductor technology is applied in electronic information engineering, and nanotechnology is used to continuously reduce the size of sensors, allowing for full utilization of integrated space. Fourth, convenience. The application of electronic information engineering technology in intelligent communication engineering not only provides convenience for communication between people but also enriches people's life experiences and emotional communication. And with its convenient operational characteristics, it creates a favorable communication environment for people living a fast-paced life.

3. Application advantages of intelligent technology in the automation design of electronic information engineering

3.1 It is conducive to improving the compatibility of upstream and downstream industries

In both the upstream and downstream industries, electronic information engineering plays a crucial role. The automation design of electronic information engineering is closely intertwined and inseparable from the upstream and downstream industries. Compared to the traditional mode of electronic information engineering design, it is difficult to ensure compatibility, which can easily lead to the emergence of independent operation states in the upstream and downstream industrial chains. And with intelligent technology, this problem can be effectively solved by combining technology and electronic information engineering. Dynamic design can fully display the intelligent computing function of intelligent technology, promoting compatibility between upstream and downstream industries. This ensures the accuracy and authenticity of information and data acquisition results, meeting the requirements of electronic

information engineering automation design and ensuring a steady rise in its level. In addition, when it comes to the specific implementation of intelligent technology, the feedback from information collection ensures a high level of real-time and speed. The relevant strategies are continuously modified and enhanced, which helps to rapidly promote and popularize new technologies. Simultaneously, it further improves the database, facilitating the smooth research and development of new technologies in the later stages. It can be seen that in the automation design of electronic information engineering, the integration of intelligence and technology not only helps achieve the compatibility goal of upstream and downstream industries but also continuously enhances the level of design innovation in electronic information engineering [1].

3.2 It is conducive to continuously strengthening the speed and ability of innovation

In the process of automated new product development, technical personnel need to ensure not only the quality of the product, but also constantly rectify user feedback information to prevent any issues with automatic product design. Through the implementation of intelligent technology, technical personnel can easily access essential product information, thereby facilitating the smooth advancement of research and development. In other words, thanks to computer support, it helps to accurately analyze relevant information and data, with the aim of fully demonstrating the performance of automated products [2]. In the process of continuously innovating automatic products, there are higher requirements for technical personnel to constantly enrich their work experience. This includes strengthening the construction of new product design concepts, which leads to a significant improvement in their innovation ability and innovation consciousness. In addition, to enhance the implementation of intelligent technology, it is important to consolidate the core aspects of the new technology. This will aid in the research and development process, while also minimizing the occurrence of errors.

3.3 It is beneficial to detect and repair faults in advance

In the utilization of electronic information engineering automation products, it is challenging to avoid various fault issues. For the traditional fault detection mode, there is a significant waste of manpower, material resources, and financial resources. This not only increases costs but also makes it difficult to ensure the accuracy of the fault detection results. Consequently, it hinders the smooth progress of fault detection work. Through the use of intelligent technology, the aforementioned problems can be effectively prevented. This includes the division and analysis of the technology's usage principles, the implementation of an expert diagnosis system, real-time detection, automation of the actual operational state of products, and the enhanced utilization of computers for accurate analysis and evaluation of the results. In the face of the problem of failures in automation products, intelligent technology can quickly identify the cause of the fault and accurately investigate and locate the faults. This helps prevent excessive costs in the maintenance and repair of automation products and effectively demonstrates the timely role of product fault repair.

4. Implementation of intelligent technology in the automation design of electronic information engineering

4.1 Intelligent control system link

In the automatic operation of electrical engineering, intelligent technology plays an important role, which can continuously simplify the operation process of the whole project, meet the needs of automatic operation, and constantly improve its work efficiency. In the remote control system, intelligent technology also occupies an important position, which can quickly summarize the internal data of electrical engineering, make up for the defects of manual collection, time and workload consumed, and provide great convenience for the follow-up management and search. In the control system of electrical engineering [3], with the help of safety function detection, it is helpful to dig out the safety risks of the equipment in time, to change the working state of manual detection, to avoid any missing problems. In addition, it can prevent the danger of manual operation, and control the hidden dangers and loopholes in the embryonic state.

4.2 Intelligent optimization service link of model design

For automated operations in electrical engineering, which is one of the most important engineering techniques, there are increasing requirements for related engineering operators. These operators need to be proficient in three

disciplines: electrical engineering, automation technology, and intelligent technology [4]. With the use of advanced intelligent equipment, the application of these disciplines in the model design of electrical engineering automation can prevent data errors and fully demonstrate their intelligent role. This leads to the accurate display of three-dimensional models and promotes the smooth development of model construction work for engineering operators. It also helps to identify gaps and provides strong support for model design and construction quality, thereby better promoting the preliminary work of electrical engineering operations.

4.3 Intelligent application link of the PLC control system

A PLC control system, which is a digital electronic operational equipment, is widely used in production design. Among them, the micro intelligent programming processing controller plays an important role in the system. It influences electrical engineering automation, execution logic, operation, and electronic data control. It enables the integration of mechanical systems and intelligent control and enhances analog control to adapt to various continuous changes in engineering operations. In addition, the PLC control system in the electrical operation project can greatly enhance reliability and anti-interference performance, thereby ensuring the standardization of the electrical engineering operation process. In the realm of numerical control systems, the application of PLC technology allows for the integration of automatic operation of electrical equipment. This innovation in industrial operation mode ensures that each system operates with the required accuracy, thereby promoting the smooth functioning of the electronic information engineering automation system. For example, in the operation of the XK5632 CNC milling machine system, the CNC system and motor encoder are integrated. Then, the positioning shift is set reasonably, and the feedback control system is successfully constructed. The process is shown in Figure 1. Simultaneously, in the automatic numerical control system, operators can gain a comprehensive understanding of the system's operating status through the centralized integration of PLC technology. This enables them to write digital programs effectively and continuously enhance the automation level of system operation. Consequently, the system can better align with the development trend of automation in the electrical industry.

5. Problems existing in the electronic information engineering technology in China

Although China has made some achievements in the development of electronic information engineering technology, the problem of network security, has always been one of the most intractable problems in various industries in China. Many people in these industries do not pay enough attention to the information security issues, and they are careless to control the work, setting up hidden dangers for the security of the later information processing work. The complete network control system in China has not yet been completed, and many technologies are still in the experimental stage. In this case, there are many loopholes on the network, many people fall into the network trap of others, and personal information is seriously stolen. Once the information security problems are too frequent, it will affect the network order on a large scale. It will not only cause a large number of personal information leakage to many Internet users, seriously affect their daily life, but also lead to social network information panic, leading to the interruption of many online orders, leading to more Internet users to lose trust in the network regulators. Therefore, attention should be paid to the security problems in Chinese electronic information engineering technology. The security problem is too common, which has a significant impact on the development of electronic information engineering technology in China.

6. Application path analysis of electronic information engineering technology in intelligent communication

6.1 Strengthen the development of electronic information engineering technology in intelligent communication

Under the backdrop of new economic development, the application of electronic information engineering technology provides technical support for the advancement of intelligent communication systems. Modern intelligent communication engineering has introduced a humanized design approach, combining the customer-centered service concept with intelligent communication. The central concept of user experience has been implemented, so it can be observed that the intelligent communication industry can successfully achieve iterative upgrades, which rely on the application of new technologies. The application of electronic information engineering technology is essential for

achieving the reform of intelligent communication. In order to maximize the effectiveness of this technology, it is necessary to focus on improving the innovation efficiency of electronic information engineering technology. This can be achieved by constantly improving the technology based on the problems and loopholes that exist in its application in intelligent communication. Ultimately, this will lead to the successful construction of an intelligent communication system [5]. Starting with the infrastructure, we should enhance the existing communication network and increase the number of modern intelligent infrastructures. Additionally, we should explore the integration of we-media technology into intelligent communication. We fully utilize the technical advantages of electronic information engineering technology in intelligent communication. This allows us to quickly overcome the limitations caused by interference factors in the information flow process. As a result, we are able to achieve humanized intelligent communication [6].

6.2 Establish the fusion system of electronic information engineering technology and intelligent communication

The development of intelligent communication and the application of advanced technology are closely intertwined, with electronic information engineering technology playing a crucial role in intelligent communication engineering. With the rapid development and progress of intelligent communication, the role of electronic information engineering technology in auxiliary aspects is becoming increasingly evident. Electronic information engineering technology has become to some extent the "functional patch" of intelligent communication engineering [7]. Therefore, China has proposed the establishment of a fusion system between electronic information engineering technology and intelligent communication. They have also added research and development departments for electronic information engineering technology in the relevant departments of intelligent communication. This initiative aims to promote technical communication and collaboration. In the construction of a smart city, the design of communication infrastructure engineering construction drawings should fully consider the application requirements of electronic information engineering technology and establish a fundamental consensus. The field of electronic information engineering technology is incorporated into the development of intelligent communication systems. In the realm of intelligent communication, electronic information engineering technology combines the benefits of information transmission, fault detection, and equipment control to achieve the seamless integration of these functions. This integration effectively enhances communication efficiency and caters to the diverse development needs of individuals [8].

6.3 Training of electronic information engineering and technical personnel

In the field of electronic information engineering technology, there are still some challenges, particularly the shortage of skilled professionals. On the one hand, vocational colleges that produce skilled workers for the workforce need to innovate their teaching methods based on employment trends. The school needs to actively pay close attention to the development status and trends of related industries both domestically and internationally. It should design a targeted talent training system to achieve the goals of employment placement and training, and effectively address the issue of student employment. In addition, the school should actively organize practical activities both inside and outside the school. It should also collaborate with professional peers to carry out "one-to-one guidance" practical activities. This will enable students to enhance their focus on professional knowledge and develop a strong work ethic through hands-on experience. On the other hand, enterprises should actively recruit talents from within their own system, fully embracing the concept of "high salary to support high performance". They should also implement generous rewards and humanized talent incentive policies, and consistently encourage technical personnel to engage in academic exchanges. And regularly organize skills training to stimulate their enthusiasm for research and innovation, and provide the corresponding impetus for the development of enterprises [9].

7. Conclusion

In the automation design of electronic information engineering, the application of intelligent technology is imperative. It is in line with the development trend of the times and is also one of the significant achievements in the field of intelligent applications. Based on this, we should continue to explore and study the automation design of intelligent technology in electronic information engineering. This will promote the healthy development and progress of the manufacturing industry and generate new economic growth points.

To sum up, electronic information engineering technology, as the foundation of information technology, plays a

crucial role in ensuring the efficiency and security of information circulation in intelligent communication. This is achieved through the comprehensive application of advanced technologies, including computer technology. The application of this technology provides significant technical capabilities for the development of various industries and enables the realization of the smart city concept. The quality of life for modern people has undergone a significant improvement, and daily communication is primarily conducted through mobile communication devices. Intelligent communication is subtly changing people's way of life, and at the same time, their demand for information security is growing stronger. However, the traditional information communication system suffers from poor information security, a low information flow rate, excessive interference factors during transmission, and even the risk of information leakage. These issues have led to a significant decline in the security index of the communication subject [10]. With the continuous innovation and upgrading of electronic information engineering technology, it has effectively promoted the intelligent development process in the fields of production and daily life in China. Through the integration of information, network, and computer technology, it is possible to achieve rapid transmission and sharing of data and information. This enables the efficient transmission of large volumes of data and information to meet the demands of social production and daily life.

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