Talking about the Application Analysis of Electronic Information Technology in the Internet of Things

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Abstract—With the advent of information and intelligence era, electronic information technology has been rapidly developed and widely used. In the era of the Internet of Things, electronic information technology will continue to play an important role. This article will verify the integration of electronic information technology and the Internet of Things by exploring the application of electronic information technology in the Internet of Things. The integration of electronic information technology and the Internet of Things realizes the interconnection of people and people, things and things, people and things, satisfies people's needs for information transmission of goods, and provides great convenience for people's daily work.

1. INTRODUCTION

1.1. The Meaning of Electronic Information Technology
Electronic information technology refers to the use of computers as the main body to process information using electronic technology. It can analyze things and realize information transmission through corresponding signals, data and text. At the same time, it can also integrate with multimedia technology, computer technology, etc. for comprehensive transmission of information. In this process, it will not only include the content of obtaining relevant information materials, transmitting information and processing information, but also applying other technologies, such as sensor technology, network computer technology, and communication technology for information processing. The continuous development of electronic information technology has made it widely used in people's daily life and work. The use of electronic information technology not only brings great convenience to people's life and work, but also simplifies the work process and improves work efficiency.

1.2. Electronic Information Technology Classification and Characteristics
Electronic information technology is divided into sensor processing, communication processing, computer processing and signal processing according to the characteristics of the information and the way of use through the preprocessing of data information. In the application of computer technology, it can realize the integration of data and information, network digitization and the development of efficient, fast, and intelligent automation through characteristic processing of information. First of all, with the development of electronic information technology and integrated circuits, most sensors not only use new materials, but also actively introduce advanced technologies. This saves the space for placing the sensor, improves the integration of the sensor, saves a lot of space for people's normal life, and facilitates people's travel and work. Meanwhile, it meets the diverse needs of people more
humanely, and people can operate and work anytime and anywhere [1]. Secondly, intelligence and automation, which are the prerequisite for the development of electronic information technology, are based on the development of science and technology, and integrate scientific and technological research results into electronic information technology to achieve intelligent development, which can simulate human brain and thinking. Besides, this also reflects the value of integrated analysis. The intelligent application of electronic information technology realizes the effective use of social resources and helps people shorten the time to obtain information. People don't need to wait for a lot of time, it only takes a few seconds to complete, which greatly improves work efficiency. Network digitization is also a feature of electronic information technology, which uses powerful data and information processing institutions to realize the transmission and sharing of information resources. People can understand social information at home, and can clearly check the situation at home outside. In the transmission of information, the application of electronic information technology has accelerated the development of digital networking and enhanced the storage capacity and the speed of information dissemination. Efficient and fast refers to the high-speed processing of information and data by electronic information technology. Due to the large amount of current network data storage, the use of electronic information technology can achieve precise positioning and quick management of data information to a large extent, which greatly improves the speed of information dissemination and the efficiency of information processing. This also provides more convenience for people's life and work.

1.3. The Main Content of Electronic Information Technology

1.3.1. The Main Content of the Sensor
Sensors are very important and indispensable devices in electronic information technology applications. We can use sensors to accurately perceive signals such as object temperature, sound, and power, and convert these forms of signals into information that can be recognized by people according to established lines, so that people can further understand related content. Sensors can be divided into piezoelectric sensors, photoelectric sensors, hall sensors, and electromagnetic sensors according to their working principles. They can also be divided into obstacle avoidance sensors, distance sensors, displacement sensors, etc. according to their working methods. Because of the different ways and working principles of sensors, they are also divided into different types. This can meet people's needs to the greatest extent. The sensitivity of the sensor has a greater impact on the efficiency of electronic information technology.

1.3.2. Main Content of Embedded System
Embedded system is the system with the highest application rate of electronic information technology, which is embedded in the controlled equipment. It can realize the management control of special scenes through effective program prediction and management. The main work content of the embedded system is to realize the accurate monitoring of the equipment. Compared with computer systems, this system can realize the management and control of specific scenes, with particularity and concentration [2]. When applying the embedded system, the staff must improve the size and design of the equipment to meet the economic benefits and production needs of the enterprise. This can lay a solid foundation for the long-term development of electronic information technology.

1.3.3. The Main Content of Communication Technology
Communication technology is the most critical technology in electronic information technology processing information, which is widely used in communication engineering. Its main work content is to process related information in the form of information transmission, which can complete the reception and transmission of information in the form of light waves, sound waves and electromagnetic waves. Some power loss occurs when people use communication technology. In order to reduce power consumption as much as possible, relevant technical personnel should optimize processes such as filtering, encoding, and decoding in signal processing. Moreover, enterprises need to improve the
professional level of communication technicians, conscientiously complete the sorting and collection of information, and efficiently complete the transmission and processing of information, thereby promoting the development of electronic information technology.

2. **OVERVIEW OF THE INTERNET OF THINGS**

The Internet of Things is a three-dimensional technology model based on computer technology. Compared with the traditional Internet industry, the Internet of Things can provide people with a more intuitive and three-dimensional interactive mode, and realize the integration of products and work systems. As an information carrier, the Internet of Things can realize independent operations on the Internet and telecommunication network information, and enable the interconnection of data and information networks. The Internet of Things is also a kind of wireless network, which can realize the scope search of information. In addition, through the combination of information to predict the development direction of the problem, the Internet of Things can also realize the digital simulation of the real world and express it in digital form. The integration and classification of data information make the data information have complete characteristics, thereby expanding the application scope of the Internet of Things. With the development of information technology and the influence of the government's macro-control policies, the Internet of Things system has been formed and closely connected with people's life and work systems, and it has been widely used in home life and work environments. This not only realizes the interconnection between people and things, people and things, and things and people, but also facilitates people to quickly and quickly obtain the information they need, which is conducive to the improvement of life quality and work efficiency.

From the perspective of the development of the Internet of Things, the foundation of the Internet of Things is the Internet. The Internet of Things can start from the perspective of user experience, combined with various new electronic science and technology and its equipment, realize the functions of supervision, management, diagnosis, and maintenance under the Internet of Things system, and promote the transformation of society toward intelligence. In the operation of the Internet of Things system, the efficiency of data transmission is also very high. The Internet of Things system not only has the functions of complete information storage, information directional transmission, independent module processing, directional control, etc., but also has network transmission protocols and encoded information indicators under the Internet system [3]. The integration of these modules enables the Internet of Things to achieve automated and intelligent operation. The working principle of the Internet of Things is to comprehensively utilize technologies such as wireless interconnection and communication, and establish a working system for directional transmission of protocol commands. In the meantime, real-time transmission and storage of commodity information is realized in the system, combined with radio frequency automatic identification technology to realize physical scanning of objects, so that commodity information can be accurately checked and synchronized to the network resource database to realize information interconnection. There are several ways of privatization, public ownership, communityization and hybridization of the Internet of Things in practical applications. Among them, privatization focuses on individuals and realizes information transmission within a targeted range. Public ownership is based on the Internet as a platform to build a complete Internet transmission environment for the masses. Communityization refers to a specific system for enterprises and institutions. Hybrid refers to the integration of the above-mentioned several IoT system models to further expand the scope of use of the IoT.

![Block Diagram of the Internet of Things](image-url)
3. APPLICATION ANALYSIS OF ELECTRONIC INFORMATION TECHNOLOGY IN THE INTERNET OF THINGS

3.1. Electronic Order
Electronic ordering refers to the combination of online and offline through the connection of the network platform and the enterprise terminal equipment during the operation of the enterprise. It will complete targeted storage and classification according to the company's order information, realize intelligent management of products, and customers can browse the overall situation of the products before placing orders online, and then complete the order as needed. This ordering mode actually saves the user the step of checking the source of goods on the basis of integrating commodity information resources. Consumers can clearly understand the quality characteristics and usage of the goods through the network platform. When the product information matches their own needs, consumers can use the online platform to place an order for purchase and electronic order as long as the product is registered on the virtual platform. This not only saves the sales link of the physical store, realizes the integrated three-dimensional service of transaction, sales and management [4], but also improves the user's order probability and creates more benefits for the enterprise.

3.2. Information Recognition
Information recognition includes barcode recognition and QR code recognition. Among them, barcode recognition is the recognition of commodity barcode information, and the system displays relevant information on the display device through the conversion of digital information. When using electronic information technology to identify barcodes, different products have different barcode shapes. The barcode transmits the information to the relevant equipment through the identification of the information, and then completes the recording and reading of the information. Two-dimensional code recognition can store more information than barcode recognition. It can not only realize the modular processing of data information, but also classify and store information such as commodity parameters, transportation progress, and damage. The system can receive the current attribute information of the product in time when scanning the QR code to ensure the smooth and complete product circulation. At present, information recognition technology has been widely used in life and work. QR code scanning payment and QR code information viewing have greatly facilitated people's lives and improved work efficiency. Shared bicycles are an important application of information recognition technology, and the locking devices on bicycles operate on the basis of the Internet of Things. It contains module control unit, positioning unit, communication unit and mechanical control unit. When using shared bicycles, people need to scan the two-dimensional code on the bicycle, and realize the transmission of instructions to the shared bicycle under the IoT system based on user information. After the fixed lock device of the bicycle receives the unlocking instruction, the internal module control unit executes the unlocking instruction, and the computer unit works synchronously to realize the circulation of commodities [4]. Meanwhile, when users search for shared bicycles using mobile phone software, the positioning system displays the location of shared bicycles in real time and provides users with corresponding services.

3.3. Communication Protocol Directional Transmission
In the era of big data, various applications need to classify and store huge amounts of data. The development of the Internet of Things system puts forward higher requirements on the efficiency and quality of information data transmission. The Internet of Things system can strengthen the research on information transmission and communication protocol transmission modes and develop low-power, network system node-oriented transmission technology to improve the existing Internet of Things system. At present, the communication protocols under the Chinese Internet of Things system are mainly short-area and wide-area. It not only promotes the construction and development of the social system under the application background of Bluetooth, wireless network and other technologies, but also provides technical support for the transportation industry and the intelligent supervision industry.
3.4. Intelligent Transportation and Intelligent Warehouse Management

Intelligent transportation refers to the use of the Internet of Things system to monitor and control the entire process of commodity production and transportation in the state of commodity transportation under the Internet of Things system. By scanning product information, it can display information such as the time and space dimensions of the product in real time, and users and merchants can complete data statistics and analysis according to the status of the product in time. In the express delivery industry, the use of intelligent platforms can realize the intelligent sorting and storage of commodities, which greatly reduces the labor intensity of the staff. The data-based operation mode improves the accuracy of product detection and classification. In terms of storage management, the Internet not only promotes the development of online shopping, but also promotes the intelligent development of the logistics industry. The use of electronic information technology to build an intelligent warehouse solves the problems of warehouse item management and efficiency, makes item connection more efficient and faster, and the storage system becomes more intelligent. In warehouse management, through online positioning and status monitoring of items, a specific item can be quickly found in a huge warehouse. When the item is connected to the Internet, the location of the item can be quickly and accurately determined through online positioning. Simultaneously, the planning and management of logistics by the Internet of Things is more efficient. Using Internet technology can analyze the needs of items and warehouse storage information, and automatically determine the best transportation plan. This can minimize the distance of transportation, improve the efficiency of transportation, and reduce the cost of logistics and warehousing.

3.5. Intelligent Transportation System

In the era of the Internet of Things, intelligent transportation systems have greatly facilitated people's travel. It realizes the supervision and control of traffic flow, road conditions, weather conditions, etc. of various road sections through online network supervision, and plans the best driving route for drivers. At the same time, it can input the information collected by monitoring into the intelligent transportation system for analysis, realize the intelligent control of the traffic light conversion time, improve the efficiency of road passing, and save the time of queuing vehicles. The use of electronic information technology to establish an intelligent transportation system can connect the ground network and the satellite network to achieve information interaction. Intelligently choosing the optimal route can greatly improve people's travel efficiency and promote the development of intelligent transportation.

3.6. Satellite Tracking Technology

Satellite tracking technology takes satellites as the main body to realize the supervision and control of ground information. Managers can use satellite positioning technology to track the goods in real time and accurately grasp the dynamics of the goods. Otherwise, managers can use the Internet of Things to analyze the data and information of the goods, check the weight of the goods, and ensure the integrity of the goods transportation. Managers can also use satellite tracking technology to remotely command the goods, focusing on a large-scale environment to facilitate the choice of cargo transportation methods and the reasonable choice of storage locations [5]. Using satellite technology to realize the full-line tracking of cargo transportation and the summary and classification of data information, so that managers can complete the plan formulation based on the data information. However, due to the high cost of satellite positioning technology, it has not been widely popularized and applied.

4. Recommendations for the Application and Development of Electronic Information Technology in the Internet of Things

4.1. Use Electronic Information Technology to Accelerate the Development of the Internet of Things

The development of electronic information technology has promoted the development of the Internet of Things technology. In the development of the Internet of Things, the active use of various electronic information technologies can not only realize the optimization and integration of various resources, but
also improve resource utilization and save various resources. Simultaneously, the use of electronic information technology can obtain more valuable information to meet the needs. For example, the application of satellite positioning technology in shared bicycles facilitates people's travel, and the use of QR code technology for shopping enriches people's lives.

4.2. Create A Good Reputation System for the Internet of Things
Except to ensuring security, the development of the Internet of Things also pays attention to the issue of credibility. The establishment of a reputation system for the Internet of Things needs to provide technical support for the system with electronic information technology. Electronic information technology helps to continuously improve reputation services, increase customer satisfaction, and further promote the development of the Internet of Things.

4.3. Promote the Diversified Development of Communication Technology
The development of communication technology is the basis for the effective connection of objects and a prerequisite for the interconnection of everything. Communication technology includes wireless communication and wired communication. The former can be divided into short-distance wireless communication and medium and long-distance wireless communication. In order to meet different needs, WiFi technology, ZigBee technology, etc. have emerged. These technologies have different characteristics such as security, scalability, and transmission efficiency. In practical applications, a reasonable choice should be made according to the needs to give full play to the advantages of these communication technologies. In the future, the diversification of communication requirements will increase the requirements for communication transmission efficiency and safety. In order to meet these communication needs, the communication technology of the Internet of Things era will continue to develop in a diversified direction.

4.4. The Miniaturization of Integrated Circuits
The Internet of Things era puts forward higher requirements for equipment volume and performance. Small and high-performance equipment will be welcomed by the market. Therefore, integrated circuits will also develop in the direction of miniaturization. Connecting small items to the Internet requires the choice of miniaturized chips. The development and application of nano-processing technology has made it possible for the miniaturization of integrated circuits. Currently, integrated circuits in smart phones have been developing towards a high degree of integration. In the future, with the improvement of microelectronics technology, the area of CPU chips will become smaller and smaller, and the performance will get better and better.

5. Conclusion
In summary, this article analyzes and discusses the related concepts and characteristics of the Internet of Things and electronic information technology. The author studies the practical application of electronic information technology in the Internet of Things. The Internet of Things has effectively promoted the development of the Internet of Things industry through its applications in information recognition, electronic ordering, directional transmission of communication protocols, intelligent transportation and intelligent warehouse management, satellite tracking, etc. The use of electronic information technology can continuously improve the development system of the Internet of Things, thereby promoting the development and progress of China's economy. In the future development, the integration and innovation of technology can continuously broaden the application scope of electronic information technology in the field of Internet of Things, thereby providing convenience for people's lives and work.

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