Research on the Application of Electronic Information Technology in the Internet of Things

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Abstract: In the current era, with the continuous development of China’s science and technology, the development of electronic information technology has also been significantly improved. Electronic information technology plays an irreplaceable role in people’s daily production and work, which helps to entirely improve work efficiency. In addition, the Internet of Things technology has developed rapidly in Internet era. In the process of the Internet of Things technology, electronic technology has a good role in promoting it. Therefore, the use of electronic information technology is very important and helps promote the comprehensive development of the Internet of Things in the current era.

1. Introduction
The Internet of Things is an emerging product in the Internet era. The core technology of it is electronic information. Electronic information technology can not only improve the operation efficiency of the Internet of Things, but also ensure the stability of the operation, so that the Internet of Things can be integrated with various industries in China to effectively improve the Internet of Things. In summary, the use of electronic information technology in the Internet of Things has given it sufficient space.

2. Brief introduction of electronic information technology and Internet of Things

2.1 Electronic information technology
With the continuous growth of China’s current information technology, the electronic has developed and penetrated in all walks of life. The types and application channels of electronic information technology are also diversified. Not only can it be a pure electronic information technology, but also it can be integrated with other industries to meet the requirements of related companies and individuals[1]. In life and work, the more common electronic information technologies include sensors, communication navigation, embedded systems, computer networks, and so on. The application of these technologies not only brings a lot of convenience to daily life, but also improves people’s work efficiency.

2.2 The Internet of Things
The Internet of Things is the latest product in the Internet era. There are also large differences in the definition of the Internet of Things in different fields. With the continuous development of the current Internet in China, the Internet of Things has been updated and upgraded[2]. The use of electronic information technology can meet people’s daily needs through intelligent perception or identification of related data. In the Internet of Things, users and objects can be effectively connected, such as the application of sensors and controllers. Users can also have a comprehensive understanding of the operation of related equipment in computer terminals, and control the use of the Internet of Things to improve the security and efficiency of data transmission as a whole, and incorporate important...
information into the computer to achieve real-time extraction. In the Internet of Things, it is necessary to play its due function in the network according to relevant standards and related protocols to achieve the communication and connection between substantive and virtual items, and use intelligent concepts to seamlessly connect information. Through the intelligent identification of online items or related information to achieve better development and expansion of the Internet, so that the Internet of Things technology can have modern characteristics to meet people’s daily work and life needs.

Figure 1. Internet of things ecological chain

3. Basic features and applications of Internet of Things

3.1 Basic features
The application of electronic information technology to the Internet of Things is the main trend of the Internet in China. The application of electronic information technology can not only reduce the distance between people, but also make people communicate more frequently, thus giving people’s daily work and life great convenience. In addition to strengthening communication, it can also realize the transfer of information between people and objects or between things. For example, in sensor network technology, electronic information technology has played a huge role. The sensor network is a micro-device system consisting of micro-sensors, signal processing and Confucius circuits, and communication interfaces. This system can integrate information acquisition, processing, and execution. It is integrated in a large-scale system, which can improve informationization and intelligence of the large-scale system. Adding computer information technology to the system can further enhance the application, so that the Internet of Things can monitor and protect people through items.

3.2 Applications
Nowadays, the Internet of Things technology has been widely used in various fields, including industry, agriculture, transportation, logistics and other fields. The application of the Internet of Things has largely promoted the progress and made the non-allocation of limited resources more reasonable, and thus promoting the industry’s work efficiency. In the fields of health care, education, finance, etc., the Internet of Things has also played a huge role. From the service scope to the quality of the method, the Internet of Things has undergone huge changes after its application. In addition, military applications of the Internet of Things have also begun to be studied, including equipment systems such as micro, aircraft, and submarines. The application and embedding of the Internet of Things has greatly enhanced the intelligence, information, and precision of the military industry. The promotion of China’s military
strength has a great promotion effect. It can be seen from the application that the Internet of Things is indispensable. With the progress of the times, the Internet of Things technology is also constantly improving, and the application of electronic information technology in the Internet of Things is becoming more and more widespread. In the process of future development, the Internet of Things needs to solve issues such as unified technical standards, management platforms, costs, and security.

4. Application of electronic information technology in the Internet of Things

4.1 Electronic Ordering System
When electronic information technology is applied to the Internet of Things, the most important is the electronic ordering system. In order to meet their marketing needs, related companies can track and control products or sources in real time on the network terminal. The relevant management personnel can also use the network to comprehensively grasp the operation status of the goods, and implement the goods on the network terminal ordering not only meets the needs of suppliers, but also makes the company’s ordering channels and processes more convenient. In the process of using the Internet of Things for marketing, it can effectively reduce the company’s cost investment in product marketing. For example, in the process of cargo supervision, sensors can be applied to monitor and protect cargo to build an ecosystem of the Internet of things. Sensors can be embedded in traffic, security and other facilities to understand the transport of goods, and the security of goods for monitoring and protection. The ecosystem can sense the surrounding temperature, gyroscope, pressure, etc., and use devices for embedded processing. These devices are connected through the network by any type of device, such as GPS, WiFi, RFID, the Big Dipper, 5G technology. For the electronic ordering system, the most important is to build a more secure payment environment, and upload the required materials to the corresponding area to complete the entire process [3]. In the process of transactions, standardized operations should also be implemented according to the operating standards of the Internet of Things. The electronic ordering system should support the transmission of related data with the Internet of Things as the support. It is very convenient to use the Internet of Things technology for electronic order. After ordering, both parties can jointly check the status of the goods and the locations, which effectively improves the marketing economic benefits of the enterprise. The flow of the electronic ordering system is as follows:

Electronic Ordering System

4.2 Commodity management system
With the continuous development of China’s current electronic information technology, it has gradually integrated into the field of product identification, and it can be used to build an effective product
management system. Among them, bar code technology has been widely used. Bar code technology is
what usually called data transmission technology, which mainly presents information to users. When
users use, they need to scan the code to identify the information that exists. The information of both
parties is converted in all directions, so that it can be organized and displayed on the computer terminal.
In commodity management system, cloud computing technology can be used to integrate computing
entities with low cost into systems with strong computing capacity, and modern business model can be
used to provide more effective and comprehensive computing services for end users. The perception
layer of Internet of things can obtain more data. After the network layer transmission, put it in the
standard platform, and then use the processing mode of cloud computing to turn it into intelligent data
and finally into useful information for users. Specifically, in the process of build commodity relations
system, using bar code technology can quickly contain information high-speeding displayed in the bar.
The transmission of important information to the corresponding terminal exist in the commodity bar
code by different forms, such as different width of the line, different goods bar code. The purpose is to
improve overall information security and privacy and the entire identification process.

4.3 Logistics management system
At present, the Internet of Things technology is widely used in various fields, and logistics and
transportation are no exception. In the logistics management system, information technology is best
reflected in satellite positioning, which is mainly to meet people’s daily needs through the function of
satellites. Satellites can be used to control all places on the ground. It can also be used to meet people’s
navigation needs. Related managers can use satellite positioning technology to grasp the position and
relevant data of the item at any time, and also can control the weight and quantity of the item in all
directions through satellite technology. In the Internet of Things, the use of satellite positioning
technology can adjust the information of the item at any time, and carry out a full range of control and
selection of the operation line and storage location of the item. The use of satellite positioning
technology can comprehensively track the status and location. After the item is transported once, the
data generated during the transportation of the item can be quickly transmitted to the satellite positioning
system. After the data is filtered, it can be quickly transferred to the manager’s computer. Besides, the
logistics management system is developing in an intelligent direction. With intelligent logistics
management system, people and vehicles can be controlled. This system (as shown in figure 2) mainly
uses radio frequency communication to realize non-contact automatic identification. RFID has the
characteristics of small size, long life, large capacity and so on. Non-visual recognition and positioning
can be read and written quickly with long-term tracking management. In recent years, RFID technology
has begun to be applied commercially, which is combined with Internet, communication, information
and other technologies to be applied in industrial automation, transportation, logistics management,
public information services and other fields. On the basis of talent technology, the design of logistics
and transportation management system can automatically inquire and record the inbound and outbound
warehouse, storage location and quantity of goods, saving human resources to a great extent. It can grasp
the real-time logistics dynamics with high efficiency, convenience, security and other application
advantages.
4.4 Smart home management system

The Internet of Things and electronic information technology not only widely use in management, transportation, public safety, etc., but also play a huge role in daily life at home. Using the Internet of Things and electronic information technology, a smart home management system can be constructed (as shown in figure 3). In recent years, broadband services have been popularized in various homes, and the types of smart home products are also increasing with a wider range of applications. Nowadays, with the smart home management system, even if no one is aggravated, the mobile client can be used for remote control. Taking the air conditioner as an example, the user can use the APP in the mobile phone to remotely adjust the temperature and mode of the air conditioner. The system can also learn the user’s usage habits, intelligently and automatically control the temperature, so that the user can feel comfortable after returning home. In addition, it also includes a smart bulb switch, which can adjust the color and brightness of the bulb through the client. People can install WiFi in the socket and use wireless network technology for remote operation, and then control the flow of electricity and cut off. The smart home management system also includes a built-in sensor that can monitor human health values such as blood pressure and fat mass. If it exceeds the healthy range, it will give a corresponding prompt. In addition, it also includes smart doorbells, smart toothbrushes, smart cameras, etc. They not only bring convenience to people’s lives, but also improve the safety and comfort of daily homes.
5. **Conclusion:**

In the current era, electronic information technology has been widely used in the Internet of Things. When using electronic information technology, relevant staff should choose the best solution based on the characteristics of the Internet of Things and the main work. The deep integration of information and the Internet of Things technology are to meet the actual needs of people. The effective integration of the two will promote the sustainable development of the Internet of Things and China’s science and technology.

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