Research on the Application of Computer Internet of Things in Intelligent Logistics Management

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Abstract. The logistics industry has been ubiquitous in people's production and life, and hundreds of millions of people are enjoying the achievements brought by the logistics industry. The modern logistics era has come. However, China's logistics management mode has not kept pace with The Times well, but has shown a great lag, which makes it more difficult to promote the better development. It is hoped that the application analysis of Computer Internet of Things in this paper can provide reference for the construction of intelligent logistics management. The Computer Internet of Things technology application in logistics industry, forming logistics information, make people's life in a more convenient, more wisdom, more intelligent direction.

Keywords: The Computer Internet of Things, Intelligent Logistics Management, Technical Support

1. Introduction
Nowadays, the development of society has been fast-paced, more and more people prefer online shopping, eager for fast and efficient logistics services. At the same time, the logistics industry has gradually abandoned the mode of relying solely on human resources for packaging, sorting and distribution, and gradually combined with the Internet, and the Internet of things has gradually become the mainstream of the logistics industry.

2. Concept analysis of the Internet of Things and smart Logistics
The concept is shown in Table 1:
Table 1. Brief introduction for Internet of Things and smart Logistics

| Internet of Things | The Internet of Things is an information network that connects all ordinary objects with independent functions through IT technology in all sectors of society. In the future, the Internet will inevitably develop into the Internet of Things, and the Internet of Things will become the leader of information technology. As the Internet of Things matures, Internet users will be able to create a systematic and comprehensive communication system between their own things on personal computers. |
|-------------------|--------------------------------------------------------------------------------------------------|
| smart Logistics   | Intelligent logistics takes information technology as its framework and information as its backbone, so the whole logistics process can be perceived automatically. |

3. Analysis of the positive effects of the Internet of Things

3.1. *The Internet of Things can help logistics enterprises to achieve scientific management*

Modern logistics enterprises need to transport a variety of goods. Meanwhile, the transport distance is longer than before, so the present logistics demand is a great challenge to the original logistics system. To manage the longer distances and the complexity of goods, Internet of Things technologies are very important.

3.2. *It can effectively improve the efficiency of logistics distribution*

The Internet of Things applies a large number of information technologies, which can understand the real-time situation of urban traffic and roads to prevent transport vehicles stuck in traffic during rush hours and slow down distribution. It can be said that the Internet of Things can accurately know road information and vehicle information to implement accurate and correct control over transport vehicles.

3.3. *improve the logistics efficiency*

The Internet of Things can not only help the logistics industry to carry out scientific management, improve distribution efficiency and avoid rush hours, but also make the links of logistics more perfect and scientific. General logistics use the machine to sweep the bar code, its reading time is about 3 seconds. 3 seconds seems not long, but a logistics site every day to handle thousands of goods, and logistics enterprises are determined by speed, so 3 seconds reading time really can not meet the needs of the logistics industry. With the combination of Internet of Things technology and information technology and radio frequency identification technology, the scanning of goods only takes 0.2 seconds, which is very fast. The identification time of goods entering and leaving the warehouse is greatly reduced, which can not only save the scanning time of logistics enterprises, but also reduce the time of logistics staff to a certain extent.

4. Application analysis of the Internet of Things in intelligent logistics management
Figure 1. Analysis of the Internet of Things in intelligent logistics management

4.1. The Internet of Things is applied to smart logistics tracking services
It is urgent to develop and reform the logistics industry. In the future, the logistics industry will develop into smart logistics. Intelligent logistics is a Shared and intelligent logistics mode based on Internet technology and information technology. The Application of the Internet of Things in smart logistics management can enable people to share the advanced achievements and services of smart logistic\(^2\). People through the Internet of things technology can use their mobile phones, computers to check the cargo status. If their found the goods late in sending, People can inform wisdom logistics terminals, requiring the staff to solve the problem and tell them the delivery time of the goods. The wisdom logistics application the transparent management pattern, making the logistics information can be shared.

4.2. Promote the development of smart industrial chains
The development and maturity of Internet of Things technology makes the construction of intelligent logistics possible. The application of the Internet of Things in intelligent logistics changes the reality from the concept of intercommunication. In addition, the derivative products of the Internet of Things technology -- RFID technology and wireless sensor technology effectively guarantee the realization and practice of intelligent logistics management. In addition, the Internet of Things technology has also entered into the business activities of logistics enterprises, and the combination of logistics industry chain and smart production has become the inevitable trend and the only way for the future development of logistics. It can be said that the Internet of Things has extended the industrial chain of smart logistics.

4.3. The Internet of Things is used for network transmission
Smart logistics management uses a variety of Internet of Things technology, technology integration is also the characteristics and trend of smart logistics management. Sensor, identification, intelligent pickup and other Internet of things technologies are integrated and applied in intelligent logistics, which can effectively realize all-round and whole-process intelligent work of logistics. At the same time, cloud computing can still save the information between the machine and the goods, as well as the information of consignee and sender. These historical data are saved and put into the database, which is more convenient for data invocation and query in case of emergency. The combination of Internet of Things and digital cluster communication technology can enhance the security of data information and realize the whole confidentiality\(^3\). As the Internet of Things technology in intelligent...
logistics is based on the Internet, its logistics mode also has the same characteristics of the Internet. While the information is open, it is also likely to be attacked by criminals. Some network hackers may also take advantage of the information opening and sharing by posing as customers to steal a large number of useful information in the logistics network, leading to the disclosure of information of logistics enterprises, recipients and senders, which brings great losses to many parties. And Internet of things combined with digital trunking communication technology can compensate for the gap, these technologies to achieve transmission digital, hackers have no key to enter system inside.

The Internet of Things applies to application services. The logistics industry is a service industry. The essential feature of logistics is to send goods for customers and deliver goods for customers. It can be said that facing customers is an inevitable part of the logistics industry. Customer evaluation also affects the reputation of the logistics industry, and a good reputation can help the logistics industry to become bigger and stronger. The application of the Internet of Things in smart logistics can effectively improve the application service level. With the development of Internet of Things, customers can also quickly find the contents of public information. In addition, the Internet of Things can effectively promote the construction of a logistics platform for smart logistics. Different sizes of logistics companies can share resources. Sometimes, they can cooperate with each other, realizing complementary advantages, and finally provide better services for customers. Take the “Double 11” shopping carnival as an example[4]. On this day, hundreds of millions of Internet users will conduct online shopping, so the logistics before and after the “Double 11” will also reach the peak of the year. When the Internet of Things is applied to intelligent logistics management, the logistics management will be more orderly, and the pressure brought to the logistics industry by the “Double 11” logistics peak will be reduced.

5. Conclusion
Logistics industry has shown a strong vitality, its development prospects are bright. China's entire logistics industry is bound to become more intelligent and modern. Science and technology construction has become all walks of life strive to achieve, logistics industry is no exception. Internet of Things technology can promote smart logistics management, bring new opportunities to the logistics industry, China's logistics industry to improve the overall strength, and even in the world logistics occupy a dominant position. Although the application of the Internet of Things has been quite effective, the application of some technologies is in poor condition[5]. In particular, the necessary RFID technology and sensor technology of the Internet of Things are still immature, or even blank. In the future, the application process of Internet of Things must focus on studying these technologies to make the construction of intelligent logistics more perfect[6].

References
[1] Application based on Product Digital Identity Management in lubricating Oil industry [C]. China Lubrication Technology Forum (2018) and the 18th Annual Conference of Automobile Fuels and Lubricants Branch of China Society of Automotive Engineering, 2018: 1096-1103.
[2] Deng Jie, Fan Fangkai, Zhang Hao: Discussion on intelligent Logistics Design of New Area [J] Cooperative Economy and Technology, 2019(12): 142-143.
[3] Xu Chenli, Zuo Xiaojing, The Development Model of Intelligent Logistics Technology [J] Computer Products and Circulation, 2019(4): 55.
[4] Ruan Xue, Application of Internet of Things in Intelligent Logistics Management [J] Science and Technology Information, 2019, 17(8): 31-33.
[5] Yang Lirong, Application practice of Internet of Things in Intelligent Logistics Management, E Research [J] National Circulation Economy, 2018(34): 21-22.
[6] Wang Jixiang. The Development of Internet of Things promotes the reform of Smart Logistics in China [J]. Logistics Technology and Application, 2010, 15(6): 30-35.