

The Practice of Logistics Management and Application Based on Two - Dimensional Code

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Abstract: Today, the popularity of two-dimensional code in all areas of life is very extensive. Compared with the traditional bar code, two-dimensional code has the advantages of information storage capacity, strong error correction mechanism, good secrecy, applications in industry and daily life more and more widely. This paper combines the characteristics of the two-dimensional code with our daily logistics application. Let the two-dimensional code make our logistics more convenient, practical and quick. Through the intelligent equipment and two-dimensional code technology, describes the application of our two-dimensional code in the whole system of logistics.

Keywords: Internet of things; QR code; Logistics management; Intelligent mobile phone

1. Introduction

Internet is an important component of the new generation of information technology. In recent years, the internet of things in China has developed rapidly, and it has brought great changes to our way of life. We can stay at home, can also enjoy a lot of on-site services, such as express delivery, delivery and so on. China has become the world's second largest economy, the country's economic strength supporters of the development of the internet of things. Moreover, China's wireless communication and broadband coverage are high, providing a good infrastructure support for the development of the internet of things. With the development of modern technology, intelligent devices, such as smart phones, have a high penetration rate throughout the country. The development prospect of logistics in our country is very good.

The development of logistics management in China also needs to solve the existing problems: cost and network. In this paper, we mainly through the internet of things one of the technologies: the application of two-dimensional code in logistics management, hope to better solve the existing problems, so that our logistics system more intelligent, convenient and fast. To a certain extent, according to the user needs to locate the solution.

With the arrival of information age, many companies and joint venture all through the web site and the database to implement logistics information management, but this way of goods logistics information query can not leave the computer and network. In order to solve these problems, the cellular phone planar bar code and logistics management information system combined, use of mo-

bile phones and portable and universality, and two dimensional barcode high capacity, faster recognition, error correction ability of these advantages, puts forward the cell phone use of logistics information to planar bar code management mode. Not only can save the planar bar code item information, still can save logistics management in the dynamic process of key information, and can be used for mobile network management and logistics information query.

System is divided into the cell phone and web end two parts, the mobile phone chose IOS systems use objective-c to achieve; The web use the JSF and EJB to achieve; The choice is MYSQL database. First integrating existing logistics management information system and the actual business process system needs analysis, according to the system's structure, system is determined mainly by the mobile phone end and the background management of the web, and then on to their function in cases analysis. Then according to the demand of the system is the detailed design, first introduced the function of the whole system frame, make sure the system USES three layer structure and system, again according to the general framework of the system each functional modules the detailed design, according to the function demand of database by e-r chart, and further the system of main design database table. System mainly expounds the mobile phone of the implementation process and the web. The mobile phone users to log on, two dimensional barcode main scanning and decoding, history records that several functions. Mobile phone end and server communication between the HTTP request, the way to respond Servlet, data to JSON format for transmission. The Web on the inventory management this module that representative.

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Through the introduction of the planar bar code to mobile phone, convenient operation personnel to logistics information query and management, logistics management operation personnel to logistics information query and management, logistics management system makes the mobility and usability is greatly increased.

2. Preliminary

Two - dimensional bar code is one kind of two-dimensional bar code, the QR code is commonly used, the QR code comes from the English " quick response" abbreviation. The shape is square, and three of the four corners in its four corners are designed to help decode the software positioning, the user does not need to be aligned, no matter in any angle scanning, the data can be read correctly, the mobile phone users can decoding the relevant information through the camera and the decoding software, the two-dimensional code has a set of fixed information points, the area of the information point is small, there are black lattice inside, so we can only cover the location of the information with dark color block, the two-dimensional code can be identified.



Figure 1. The Two - Dimensional Code of Workshop 9

3. The Logistics management and Application of Two - Dimensional Code Technology

In recent years, in the logistics management, because of the increase of the number of express, the one - dimensional code used in the past has certain use restrictions, the drawbacks are gradually revealed, the emergence of two-dimensional code can alleviate this pressure. Two - dimensional code is different from one - dimensional code, without having to build a large database, can watch items and input information on site, and it has the advantages of high fault tolerance. As the following picture shows Figure 2.

The management and application of two-dimensional code in the logistics industry includes three processes: firstly, customers order goods on the internet, order information is sent to suppliers, suppliers use computers to generate two-dimensional code, and use database to manage, goods storage with two-dimensional code, in

this process can save the past manual process, and the information of goods can not be printed on paper in print form, a lot of information stored in two-dimensional code saves space and time. Secondly, when the goods issue management of two-dimensional code, the management sends the two-dimensional code to the consumer, the consumer can use the mobile phone to sweep the code to watch the commodity position at any time, comparing with the previous webpage edition, carries the two-dimensional code commodity can be sent by the courier at any time to enter the position information, lets the customer obtain the first hand data, greatly improves the user experience. Third, when the courier service is delivered to the customer, the customer can scan the goods to see if the information is correct, and click the confirmation message.

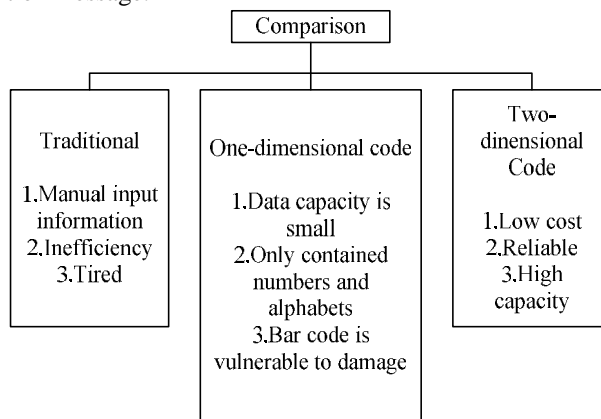


Figure 2. Coparisons.

3.1. The Mobile Version

The mobile version is provided to couriers and ordinary users, respectively. The courier scanned the 2d barcode graphics, inquired where to send the express mail, and the various information of the addressee and sender, and promptly informed the change when the express problem occurred. The account is divided into sender and receiver, they can query, the information queried has item details, express delivery status, order no and other information, the item details and the no change information such as order number can be queried directly, but the variable information such as the express delivery status needs to be queried by the internet.

3.2. Pc Version

Pc version is used by the management personnel of the logistics company, it is basically the same as other express management system functions, but only increased the generation of two-dimensional code, scanning the two-dimensional code and other functions. In the past when input message information is required by the administrator hand order to enter the order number, but this is also very large, the first is that when the administrator

working time is too long to fatigue will reduce the efficiency of work, the second is that the administrator may enter errors, causing the freight information and so wrong. In this system, when the courier or ordinary users enter the express information, the management personnel audit the order, and then generate two-dimensional code graphics, and save to the database. Later use two-dimensional code scanning entry will be simple and convenient, the administrator will be connected to the computer on the special camera scan, the courier information will be automatically entered, all information can be automatically modified. At the same time, the generated two-dimensional code can be printed, affixed to the express, provided to the courier.

Through this innovation project, highlight the advantages of two-dimensional code in the logistics, the introduction of two-dimensional code is of considerable significance for the management of logistics, however, our research on two-dimensional code also has certain limitations, in the future research of logistics management, we should be more inclined to the intelligent process.

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