Applications Research of Two-Dimensional Code Technology in University Fixed Assets Management

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Abstract: The digitalization of asset management in universities is an important method to improve the efficiency of management. At present, with the gradual maturity of two-dimensional code scanning technology, two-dimensional code technology provides a new direction for university management and has great significance for improving the management efficiency of fixed assets in universities. After analyzing the basic characteristics of two-dimensional code technology, aiming at the current situation of asset management in universities, we design the application plan of two-dimensional code technology in fixed assets management in universities to provide some references for relevant researchers.

1. Introduction

Two-dimensional barcode is a black and white graphic record data symbol information distributed in a two-dimensional direction according to certain rules. It expresses information in a graphic manner in two directions and horizontally, so it can convey a large amount of information in a very small area. It is characterized using several binary geometric figures to express text numeric information, and automatic recognition of information by photoelectric scanning device and image input device to achieve automatic information processing. Its information capacity is large, the coding is highly intensive, and the range of coding is very extensive. For example, pictures, signatures, characters, fingerprints and so on can be encoded digitally, and then can be represented by barcode. In today's high-tech development, its development has a certain benefit to the development of society and economy. With the rapid development of communication technology and Internet technology, fixed assets management by fixed computers has been unable to meet people's needs. Connecting mobile terminals to the Internet has become a new technology pursued by people. Mobile Internet technology is a new technology developed based on communication technology and Internet technology. It can enable people to access the Internet anywhere at any time through mobile communication devices. Its characteristics are convenient and fast and free from time and space restrictions, so more and more people are getting more and more popular. With the development of wireless Internet technology and wireless communication, wireless interconnection technology will be applied to a wide range of fields. The two-dimensional code technology is applied to the management of fixed assets in universities, the fixed assets encoding, collected, and then set up the database, so that all the information will appear in the database, the staff can share information resources in different through the local area network within the campus, also can understand the fixed assets management information [1].

2. Basic Characters of Two-Dimensional Code Technology

Before the emergence of the two-dimensional code, bar code is not the amount of information the identification industry, library management and so on but one dimensional code can store items, Shen barcode can only use a few digits letters or numerals, so the description of one-dimensional bar code of items is not complete, in the commodity description is always subject to many restrictions but, the barcode for space occupying a large utilization rate is not high, destroyed cannot read, compared with

the one-dimensional bar code, two-dimensional bar code has various characteristics. The stock of information is large. The two-dimensional code contains information characters, which only need one square inch and relative times. It can simultaneously code the voice, signature, fingerprint, photo and text. It provides a good way to automatically identify, carry and store information. It has high information security and strong anti-counterfeiting ability. By means of cryptographic anti-counterfeiting and software encryption, the two-dimensional code has a high capability of anti-counterfeiting and confidentiality. Even if a picture is copied, there is no way to be identified by the machine, which greatly reduces the risk of information disclosure. It is convenient for manufacture and low in price. The traditional information records are realized by the way of electromagnetic, dimensional bar code is a picture in the form of the number of file which can realize the information in any medium reached, or through thermal inkjet, laser, dot matrix, etc., in printing technology, metal cards, paper surface display two-dimensional code, the required the cost of printing materials and the cost is the same. So, people are used to see two-dimensional code technology as a zero - cost technology. Two-dimensional bar code shape can be adjusted, not by the media area and other factors affect the appearance or discarded, and the two-dimensional code also can communicate, to ensure a good information storage rate and error rate, to ensure that the management of the automatic identification and tracking supervision [2].

3. Current Situation of University Fixed Assets Management

3.1 Insufficient management awareness

In the management of universities, the management of assets is a relatively weak link, and there are still some phenomena of non-standard operation. In addition, due to insufficient attention to asset management and weak sense of work, we fail to realize the importance of asset management in education and teaching, which often leads to bad phenomena such as asset entry, registration is not careful, the use of departments is chaotic, assets are idle and so on. For a long time, the management of fixed assets of university has always been a weak part of the management system is not perfect, and resources is not clear, the utilization rate is not high, backward management tools rely on manual or computer aided management of most of universities, the work of complicated procedures and work flow is not smooth, resulting in management and use. The lower level of information application results in the asset management staff unable to real-time understand the use of assets. By using two-dimensional code scanning technology, network management system can be established between all campus campuses through the network information equipment, so that only the two-dimensional code scanning of the equipment can clear the information of the device [3].

3.2 Lack of management system

Some universities do not have a clear asset management system, is the management of the assets are under the control of direction, there is no specific operational content, leading to the asset management system is just a mere scrap of paper not approach the actual assets, management. There is no definite relationship between the Department of asset use and the Department of management. Asset management is vague and the supervision and management of assets is not enough. All these problems lead to a lot of manpower and material resources to be checked and it often appears that the accounts are not consistent with the actual situation, the total assets are not clear and so on, which may eventually lead to the loss of the assets. In addition, the asset utilization department does not know the real-time data of its department, and only when it is inquired by the asset management department, can we get the assets data of our department. In the traditional management, often need to manually check the equipment, this had among the college campus, back and forth, greatly increased the burden of the management staff, and to improve the efficiency of management, even using the traditional one-dimensional bar code does not solve this problem.

3.3 Backward management model

In recent years, the state advocates the construction of campus information, in terms of asset management, most of domestic universities gradually by the computer instead of manual, some research university assets management system, the management system of office equipment, training equipment and other assets, in the overall management level has improved to a certain degree. However, although the use of computer and other information technology, but in the management, mode is still relatively backward, and cannot meet the needs of the current development of universities. It cannot use the network sharing of relevant resources, the function is relatively single; the use of barcode printing for one-dimensional code, the amount of information storage is very small, only as a sign of specific information items, cannot describe the goods. Apparently, all universities are actively changing their assets management mode, but in fact there is no essential change, just from the original manual labor to replace the computer management system, completed only management of single business assets, in the face of different development patterns of college, how to realize the individualized management of the fixed the assets become the focus of the current work [4].

4. Applications of Two-Dimensional Code Technology in University Fixed Assets Management

4.1 Design scheme

Fixed assets management in universities focus on the management of fixed assets, assets to avoid bad debts caused by the lack of results in the loss of assets, the traditional management mode manually checked items through the list of items or the lack of control, manual comparison is time-consuming and laborious, but also easily lead to mistakes. Therefore, the introduction of fixed assets management can effectively alleviate the difficulties in the inventory. First, led by the asset management department, do basic data maintenance work, organize the necessary information, complete information should include assets, assets encoding, only use department, the use of personnel, goods name, specifications, location, start date, the original value, depreciation and so on, based on perfect information, hit assets the label printer output. The output of the two-dimensional code is slicked to the fixed assets, forming one code and one label corresponding. In every procurement department, a fixed asset label machine is set up. The new purchase equipment is registered in the leading link and output the asset tag according to the prescribed format. When the item is used, the information can be read from the scanning gun and the outgoing process is finished. In the inventory of fixed assets, we can take the form of scanning two-dimensional code instead of the original artificial comparison method. We can compare the data obtained through simple office software and compare whether the data is duplicated. If there is still an asset vacancy in the system that can be scanned in the process of comparison and there is still an asset vacancy in the system, you can quickly contact the asset users and determine the asset direction. In the process of using two-dimensional code inventory, each scanning two-dimensional code will automatically form a record of information, which can also replace manual entry into the update work. Make the account of the assets accurate, timely and synchronizing.

4.2 Implementation process

The application of two-dimensional code and mobile interconnection technology makes asset management information. The information and data of fixed assets can be centralized into a system. The system can input, read, analyze and count these data flexibly, and manage them effectively. Asset managers can grasp the status of assets in a timely manner through the system. The system contains all the business functions of the traditional asset management system, such as the increase of assets, scrap, maintenance, inventory and other functions. The new system is made up of hardware and software. Hardware such as electronic tags, readers, network devices, printers, and so on, software such as database and user interface. This system has high accuracy and strong practicability, can not

only satisfy the management of fixed assets, but also flexibly according to the user needs to deploy and upgrade; system can save the data for a long time, and save the historical data integrity, data security, reliability and stability; the system adopts the advanced technology and advanced software, can be used effectively in a very long period of time. The system manages asset management mainly including assets storage, asset movement, asset scrapping and maintenance, assets inventory and so on, which improves the efficiency of management. The management of fixed assets in s has a lot of work and involves many problems. The introduction of two-dimensional codes greatly improves the accuracy rate of fixed assets management and improves the efficiency of work managers. With the development of Internet and the introduction of mobile Internet technology, the wireless Internet fixed assets management system adopted by s meets the needs of multiple users accessing at the same time but not affecting each other. Therefore, using two-dimensional code and mobile Internet technology to manage fixed assets is an innovative management tool. The new management system will solve the difficulties encountered in management. The two-dimensional code technology can strengthen and improve the work of the fixed asset management system in s. In asset management, when we check accounts, we only need to use two-dimensional code to scan and identify on fixed assets, and we can find the location of fixed assets.

4.3 Result presentation

The technology of two-dimensional code scanning can make the management of fixed assets more accurate. In the application of two-dimensional code technology, we only need to scan the two-dimensional code of fixed assets in universities, and scan results will appear in account management accordingly, so that we can more quickly compare accounts. Therefore, the application of two-dimensional code technology, on the one hand, greatly reduces the probability of omission and error in the proofreading of managers, on the other hand, it also greatly liberates human resources and simplifies the accounting process, thus saving manpower and material resources. Moreover, according to the two-dimensional code scanning technology, it can also significantly improve the accounting discrepancy between campuses and colleges, which greatly improves the accuracy of fixed asset management. Secondly, the use of two-dimensional code technology to manage university assets can promote the standardization of management process. In the application of two-dimensional code technology, we can promote the clarity of fixed asset management, that is, we can define the number of fixed assets, the degree of damage identification, the use situation and so on. Therefore, the fixed assets management will bring all the equipment into the management system and promote the standardized development of management. Thirdly, the application of two-dimensional code technology management can enhance the security of asset management in universities. The number of fixed assets large capacity, high value, in the use of a wide distribution of characteristics. The use of authentication or fingerprint verification to ensure the safe use of fixed assets, fixed assets in different areas are included in the two-dimensional code technology management, to solve the problem of loss and loss. The two-dimensional code technology must be well combined with the management of assets in universities to solve the problem of fixed assets management in universities.

5. Conclusion

For universities, fixed assets management is very important. In the management of fixed assets, the application of two-dimensional code technology can make fixed assets more convenient and large-scale. It can help the unified identification of fixed assets, the society is developing continuously, and the information age has arrived. Universities need more innovative technology to manage the university fixed assets and change the old traditional manual operation mode. Therefore, it is very necessary to quote two-dimensional code technology in the management of fixed assets in universities.

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