Research on the Application of Internet of Things Technology in Computer Monitoring System

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Abstract: Based on the Internet of things architecture, computer monitoring can better adapt to the needs of the times than traditional video monitoring. Therefore, in the construction of computer monitoring system, it is necessary to apply the Internet of things technology in combination with the development standards and requirements. Based on this, based on the analysis of computer monitoring, the basic structure of Internet of things technology, working principle and so on, this paper discusses the advantages of computer monitoring and application of Internet of things technology, and then discusses its application in different fields of monitoring systems.

Keywords: Computer Monitoring System; The Technology of Internet of Things; Applied Research

Science and technology has promoted the development of computer and network technology in various fields, and computer monitoring is widely used and popularized in many industries and daily life and work. Computer monitoring is based on computer, automatic control and other technical products, can achieve real-time dynamic detection of all visual objects in the monitored area, the application of Internet of things technology, computer monitoring more mature. Internet of things technology based on the Internet to achieve information perception, connection, management technology, become an important part of computer monitoring system, sensor equipment based on monitoring system, greatly improve the correlation coefficient between things and network information, make computer monitoring function more comprehensive, system more intelligent, can use system intelligent terminal to implement perception, transmission of information, according to the flow of related monitoring work fast transmission of relevant data, thus breaking the traditional monitoring data dispersion, improve the efficiency of monitoring and monitoring data coherence.

1. Overview and comparison of Internet of things technology and computer monitoring system

1.1 The standards for computer monitoring data

The computer union is the standard core of the monitoring system, according to the video visual mode, data transmission, monitoring and so on as the monitoring system each step. The sensor converts the temperature, pressure, sound wave and other data into the corresponding current and voltage, and then passes it into the visual device, which can be analyzed, through the computer to form a variety of analysis charts and images, achieving the transformation of monitoring data. To set up reasonable data standard, it is necessary to make clear the content of actual judgment, so as to carry out effective input and output of different forms of information, to realize the accurate execution of each device, and to ensure that the computer can integrate the application of data and control system.

1.2 Basic construction of Internet of things technology

The Internet of things is divided into three levels according to different communication modes: perception, transmission and application. It also needs to construct the standard of data acquisition according to the required identification information, and determine the distance of data transmission between sensors and the standard of transmission network. Perception layer uses

coordinate, QR code and other data forms to realize the perception and analysis of real-time information realization. The transfer layer uses the effective data unit, gathers the information and carries on the analysis processing, clarifies the data layer which needs to pass, then realizes the accurate data transmission and application of wireless / wired form. The application layer is to carry out the necessary data analysis according to the standards of the relevant application technology of the Internet of things, and then formulate a reasonable information monitoring structure to realize the division of responsibilities of the system to monitor different information, so as to enhance the intelligence and automation of monitoring. The application platform accurately analyzes the functions from the package transmission according to the control standard, and processes invalid sensing data according to the standard to meet the service requirements.

1.3 structure comparison of computer monitoring and Internet of things

In the application of Internet of things technology, computer monitoring needs to analyze different kinds of different levels in the two structure modules, so as to accurately judge the overall structure, complexity, type and working principle of the equipment, and set appropriate monitoring and analysis standards.

The structure of computer monitoring is realized according to the requirements of related work, the principle of computer monitoring and the design of monitoring standard. According to the standard of monitoring input and transmission, the internal physical change process is analyzed, and different control decisions are taken according to the data acquisition standard. According to the task flow and feedback mode, control the monitoring execution standard and the status of each equipment. The feedback mechanism is to determine the sensor collection according to the inductive execution mode, and to generate feedback information according to the input criteria.

The operating framework of the Internet of things is to judge and analyze the item information according to the operating standard of the Internet of things, to determine the state of the marked object, to use the sensor to carry out the whole process analysis and monitoring process, and to attribute the dynamic situation of the item. The network layer analyzes the actual collected data according to the network application standard, and then accurately accesses the corresponding Internet of things layer by means of convergent network control. The article information is transferred to the application layer by means of Internet and so on. The application can manage the underlying perception, such as information sharing.

1.4 The comparison of working principle between computer monitoring and Internet of things technology

In addition to the basic construction and operation structure, the two technologies have different working principles, both of which realize the quantification, transmission and application of the data features of the perceptual objects according to the process of information acquisition, transmission and processing. And the computer monitoring system is only one embodiment of the application of Internet of things technology, that is, through the application of Internet of things technology to achieve the required monitoring mode. Therefore, when applying the Internet of things technology, computer monitoring must distinguish the primary and secondary relationship of each function, make use of the reliability of the Internet of things, synthesize the application standards of the two according to the actual demand, and expand the scope of the application of computer monitoring.

2. Advantages of Internet of things in monitoring systems

The Internet of things technology is to connect the item information with the Internet information according to the agreed standard, realize and exchange the information, the ultimate goal is to intelligently identify, locate and track the object. Sensor, RFID label and embedded technology are the three core of Internet of things technology. Sensor is the front-end equipment to realize the Internet of things technology. Nowadays, there are commonly used infrared radio frequency identification, laser scanning and other sensing devices. Applying sensors and other devices based on the Internet of things technology to the monitoring system can make the whole monitoring system more intelligent, which is also the inevitable trend of the development of modern computer monitoring system. For example, many hydropower plants are beginning to build more intelligent monitoring systems, which will make use of advanced technologies such as the Internet of things, big data and cloud computing, so that hydropower plants can realize more intelligent and automatic monitoring and management, and help enterprises improve the quality and efficiency of safety management, water quality testing and daily office work, etc. It can be seen that the optimization of computer monitoring system by using Internet of things technology is very beneficial and necessary for enterprises and society.

3. Specific application of Internet of things in monitoring systems in different fields

3.1 Applications in the field of electronic commerce

Computer monitoring and Internet of things technology are widely used in the field of electronics, which can achieve efficient

commodity management, logistics distribution, order tracking and other work. Combining the Internet of things with computer monitoring system can effectively improve the quality and efficiency of logistics information tracking and other commodity management work. Through the Internet of things label technology, using the detection technology of QR code, to achieve accurate identification of goods, management, using application layer operation can receive and manage goods in real time, dynamic, for example, through the computer Internet, we can determine and modify the origin of goods, dates and other aspects of information, achieve the information requirements of consumers, and provide consumers with synchronous updated commodity information.

3.2 Application in the field of education

In recent years, Internet education has developed rapidly, but students still need to carry out practical learning in online teaching, and teachers also need to carry out various operations to improve the quality of teaching. Therefore, in order to improve the practical operation of Internet teaching, virtualization laboratories can be established through the Internet of things and computer technology. Students operate through information equipment with sensors, and the equipment collects and analyzes the students' remote operation through application analysis. Students and teachers can receive raw data and related analysis data almost synchronously, students can understand problems in operation more easily and accurately, and teachers can read the required information to achieve more efficient and accurate interaction and classroom management.

3.3 Applications in the field of transport

The traffic flow in our country is huge, the traffic management is very difficult, there are monitoring equipment in the sidewalk, the complex section and the high speed limit section, but the traditional monitoring system needs to be improved in scientific and management level. Application of the Internet of things in computer monitoring can improve the efficiency and quality of traffic management. For example, high-speed toll stations adopt ETC technology to automatically identify all kinds of information of vehicles, complete instant automatic deduction of fees through network platforms, reduce manpower management and operation, and greatly improve the management efficiency and quality of traffic management and monitoring systems.

3.4 Application in the field of life

Through the Internet in life, residents can carry out daily life and learning operations on operational equipment with corresponding Internet of things technology. For example, using smart phones for air conditioning, performing data recording, analysis, collation and adjustment to meet individual needs.

3.5 Applications in the field of fire protection

Through the Internet of things technology such as sensors, can make the equipment information in fire rescue more effective transmission, for example, through the equipment with GPS or radio frequency signal, the rescue operation and progress of firefighters are dynamically monitored and analyzed, and the abnormal situation is timely warned to reasonably dispatch firefighters to ensure the safety of firefighters and the quality and efficiency of rescue work.

4. Conclusion

To sum up, the Internet of things, as a new strategic industry, plays an important role in computer monitoring system and other management and management work in various industries. In order to promote the computer monitoring system of various industries to be more intelligent, it is necessary to strengthen the comparative analysis of the Internet of things technology and the computer monitoring system, and on this basis to enhance the application strength and value of the Internet of things technology in various industries and fields of computer monitoring system, and to provide more convenient and accurate information monitoring services for social development, production and life.

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