

## Contract Management Based on “Internet +”

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**Abstract.** This paper based on the requirements of the development of the company, build a scientific, efficient and intelligent management contract management system, its purpose is to strengthen the company of the contract schedule and information monitoring, improve the contract process control, shorten the end of contract cycle, and ultimately optimize customer structure, enhance the company's core competitiveness, a solid foundation for the company informationization operation lay.

### Introduction

The contract is the basic effective certificate for enterprises to engage in all kinds of business activities. Enterprise contract management is conducive to strengthening the internal control of enterprises, reducing enterprise risks, improving the business reputation of enterprises, reducing all kinds of disputes caused by contracts. With the development of information technology and computer network technology, the integration of computer and our production and life has gradually become the theme of the times. Especially for the realization of network management of contract, it has also gradually been paid more and more attention by scholars. In terms of means and degree of implementation, it is far from the western developed countries. The domestic contract management technology needs to be greatly improved, and the application of information technology is imperative. The application of information technology in contract management requires the introduction and learning of foreign advanced technology and experience, and the combination with the actual situation in China, in order to improve the overall level of domestic contract management information.

With the advent of the “interconnection +”, domestic enterprises in the Internet development trend, to the era of information and intelligent. Facing the increasingly competitive market, the company has put forward the important development policy of realizing informatization in an all-round way. “Data communication is an important mode of communication which integrates communication technology with electronic computer. It is a mode of communication in which information is transmitted from one terminal to another by transmission technology according to a specific communication protocol.” It is composed of electronic computer, communication circuit, terminal equipment and communication equipment group. Data communication technology is mainly through the communication system and computer in series, with a number of communication equipment to achieve the connection function. Computer network technology originated in the mid-1990s. It integrates scattered data into an organic whole by further sharing and collaboration according to certain network protocols, so that people can freely use all the resources and obtain the information they need.

The large amount of data and the diversity of business in the contract management information system are a huge test for the contract management information system, thus requiring the whole system to be safe, reliable, strong and able to meet the diversified needs of enterprises. Of course, this will also bring more and more information collection methods and authenticity to enterprises more problems. “Up to now, many enterprises have been able to manage contracts through management system software to a certain extent, but most of them are based on the old C/S model.

The higher the maintenance costs, the more difficult it will be to operate. This is not suitable for many enterprises.” Therefore, we can realize the whole management information system by using the B/S structure model. Before the contract management is manual implementation, it not only has a certain impact on the number of contracts and speed of flow, but also a large number of contracts make managers tired of coping, not only delays time, and is not conducive to the development of enterprises. A good contract management system can not only realize the scientific management of contracts, but also realize paperless and automatic management. Contract management system can not only integrate historical data, but also dynamically grasp the changes of data, so as to provide an effective reference for enterprise management to make decisions. The contract management information system under B/S structure not only simplifies the software development process, but also greatly improves the software expansion function. All these are very effective for the development of the whole system. Therefore, our research field has broad prospects at present. The application of contract management information system makes the enterprise develop faster, and more and more researchers devote themselves to the research in this field, thus stimulating the development of this field.

Contract management is an indispensable component of the business process management system, good contract management, has an important influence on the economic benefits and enhance the economic activities of the company to carry out the contract, good operation management is beneficial to the project in order to promote the project and process monitoring, so the research and development of contract management information system, is to improve the enterprise internal the efficiency of the staff, strengthen the information sharing between the departments, an important measure to reduce the workload of management personnel, is the enterprise to save the cost of human resources, reduce the labor cost pressure important means.

### **Theoretical Design**

Through the requirement of this study, the contract management information system mainly includes employees, departments, customers, contract projects, contract information, etc.

First, the employee profile. It mainly involves the employee's name, work number, gender, home address, telephone number, e-mail, department, and type of work. Second, customer information. It mainly includes the number, work unit, unit address, contact person, telephone number, bank account number, tax number, and e-mail of the relevant customer. The third is project information. Project information includes project number, name, nature, input amount, project leader, introduction. Fourth, information entities. The contract information entities are mainly contract number, project name, project establishment time, project closure time, fund number, and content introduction. Fifth, departmental information. The department information includes the department number, department name, superior number, department description, responsible person, and telephone number.

All the information mentioned in the design of this system can not exist independently but is connected. The relationship between the business contract and the customer is more than one pair. The customer can enter into many contracts with a certain enterprise, but a contract only belongs to a specific customer, and the contract project is the same. A contract must include many projects. However, there will only be one contract for a particular project.

### **Physical Design**

Through the design of the above theoretical system, we can see that all the information entities and their attributes involved in the contract management information system are now to build database entities based on these entity attributes.

### **Safety Module Design**

First, it is necessary to build a firewall for a company's system design. Through the setting of a

firewall, the system is divided into an intranet and an external network. When using the Internet, the system can effectively prevent some man-made invasions and attacks. In the intranet, it's mainly through the use of special network and general LAN isolation measures to achieve the special effect of special network.

In the design of the firewall, the switch equipment adopts several interfaces for parallel connection to prevent the entire system from operating properly due to a problem with a single device. In addition, backup systems have been installed to enhance the security of the entire system. A complex system network structure has been set up to further improve and expand the information bearing capacity of the entire network, thus effectively reducing the pressure on a single device, reducing system congestion, and avoiding system screen delays and timely refresh. The security performance of the system is greatly improved.

The second is to focus on the security of the system application in the hardware design of the entire system set a certain degree of redundancy. In this study, the author uses the  $N + 1$  backup mode, this mode includes the system's hard disk, network and large server and other equipment. The "system cluster technology" is adopted in the distribution of databases and applications. In addition, the entire system strictly distinguishes between the system's application and the system's test functions, so that each of them runs separately, ensuring that the system is safe and reliable.

The third is to ensure data security. The purpose of this function is to protect the core secrets of the company. The general database contains a large amount of enterprise data information. If it is attacked, the consequences are unimaginable.

Fourth, the key management of user rights. Build a web footprint retention function during the system design. All employees are no exception. All employees are certified at any time, any web page of the computer login system, and all employees are held accountable for their actions. It also objectively ensures the internal security of the system.

In addition, the "matrix" enterprise management model also sets relevant standards for all users' operating standards, and provides guarantees for the rational and correct use of the system.

## **Physical Topology**

Physical topology is a network structure that combines network node devices with connected lines. In making structural choices, the following factors need to be considered: first, the ease of installation, the difficulty of reconfiguring operations, the ease of system maintenance, and the degree of damage to the entire system in the event of a failure somewhere in the system.

Second, the main network structure of the contract management information system is firewall, switch, large server and other equipment. In this article, the author deliberately sets the layout of the firewall and the switch as a "mouth" subtype, which can make the connection between various devices more reasonable. At the same time, the system structure distribution is more reasonable and safe. Three is the Department

The unified database and the large server are the core parts of the entire system. This series mode effectively enhances the data security performance. The physical topology of the system consists of Internet, firewall, switch, database server, user, etc.

In the first section of this article, the author analyzes the overall design idea of the entire contract management information system, which is divided into the overall principle of system design, the framework structure, and the total function of the system. Its content includes employee data, customer data, project functions, information functions, control functions, statistical functions, and modification information. Section 2 based on the principle of designing the system, the author designs the database of the system. The design of the database is divided into logical design and physical design. The entities involved in the entire database design include employees, departments, customers, contract items, and contract information. The third section provides theoretical and physical design for the database design of the Contract Management Information System. Finally, the last two sections of this paper focus on the security module and the physical topology of the system.

## Summary

In the process of system development, through in-depth analysis of contract management needs of the various departments of the company, will be combing the business process management system contract for system development demand points, and the system of overall positioning, design an E-R model system. The design and phase, three layer B/S-C/S application system based on the structure, development and running environment for the conversion of NET, the background using SQL Server E-R model to relational model of database 2010 database work, database structure and function modules of the code design work, and make full use of the core functions of Web service development demand including staff, customer information maintenance, check and contract information statistics and modify etc. In order to ensure the overall performance of the system, after the development of the system functional testing, performance testing and security testing, and put forward the system needs to be improved and the next part of the future outlook.

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