

Research on the application value of computer technology in hotel management

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Abstract

Hotel management become much important with the increase of services of hotel. And the traditional hotel management pattern have not adapted to the modern hotel management. Therefore, management with high-tech technology is needed in modern hotel. Computer application can well solve management mode of modern hotel and improve the service level of hotel. With the development of IT technology and hotel industry, current hotel management have developed into a new age and new systematic development direction emerges constantly. This paper mainly discusses the application value of computer technology in hotel management. And it illustrates the importance of computer technology in hotel management by explaining the systematic design and implement of hotel management.

Keywords: hotel management, computer, information system

1 Introduction

Anthropogenic flow scale expands with social progress. Large anthropogenic flow amount promotes the rapid development of hotel industry and improves the requirement of service quality. Thus, management pattern should keep pace with age progress and high technology is needed in hotel management to better solve the value and economic benefit of hotel. Application of computer technology in hotel management solves the problem. Based on information technology and computer technology, hotel management system achieves the management of manpower, physics, capital, logistics and information.

Application of computer information technology will not decrease service to customer. It can improve working efficiency in hotel service operation level and make stuffs have more time to provide more service for customers. It can directly improve service quality and provides more perfect and comfortable experiment for customer in service product. It can provide better tools and improve marketing effect in hotel marketing area. It greatly enhances the management control and marketing prediction and analysis ability by establishment of rapid communication channel [1], design work process and automatic monitoring and feedback analysis of database flow.

More and more hotels tend to combine emerging network technology with the rapid development of network technology. A large amount of manpower and material resources are put in to develop internet booking business. E-commerce war begins secretly. Portal system of hotel industry is facing with the huge challenge.

Therefore, hotel managers must realize that current hotel portal system should not only fully advertise their brand in network space, but also meet different requirement of customers. Different customers have different purchasing behaviour. Hotel portal system should meet different requirement of consumption as possible. Hotel need provide more personalized and diversity service to improve customer satisfaction for transforming potential customers into practical customers and cultivating loyal customers. For instance, Hilton Hotel Corporation has near one hundred years of history. It owns 520 subbranches and 475 thousands of guest room in the world. It can also establish portal systems with regional characteristics adopting different management principle according to the cultural background of different area [2]. In addition, Yinfeng Days Inn Business Hotel is a business hotel managed by American Days Inn Hotel Corporation. Yinfeng Days Inn is characterized by far geographic position, quiet and comfortable environment and low price. The system can be clear at a glance and shorten the time of browsing system.

2 Overview of Relative Technology

2.1 COMPUTER TECHNOLOGY

The involved computer technology is mainly computer networking technology. Computer network is the product combining computer and communication technology. It can connect the scattered computer users together by transmission media. With the support of relative communication software, computer users can share

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computer equipment, application software and data and realize the transmission of voice band and video.

Network of current hotel management information system can share server, for example, Novell NetWare and NT72000 server. Server is a computer. Its operation system can make multiple users to visit the software. Meanwhile, it can provide services such as network printer management and fax service management. In this network, a computer accepts servers are termed as client. Client can communicate with server and acquire various service application provided by server. Information transfer is shown in Figure 1.

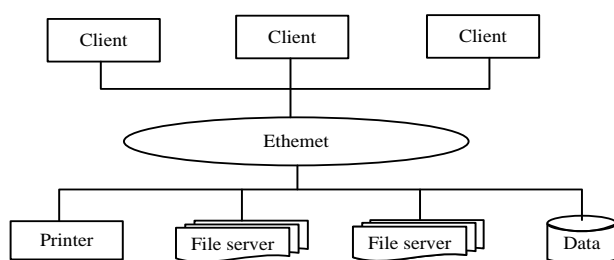


FIGURE 1 Schematic diagram of computer network structure

For guest room booking, system mainly adopts radio interface technology, which is composed of series transmitting entity between exchanger interface and network interface of relative user. It provides wireless implementation systems that have transmission capacity for transmitting telecommunication services. Computer technology is also needed in PSTN access technology and digital data network access technology.

2.2 DATABASE TECHNOLOGY

Core technology applied in systematic development is ASP+SQL Server 2000. It is a hotel management information system based on B/S pattern [3]. Design of database should according to the practical demand of hotel management. The following designs are mainly fulfilled:

(1) Design of user's jurisdiction. Distributed database model is established for the overall planning of hotel management information system. Users can share the information in database record.

(2) Design of index file. The information submitted by clients should be quick positioned and accurately found for managing a large amount of data information of client network booking for guest room.

(3) Design of file and format. In practical index file, database table should be established for administrators to accurately find client information.

(4) View design. View is established based on the name of client, room number and ID number. Inquire of this information or other operation can be carried out on view.

2.3 SOFTWARE FRAME TECHNIQUE

The applied B/S architecture mainly applies WWW browser technology that is constantly mature combining with multi-scripts language. It realizes strong function, which can only achieved by complicated special software in the past and saves development cost [4]. System installation, modification and maintenance all rely on server, which brings convenience for hotel management and also saves maintenance cost of systems technology. Administrator need only one browser to operate all modules. It really achieved function of zero client side and is easy to update automatically in runtime. Meanwhile, software frame technology of B/S also provides heterogeneous machine, heterogeneous network and online of heterogeneous application service. It combines with computer radio interface technology, which is convenient for different clients to fulfil guest room booking in different places to a larger extend.

3 Design of Hotel Management Information System

3.1 DEMAND ANALYSIS OF HOTEL MANAGEMENT INFORMATION SYSTEM

In current hotel management information system, system content is easy to operate and structure is simple. It mainly has function bar, booking system and propaganda picture [5]. Browser is easy to find the information and operation is simple and effective. Client only needs to input user name, password and real name when booking guest room online and then fulfil booking. Client can check whether the booking is completed any time. The booking is usually submitted in form. The whole processes only need one conversion process. Then the basic information of user can be stored and it is convenient for administrator to management client's information. Hotel administrator only need to input username and password for login and then manage the relative information of client. There can be more than one administrator. Administrators can be added in admin table.

Current hotel management information system does not have enough multi-media factors [6]. A good hotel management information system needs to insert video and voice band in system page. Streaming media technology adopts buffer storage to realize basic technology of streaming transmission. It can not only show real time dynamic information of hotel to clients but also integrate specialty catering and tourism of the located area of hotel to meet clients' individual demand. Database safety should be improved to prevent the reveal or damage of clients' information. The basic operation principle of streaming media technology is shown in Figure 2.

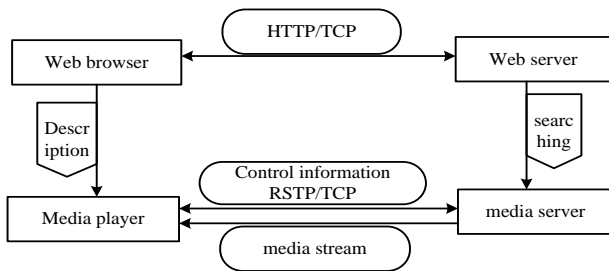


FIGURE 2 Operation principle of streaming media transmission

Client information needs to be encrypted for safety. Encryption technology mainly adopts DES algorithm [7]. In addition, network access control, network jurisdiction space, network server safety control, safety control of network node and port are also need to be carried out. Firstly, access of database need to be controlled for the safety and integrity of database. Then recovery technology is applied. And DBA store data into another disk at fixed period. When the database is damaged, it can help to recover database operation. Working operation flow diagram of hotel management information system is shown in Figure 3.

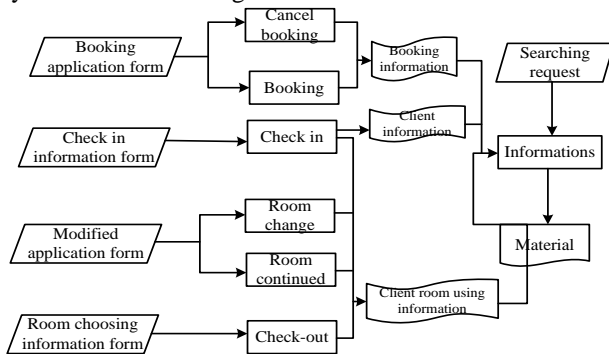


FIGURE 3 Flow diagram of hotel management information system

3.2 OVERALL ARCHITECTURE OF HOTEL MANAGEMENT INFORMATION SYSTEM

The architecture of system software mainly has three layers: data layer, web service and dedicated browser, as shown in fig.4. Data layer, that is, database, is data that stored in certain form in computer storage device. In hotel management information system, clients' information should be stored for later further searching after storage and collection. It is convenient for system administrator to process and obtain needed information. With the rapid development of computer technology, people now have changed storing data in file cabinet. People store and manage large amount of complicated information scientifically with computer and database technology. These precious information resources can be conveniently applied and managed, which improves the efficiency of hotel management and lower management cost [8]. Data stored in the database is organized, described and stored according to certain data model. These data have small redundancy, high data independence and expansibility and can be shared by users.

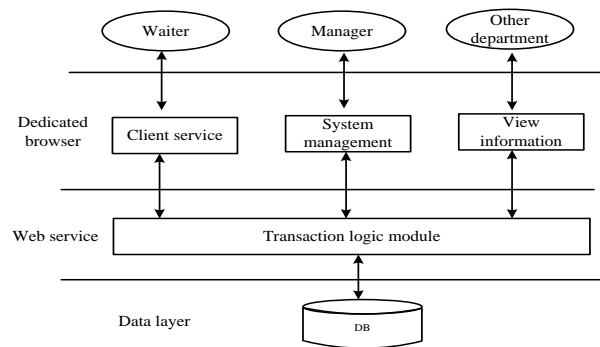


FIGURE 4 Architecture diagram of system software

Management and control system of guest room are composed of backend database, guest room intelligent controller, supervisory control computer in every floor, guest room server, power engineering server, reception desk supervisory control computer and other accessory equipment. System structure adopts second level distributed network structure and applies C/S star network topological structure between supervisory control computer of every floor and guest room server. It adopts TCP/IP protocol to communicate, links by fast Ethernet and achieve by Winsock. Lower computer is the second level system of controller. Upper computer is PC. RS232 full-duplex serial port is used for communication between lower computer and upper computer [9]. Guest controller is lower computer responsible for field control and information collection. Floor supervisory control computer is upper computer. It monitors all guest rooms in the floor in real time and achieves modification of demonstration and control parameter and process of information.

Hotel management information system contains various functions. Every function has several correlation subfunction modules.

(1) "Administrator management" function module is used for managing the account of administrator such as adding administrator's account, modifying password, delete account.

(2) "System management" function module is used for management system allocation, system notice and database backups. Allocation of management system is mainly used for controlling the demonstration of information in system. These information include demonstration pieces, number of character, limitation of file size, storage of file catalogue, catalogue of backend management file, permitted file type, delete operation supported by FSO and effective time of backend login. System notice is used for managing, modification and deletion of title and release of notice content. Backups of database mainly includes backup of system data file and data storage path.

(3) "Enterprise information management" function module is mainly used for managing hotel information such as hotel introduction, manager speech, hotel course, hotel honour, location, etc. It has function of viewing, modification and deletion. Meanwhile, new column such as content and character can be added in this module.

(4) "Service management" function module is mainly used for managing service item classification, service item management, service item addition, service item review, room price addition, room information management and room booking management.

(5) "News management" function module is mainly used for all news management and news classification management. All news management is mainly focus on modification or deletion of tourism news, industry information and enterprise news. News addition mainly includes addition of news title, news content and news classification.

(6) "Message management" function module is used for inquiring, replying or deleting message.

A basic hotel management system database contains multiple tables, which respectively store data information of relative subfunction. "Guest room information" and "guest information" are expressed as critical tables, which are used for storing the basic information of guest room and information of check in client. Other table involving guest room are just used for recording relative guest room number: "guest room information".

Design of backend management system includes administrator information, system information, service management, news management and message administrator. Administrator can enter the backend management module of hotel management information system by input user name, password and verification code. Administrators mainly have two operations in backend module: one is the basic setting of room information; second is the modification and deletion of room historical material module.

Function of database backup is backup of data file of enterprise system management. Current database path can be showed in the dialog box for administrator's operation. When system occurs accident, recovery of database file can prevent loss or omission of relative information [10]. The system will show name of backup

database and automatically generate the time of database backup when administrator backup data file or material. Backup of database module is good to the storage of information in the whole management system and the safety of relative data.


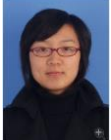
Service management module mainly includes service item classification, service item management, service item addition, service item review, room price addition and room booking management. Service item classification is mainly the management of product classification setting. Specific items have guest room service, catering service, entertainment and banquet service. Administrator can add, modify and delete sub-column. Jurisdiction of adding sub-column is adding subclass and choosing from the belonged large class.

4 Conclusion

Hotel management information system is related to whether the hotel can develop and the prospect of hotel industry. It is the core of long term development of hotel. Hotel industry so far devote to developing more effective management information system. It updates the management of hotel and brings rich economic benefit to hotel. With the development of network information, most industry tends to develop e-commerce. E-commerce developments of hotel industry represent the general trend. Therefore, more application of computer technology in hotel management is the develop trend of current hotel industry. Hotel computer application system is different from the computer system application of other industry. It has its own characteristic. Combining with computer technology, hotel improves the management mechanism inside hotel. It makes hotel administrators comprehensively see the business situation of hotel, meets the demand of customer's individual demand and improves service efficiency and improves economic benefit.

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