The Development and Realization of Network-Based College Student Apartment Management System-Taking the Development of Apartment Management System of Xiamen University as an Example

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Abstract. In order to improve the utilization rate of college residential resources and the efficiency of management personnel, we decided to develop Xiamen University apartment management system. The development and realization of the system helps to improve the overall efficiency of student apartment management. This paper presents how the graduate students select their own dormitories through the network system for the first time, by showing the process in which students, college administrators and apartment administrator are involved. The development of apartment management system aims to optimize the work process, adopt scientific management, and improve work efficiency. This system is applied to the management of college apartment with good effect. At last, a summary and forecast are given to the system.

Introduction

College students’ apartment is an important place for students' daily life and study, which is also an important position to carry out ideological and political education and quality education for students outside the classroom. Therefore, the management and construction of student apartments are, to a certain extent, related to the vital interests of students, the normal order of teaching and school security and stability. Hence, strengthening the information construction of student apartments and building a good student apartment management system, can not only improve the level of student apartment service, but also work efficiency. In recent years, colleges and universities continue to expand enrollment, with the number of students increasing year by year. The apartment management, however, is still in the traditional mode. Dormitory distribution, accommodation management, sanitation examination and other related information are mainly input and recorded manually. This management model is of low efficiency, poor confidentiality, inconvenience to search for, update and maintain the information and data, seriously affecting the efficiency and quality of campus management. The students' apartment management is a multi-faceted system with dormitory management and dormitory culture construction as the core. With the rapid development and the continuous improvement of China's economy, college students' right-protection awareness, values and ideas have also changed accordingly. Students' demands for independence, autonomy and freedom are more intense, and their needs are personalized, differentiated and diversified, which poses new demands and new challenges to student apartment management.

Conventional apartment management usually through pass the documents required for leader’s approval manually, but sometimes the leader might be out on business, leading to work delays. The use of information management, through the management information system, has established a network of official documents to replace manual labor. For schools with a number of sub-campuses, this can help to document loss reduced due to human factors. During the submission, release, approval and other processes, work is not subject to geographical restrictions. Different campuses or departments can interact through the network, which greatly improves the work efficiency.
Research Status Quo at Home and Abroad

At present, there are great differences in informatization of apartment management between domestic and foreign universities and colleges. Foreign schools started early with high and fast informatization. In China, however, informatization began late and develops slowly and is still in its infancy. In recent years, colleges and universities have gradually realized the importance of informatization. They often outsource to design companies to select and develop their own systems and software, or use their own technical resources and strength. Most of the apartment management in China's colleges and universities is done by manual recording. The current domestic student apartment management system includes that based on the C/S model. Within this regard, we can find The Design and Implementation of College Student Apartment Management System [1] by Wu lei, The Design and Implementation of the Student Apartment Management System Based on the C/S structure[2] by Cao Yanting, The Design of the Student Apartment Management System by Guo Nan. As for the researches of system based on the B/S model, articles include The Design of the Student Apartment Management System Based on ASP.NET by Zhang Zaizhi, The Design and Implementation of College Student Apartment Management System Based on Web by Wang Pingli, The Design and Implementation of College Student Apartment Management System by Pan Bo, The Development of the Student Apartment Management System based on JSP by Mao Jing, and The Design of College Student Apartment Management System Based on ASP by Tan Jingjie. From the existent system, we can see that the importance and significance of the building of the student apartment management system has been fully understood. Its main function is to add, delete and modify the information of buildings, dormitories and students. This system has moved gradually to perfection.

The Advantages of the Internet Management Model and the Necessity for Integration

The data of each department is more accurate. The information systems, can collect the information from each department through the network timely and accurately, and can by analyzing and processing different data, automatically form unified reports. Take the statistics of student accommodation information as an example. The traditional manual registration can sometimes be inaccurate due to negligence, making it more difficult to collect room information and distribute and adjust the rooms. It also takes a lot of manpower and material resources to make changes. The use of apartment management system will make work easier and faster. Through the system, we can accurately and quickly query the information of student dormitories.

It is conducive to simplifying the organization and saving money. Network-based system reduces the workload that need to be done by hand, so that we can some jobs. At the same time, information technology can also reduce the use of paper documents, so that we can significantly reduce these supplies, saving many expenses.

Analysis and Design of Apartment Management System

The apartment management system aims at saving the labor cost and time cost of handwriting and keeping all kinds of documents, simplifying the operation and process, making it convenient for the students to apply for dormitories, check-in and check-out, and for the college administrator to approve the student's accommodation application forms.

Practicality: Considering the demand of student accommodation application, it provides a set of simple, widely used and extended resource sharing management system to improve the staff's ability and efficiency. As a network-oriented system, it can be used by legal identified profiles in different regions and at any time.

Openness: The system adopts open technology, open structure, open system components and open user interface as much as possible, in order to facilitate system maintenance, functional expansion and system upgrades.

Reliability: The system uses mature technology and mature means to facilitate system maintenance and management, ensuring that the system is running reliably.
Operability. Administrator with simple computer knowledge can use it after receiving short training, so the management system interface needs to be user-friendly with simple operation.

Usability: Based on the user's operating habits, the system should have a user-friendly interface, complete functions, great compatibility, and can adapt to changes in development plans.

Postgraduate freshmen can choose their own dormitory. Traditionally, apartment administrators allocate rooms for students. But in 2016, postgraduate freshmen start to choose their dormitories online. On 6pm of the first day, 87% of the freshmen selected their rooms. It’s the highest figure over the same period last year. During the process of selecting dormitories, we found that many students do not care about the room details, but who lives with them together in the dormitory. In the future, we might provide “appointed check-in” service, that is, students in the same area can apply for binding in advance, and the system will randomly assign a room to the bound students, who don’t have to worry that they can’t get the same room. Combining the apartment management system, we began to use student apartment models in 2016, that is, all the apartments of Xiamen University are displayed in electronic models. Different construction time and location leads to various types of apartment. Also, some have undergone transformation, with layout changed. The previous student apartment administrator did not carry out type sorting, modeling, or archiving. This project helps to better manage and distribute the existing student apartment resources. It’s also helpful for the students to get to know their dormitories before moving in, which improves the informatization level of apartment management. As of July 2016, we have established 72 types of student apartment models across the school.

![Figure 1. An Example of Three-dimensional Rendering.](image)

Undergraduate freshmen’s qualification to online appliance. College administrator allocate dormitories online. They will allocate according to the timetables, interests and other information students filled out while applying. For other students to check in, check out or change the room, college administrator can approval through the network. It’s no longer needed to submit a paper document, making it convenient both for the students and the college. Accommodations (before & now): the number and detailed information of designated students in different school districts, dormitory districts, buildings and rooms. The number and detailed information of students (based on their department, grade, gender, education level and type) in designated school districts, dormitory districts and buildings.

Businesses: In a set period of time, the number and cross-distribution statistics of students doing personal business. For example (statistics), in a certain period of time, the monthly distribution graduate students checking out. The total number of individual businesses handled in a certain district in different stages.

Facilitate student’s online appliance. Network provides a platform across time and space, within which students can stay at home to apply for accommodation. In this way, the application process becomes more clear and precise. College and apartment management departments can directly deal...
with the requests submitted by students through the network. Compared with manual filling in the application form, the system greatly improves the timeliness of the application, providing real-time monitoring of student's appliance, which improves work efficiency and strengthens the communication between different departments. The Student Affairs Office of the apartment can get to know and supervise the work of the college through the system. Reducing office costs: compared with application in the form of paper, this system adopts paperless management on all the student apartments.

**Conclusion and Shortcomings**

This paper put forward the self-selection of dormitory for the first time. Based on the requirements and needs of undergraduate, graduate student for dormitory application and allocation, as well as the needs of the school management department, this system fully realizes information access, information dissemination, information sharing, dormitory applications, and dormitory allocation, providing technical support. For the successful appliance of the students and the automation work of the school management departments. This system has optimized the work process with the implementation of scientific management, making all the students, college administrators and apartment administrators improve their efficiency. The development of this system is of practical significance. The system was put into use in June 2016. According to its effect, this system does solve the lower the pressure on students and the administrators. Functions of this system is still being improved and expanded into a more effective online apartment management system.

**References**


