

Research and application of digital campus SMS platform based on web services

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Keywords: Message platform; Campus network; Information

Abstract. WEB embed online platform, the main function of the information services, student management and access control of three modules. Since the open education students not at school, so that the information service is particularly important, information services are primarily teaching information services and management information services. Teaching Information Service to inform learning, learning to supervise and inform daily teaching. Inform students mainly study plan, course schedule, online learning resources, exam review and so inform learning urge major online lectures, online learning, BBS discussions, thesis guidance and reminders, etc., mainly to receive daily notification teaching materials, review information and operations, income homework, examinations notice. Management information services are primarily various kinds of information to learn outside of the main school, holiday, payments, according to graduation photo, fill out the registration form graduates, school and other activities carried out student exchange and communication by sending and receiving messages This article describes the role-based web and messaging platform SMS platform application in campus network, and provides a framework for the design of campus network SMS platform, analyzes the significant role SMS information platform of information technology in the campus network play.

1. Introduction

With the computer network technology and telecommunications technology to show, increasing the degree of information, use of information communication growing popularity of mobile phones, but also to the traditional education it provides a platform for exchange from the Central TV, provincial, city and county TV students across the country, part-time adult education students, teachers and exchange of information is particularly important [1, 2]. Receive from the student textbook, homework income, school exams to, if every time a call, the heavy workload of teachers, some teachers use the phone or send text messages QQ, efficiency is not high, the use of flying letters, limited to mobile numbers , but the efficiency is not high multi [3-6]. Since Henan TV online platform embedded messaging system, use the platform for teaching and management, successfully resolved the exchange of Radio and TV and TV around the city between teachers and students, with timely, prompt, convenient, small investment, etc., for the province TV University teachers and students provides a timely, rich and diverse, personalized information services. Greatly improved work efficiency, but also reduce the cost of education, the majority of teachers and students [7].

With the development of modern communication technology, short message service in many industries have been very good application. SMS through the store and forward, real-time monitoring mechanism, improve reliability, low-cost wireless data services to meet user requirements for use in resource-constrained wireless networks and devices [8, 9]. Web-based campus network application platform SMS successfully solved the schools and individual students as well as two units to communicate via SMS issues, the full realization of short message communication with the computer PC, computer and mobile phones. Within the meaning of the construction of the campus network messaging platform: Web-based campus network integrated messaging platform for "Campus Management Information" communication easier, the school is an important breakthrough in information technology, educational technology modernization. Communication platform connecting students and students, students and teachers, between teachers and teachers in order to

achieve a real sense of the campus intelligent information on schools, teachers and students to provide timely, rich, diverse, personalized information services to information communication become "smooth", "anytime, anywhere."

2. Function SMS platform

Student is to import student information management, query, output printed, or modified [10]. The school library administrator students basic information into the SMS platform, while these data filtering, query and print. Different users have different scope of management, the provincial school to see all the information TVU, TVU cities have only seen this city students basic information and can choose to manage their own classes depending on the circumstances, bulk import student phone and related maintenance. Currently there are three kinds of users, administrators of Radio and TV, TV municipal administrator and teacher. Radio and TV administrator is responsible for operation and China Unicom, set up the system of basic data, docking with the student database import students basic situation, the basic operation of the monitoring system, the distribution rights to TV and city administrator [11, 12]. TV main municipal administrator is to manage and maintain the system, responsible for the city's local teachers assign permissions, perform cost calculations and turned over, etc., and is responsible for the content screening and supervision of the local market SMS, if found illegal content, remove permissions. Class permissions are texting, view the information, the establishment of classes, introducing students to the phone number, change passwords. System functional block diagram was shown in Figure 1.

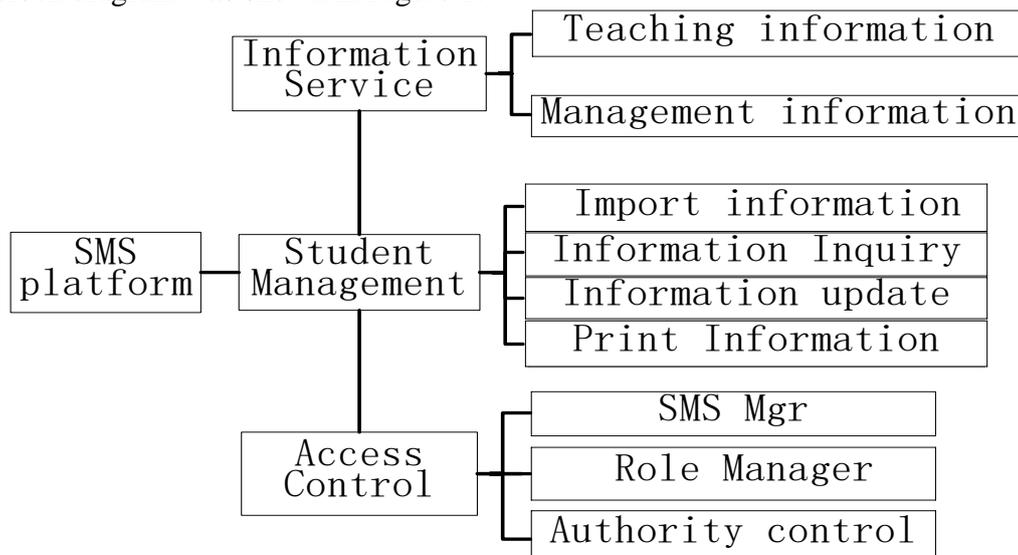


Figure 1. System functional block diagram

SMS is a store and forward through real-time monitoring mechanism that can provide reliable, low-cost wireless data services, to meet the requirements of the user's resource-constrained wireless networks and devices used. In addition to the technical control, but also have the corresponding administrative regulations. Texting requirements specific to each student, accurate to the people, not abuse mass function, and students do not send irrelevant messages, if three students are to report spam messages, turn off the corresponding SMS permissions City TV no longer opened. TV municipal administrators often view the log, authorization for teacher supervision. SMS platform is very practical, very convenient, we must strengthen the management, if poor management may bring a lot of trouble. Some teachers account used by others to send some advertising or to send a private message, the content is not suitable for teaching, the impact is very bad, how to monitor such situations? First formulate strict rules and regulations, and the second control technology, is now graded by an administrator, the administrator is responsible for the municipal TV Radio and TV administrator privileges to oversee the work of the municipal administrator TV; the person in charge of the municipal TV and submit a written list of electronic management and related regulations,

supervision of the content of the message for each class; teacher submit a written application to open SMS function, requiring only sent to students with learning-related messages.

3. Framework design of Web-based campus network SMS platform

Figure 2 shows a system configuration diagram web-based short message service platform. Web Client Access Short Message Service Platform Web Server on; short messaging interfaces CMPP agreement with the short message gateway communication, short message gateway SMPP protocol to communicate with the short message center, the short message center receive and send messages via the mobile network.

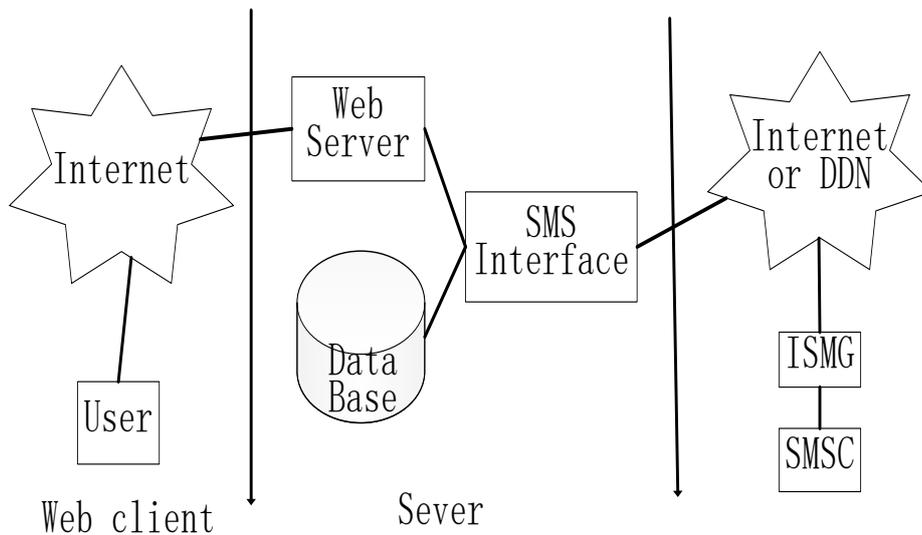


Figure 2. Short message service system architecture platform

Campus SMS Gateway platform architecture and web site services provided in the interface shown in Figure 3. Wherein the Web site services including SMS services and management and maintenance functions. SMS features include user registration, subscription SMS, instant messaging, write text messages from the updated information and other modules; management and maintenance, including information release, columns management, application management, query logs, billing statistics, system configuration module. Database based on C/S structure of SQL Server, the data stored on the server, including Web user registration information, on-demand user information, short messaging information, short messaging logs, relevant data on the phone on-demand services and the like. SQL Server is a C/S relational database management system, safe, good stability, can support a large number of stored data.

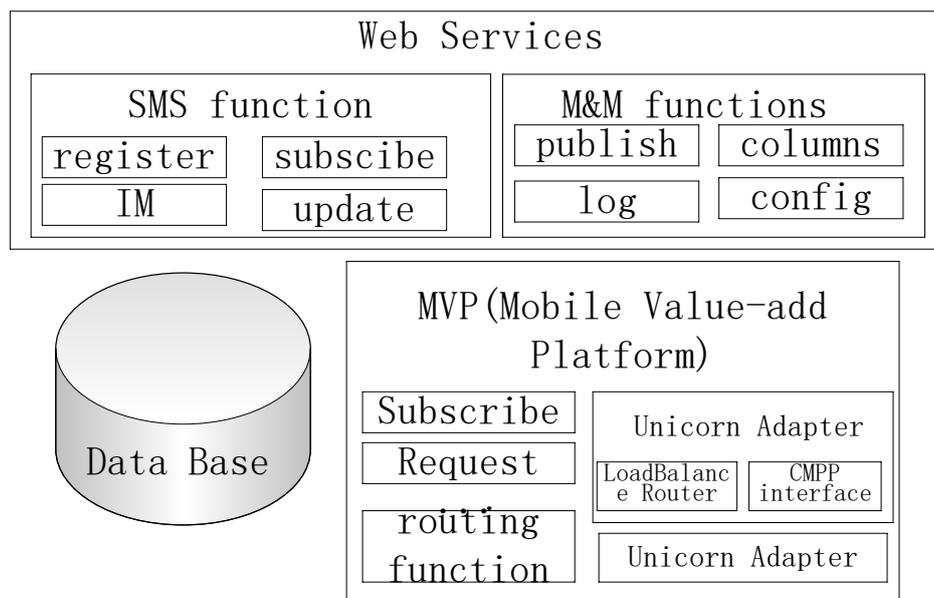


Figure 3. Campus SMS gateway platform architecture

Digital Campus is a highly information-oriented talent training environment consists of digitized information management and communication mode of transmission is formed, is the use of computer technology, network communication technology to all information resources the school's teaching, research, management, and service to conduct a comprehensive digital , scientific and standardized way to integrate these information resources and integrated to form a unified user management, unified resource management and unified access control, and through the organization and business process reengineering, promote the school system innovation, management innovation, and ultimately education information technology, scientific decision-making and management standardization.

4. Conclusions

SMS provides a low-cost means of communication will have a huge impact education model, the timely exchange of teachers and students, students learning to eliminate the sense of loneliness, feeling the teacher has been around, there are ready to solve the problem, increase the interest in learning, improve learning outcomes. SMS embedded enthusiasm has been greatly improved in the Henan TV platform, the students online learning, online real-time performance in the classroom lectures to increase the number of posts increased significantly, SMS to TV teaching and management has brought great convenience, I believe it function in the future will be more applications.

Short message service campus network and telecom, mobile, china unicom is in the combination of rapid development stage, a variety of value-added services based on SMS abound. Web-based short message service platform integrates information dissemination and information on demand, convenient for the user to provide the required information to enhance the user acceptance of the initiative information. Digital Campus is a step by step, the means and methods used more and more. Undoubtedly, the use of SMS platform will be a new, convenient and scientific management methods, the school is to communicate, access information, release another important channel of information, and will get a good social benefits.

Acknowledgements

This work is supported by the Natural Science Foundation of Nanjing Institute of Technology(No. QKJB201313).

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