

Construction of Library Bibliographic Inquiry System Based on 4G

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Abstract. [Purpose/significance] 4G network is more and more popular in many libraries because of its convenience and timeliness, with the upgrading of 4G mobile network communication technology and the deep development of Digital Library. [Method/process] In this paper, in order to satisfy readers' demand for library information resources at any time and place, According to the characteristics and requirements of 4G network library inquiry system, the system is designed and developed, The implementation function and system solution of library inquiry system based on 4G mobile network are discussed. [Result/conclusion] Through the construction of Library Bibliographic inquiry system based on 4G, it will be promoted the mobile development of libraries, to satisfy the readers' demand for the mobile use of library information resources, and Meet the readers' reading needs of the new mobile network environment.

Introduction

In recent years, with the continuous development and upgrading of ubiquitous network environment and the extensive application of multimedia information technology in libraries, the learning environment and living habits of college teachers and students have undergone tremendous changes. Due to the massive popularity of mobile phone and mobile terminal, resulting in Pan paper reading books and periodicals reading in the declining proportion of mobile, electronic document reading proportion increasing, to the information service of digital library to create a new space for development.

In this new environment reading ecology, University Library as the information security and service center, to change the traditional means of information service in a timely manner, the development of information service mode reasonably, build information resources navigation service platform for mobile network based library, provide query service information resources of mobile terminals such as mobile phone library based on readers, so as to better to meet the demand of readers to use the library information resources, information technology to enhance the service level of the library to a new level.

The Development of Mobile Reading in 4G

Advantages of 4G Technology. 4G mobile phones can realize video calls, complete functions, simple operation, watching TV on the mobile phone and surfing the Internet at any time. The functions are complete and the operation is very simple.[1] 4G mobile Internet access is very fast, capacity increases, the average speed of mobile Internet access is about 10 times. At the same time, 4G mobile phone and real-time monitoring function, as long as the camera and mobile phone connection, you can always see the camera in the phone shooting picture. The policy support has great potential, and the most important 4G has been supported by the national policy and financial support, which has set up various platforms for 4G to develop smoothly.[2-5]

Due to the limitation of bandwidth, the data service of 2G network can only be based on text, small pictures and so on. The mode of expression is monotonous and boring. 3G networks will provide a broader platform for information services, which will include voice, picture and video.

The 4G technology provides a high-speed and convenient information channel, providing greater prospects for the reader's mobile services.

The mobile library with the wireless communication technology wireless communication network and the perfect combination of library, mobile library service platform can whenever and wherever possible the traditional library services provided to the users, information resources and services at any time, any place can get mobile library through the mobile terminal. The mobile library that the user does not passively receive information or knowledge, and only need to provide the library according to their own needs to choose the service customization, active service can realize the mobile library, to meet the personalized needs.

Mobile Reading Demand of Readers. In the ubiquitous network environment, the rapid development of mobile network changes the information of our ecological environment, the user wants to use the mobile terminal equipment different by different operating platform and network system, access to various information resources, so as to pursue the best reading effect. Therefore, resource providers need to constantly explore new information service models, provide cloud reading services, and realize the reader's multi device compatible, multi system seamless mobile reading demand.[6-10]

The mobile network environment, affecting the development of 4G networks seriously and change the habit of reading needs and behavior of users, breaking the traditional barriers to restrict access to resources on time and space, free and random access mobility of resources. At present, Internet users basically have intelligent mobile terminals such as mobile phone or tablet, "mobile phone control" has become the people's normal life, the user's reading habits and method of acquiring knowledge is completely changed, the increasingly strong demand for mobile information.

Construction of Library Information Navigation Service Platform based on Mobile 4G Network

The Construction of Library Bibliographic inquiry system based on 4G includes functional design, code design and interface design of three parts. The specific model is shown in Fig.1.

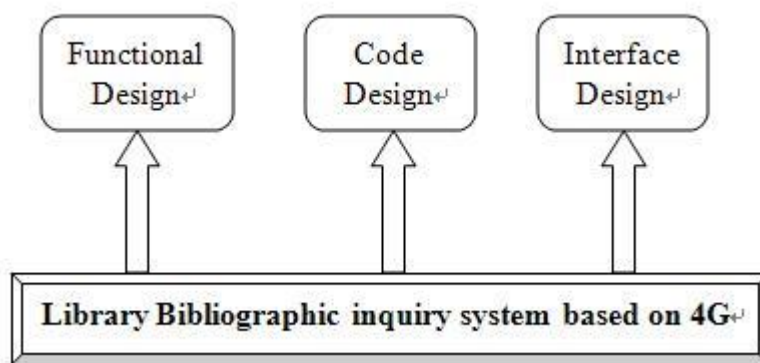


Figure 1. Construction of Library Bibliographic inquiry system based on 4G

Functional Design. As the service function of the digital library system on the mobile terminal extension, 4G network construction of Library query system should give the reader service of digital library function as much as possible in the implementation of the platform based on mobile phone. Therefore, based on the 4G mobile network bibliographic inquiry system, in addition to providing the original basic services, the 4G mobile phone and other mobile terminal features, try to provide some special services. The platform can be provided by the mobile terminal system of We Chat APP software, to achieve the entire digital library portal website provides bibliographic information query functions, including online museum library, collection of paper books and electronic books module, query module, book shelves and navigation services, personalized

recommendation module and borrow special literature search service module. The functional design is shown in Fig. 2

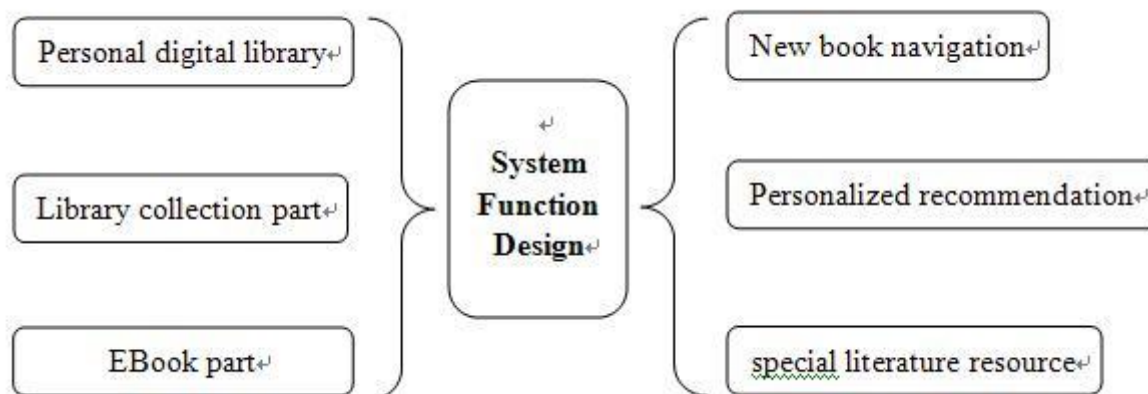


Figure 2. System Function Design

Personal digital library. Mobile phone readers query system by logging 4G network library, you can more easily view the readers basic information, view the reader information, renew, report the loss of library card hanging solution and reader recommendation service etc.

Bibliographic retrieval service. 4G mobile phone readers can search books information through web pages. According to the information of readers, they can recommend books that readers may like. They can make an appointment or evaluation of the books and periodicals they inquire about.

Check out new books on shelves. Show the time frame of the new book. Click A, B, C and so on. Click on the list of new books.

Hot recommendation. You can click A, B, C and other categories, click on the reader's list of recommended books. Display recent time range. According to A, B, C and other categories, click on the latest hot library rankings.

Library bulletin. Show the nearest library notice, such as closing open on time.

Code Design. 4G network library inquiry system is the product of mobile communication technology, and the development of mobile phone library will be accompanied by the continuous upgrading of mobile communication and other information technology. The arrival of the 4G era will solve many problems of mobile phone library in 2G era provides mobile information services, relying on 4G technology and intelligent mobile phone terminal, mobile phone library can change the previous mainly through mobile phone text messages, multimedia data transmission services, began to develop WEB browsing, visual communication mode of the wireless internet.

The library needs to carry on the deep processing to the information resources in the library, establishes the standardized database, creates the rich practical and the characteristic homepage. Design simple composition, clear structure, reasonable classification, and even moderate font, more suitable for 4G user service website.

Construction of 4G network library query system can be used to design the same with the original library WEB system architecture and development technology based on WEB (such as .Net, Javascript etc.), many modules can be transplanted from the original WEB library query system, which can reduce the difficulty of construction of mobile phone library, reduce implementation cycle, save time and money. But the problem is that 4G intelligent mobile phone is powerful, than the PC computer operating speed is slow, mainly rely on the mobile phone keyboard click control instead of the mouse, while mobile phone screen is small, with little memory, various types of equipment etc., if copying the original system design code and WEB interface for PC terminal, mobile phone will give readers a lot of inconvenience, such as dislocation, text confusion, the operation is difficult. In order to solve this problem, the nonprofit organization to develop international network service standards of the proposed standard, a series of therefore, in the design of a WEB site, should be designed in strict accordance with the standards, to ensure that the mobile phone library smoothly.

Interface Design. 4G network library query system provides a data interface circulation system by library management system manufacturers, by Chinese Unicom mobile agent server in the library internal deployment, to solve the original system and docking library and provide, to wireless library search system use, wireless application to readers based on knowledge service oriented based on the network library query by 4G system, readers can easily query the bibliography and borrow information whenever and wherever possible, the first time to understand the new books, self renew, appointment books, documents and other procedures report. The library can use this platform to recommend and publicize library resources and services in a timely and personalized way, and carry out information publishing, borrowing reminders, overdue reminders, reference consultation and reader opinion surveys.

Summary

4G library network query system is based on mobile device terminals to achieve. For example, various types of 4G mobile phone, handheld mobile terminal reader and tablet computer, there is a huge difference in the different operating system and hardware configuration, how to be able to do equipment of different mobile terminal can realize the unified authentication technology barrier 4G library query system.

The development of anything is not easy, 4G network library query system is no exception, at this stage there are still some problems of 4G mobile phone tariff is high, the operation procedure is more complicated, but these problems will be with the social and technological progress and further improve the function of the mobile phone has been gradually resolved. The construction of network library inquiry system based on 4G is the link between Library and readers. The mobile phone through the mobile communication network, realizes the information value-added services, timeliness and convenience of it can help readers whenever and wherever possible to avoid overdue fine, remind readers to have appointment books, need to check their books in the library is whether can borrow, to answer the issues raised by readers; at the same time can help library to improve the utilization rate of resources, the efficiency of the library service quality and strive for further improvement.

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