The Pre-application System of Real Estate Registration

Zhiqing Wang and Hao Luo

Abstract With the increase in network speed and the expansion of intelligent equipment, the establishment of real estate registration center is increasing year by year. The current model cannot meet the requirements of the registration center. Instead, there are some problems such as wastage of resources and time. To improve the efficiency of registered office and service levels, we want to establish "The Tianjin real estate trading center of registration and certification online pre-qualification platform". The purpose is to establish information, standardization, intelligent, all-weather network service platform. The system is adopting B/S operation mode and using Silverlight and related to the client. It can be applied for multiple subsystems such as examine and verify as a complete solution. System innovation is mainly for business. It will upload all the processing requirement by the Internet and it will do a preliminary application, then submit formal approval process.

Keywords Real estate registration · Preliminary application system · B/S structure operation mode

1 The Introduction

Tianjin real estate trading center of registration and certification (hereinafter referred to as center) is used for registration of the state land with the initiative registration of real estate [1], pre-sale registration of the commodity house, land mortgage registration and so on. It is an important window of national territory and

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housing administration industry and it is the national construction system of the national civilized unit. At present, there are some issues with such as the standard strictly, high social awareness, heavy working intensity and others [2], they already set up nine business windows in the registration center in bureau of administrative service hall. The businessmen and people are eager to establish a convenient and efficient information platform in the center to improve the efficiency of operations [3]. This platform can give the demands of the masses satisfaction and can promote the office efficiency and service level of the real estate registration. It is the only way for the long-term development.

According to the actual research situation and development trend in the future, we should make sure the project construction should be a high starting point. The overall project goals can be summarized as follows: (1) We will achieve the online application of registration center for all of the real estate registration project gradually [4]. We will realize the online application [5] (network or mobile phone APP) of the development enterprise and masses. We will achieve the database management of the real estate registration information [6] and archives, which will enhance the level of real estate registration information based on the realization of online office and paperless office. (2) We will realize the visual control in the whole process of the business registration based on the current real estate registration mode and explore a set of combined with ISO 9001:2008 management system, suitable for the real estate registration model of modern. (3) We will realize all kinds of registration and the summary of relevant information, query, statistics of intuitive visual and automatic generation and establish cooperative office platform. (4) We will realize the intelligent release of real estate registration information and cooperate with financial institutions and large real estate development enterprises. Thus, we can enhance the level of real estate registration management. (5) We will realize online publishing of the notification, announcement and related advocacy work and answer the various related consulting of the public by intelligent robot. We can realize the window service network of the real estate registration infor-mation and satisfaction survey of service network, etc. (6) We will realize the interconnection with utilization of archives system, realize the resource intensively and information standardization. System is divided into three parts: the real estate registration pre-application subsystem, real estate business subsystem and real estate registration service subsystem. The paper is organized as follows. In Sect. 1, we described the research status of real estate registration system, the research target and content. In Sect. 2, we introduced the development of national territory and housing administration application system in Tianjin. In Sect. 3, we introduced the research results of benefits. In Sect. 3, we addressed the application of research results. In Sect. 4, we are testing the system and obtained result. In Sect. 5, a summary is made for this paper.

2   The Development of National Territory and Housing Administration Application System in Tianjin

2.1   System Overall Design

There are three ways of application of software with current development [2, 7]: Independent development of completely independent; Pure secondary development based on commercial software platform; On independent programming language platform, use software to provide the basis of component integrated secondary development. This system is composed of four layers, respectively, and they are the Client Tier and WebTop Tier, Application Tier and the Database Tier.

According to the above analysis, the center of pre-registration system provided by our company will be established in the database based on the B/S application and it will pay attention to the compatibility and expansility. The development environment is using Microsoft Visual Studio 2010, oracle10g database, using the c # development language and using Silverlight 3.0. In client running environment, the operating system are Microsoft Windows XP, Microsoft Windows 2003, Microsoft Windows 7 and so on. The customers will use browser IE 6.0 and above.

This system background is a new technology of Microsoft's Silverlight [8], and it is crossing platform and browser. Its generation has brought a lot of powerful tools for the Internet in the computer industry and it also improving the working efficiency. In this paper, we are relying on the composition and properties of Silverlight, discussing its actual application in related industries and development prospects.

Web development platform is a kind of trend. When many programmers were tired with the programming work, they are looking for highly efficient and different development methods. Thus, they will go into the development platform.

The system framework is as follows in (Fig. 1).

The system development environment and running environment is as follows:

(1) The development environment (Table 1)
(2) The operating environment (Table 2)

2.2   System Development of Key Technology

Microsoft Silverlight is a cross-browser, across the client platform technology. It can design, develop and launch a multimedia experience with rich interaction (RIA, Rich Interface Application) network interactive program. Silverlight provides a powerful platform. It not only can develop Web application with professional graphics, audio and video, but also enhance the user experience. Thus Silverlight attracted the attention of designers and developers.
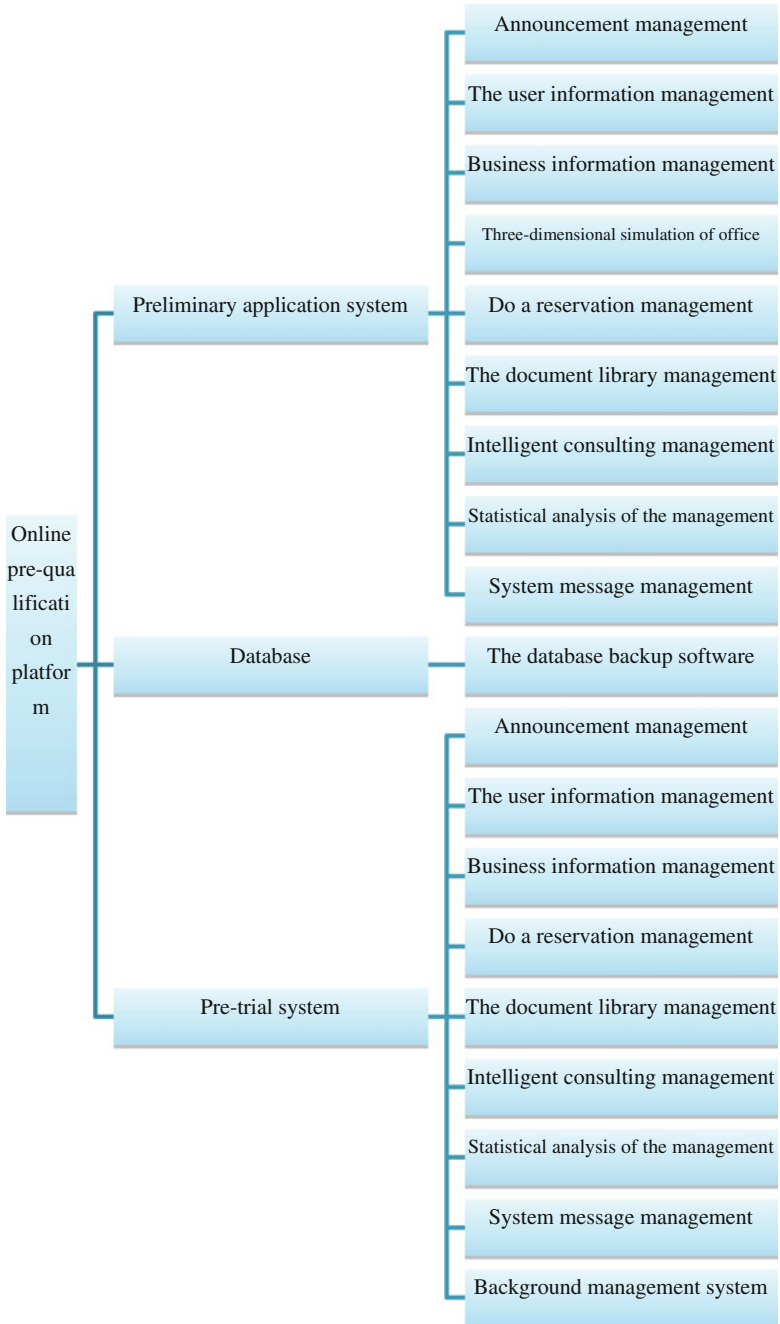
Fig. 1 The system framework

Table 1 The development environment of hardware environment

Hardware environment	
CPU	Intel® Pentium® 4 Processor 2.8 GHz
RAM	4 GB
Hard disk	120 GB Hard disk
Display	1600*900 Pixel true color LCD

Table 2 The hardware environment of running environment

Hardware environment	
CPU	Intel® Pentium® 4 Processor 2.4 GHz
RAM	1 GB
Hard disk	100 GB Hard disk

Silverlight can create a highly artistic application, it has the following characteristics: (1) A cross-browser, cross-platform technology. It can run in all popular browsers, including Microsoft Internet Explorer, Mozilla Firefox, Apple Safari and Opera. It also can run on Microsoft Windows and Apple Mac OS X. (2) No matter where to run, it can provide the same user experience. (3) The system is needed to download a small file to install to support, just a few seconds. (4) The user can be controlled directly in your browser and you can drag, flip, zoom pictures. (5) It reads the data and update the appearance but not interrupted by refresh the whole page to the user operation. Silverlight combines multiple technologies into a development platform, in which you can choose to conform to the requirements of the appropriate tools and programming languages.

2.3 System Implementation

The system is according to the requirement analysis [4]. In the early development of the system, we carried out preparation, project design work, organize relevant technical personnel for the requirements analysis and overall design of the system and we have determined the technical architecture, development platform and tools of the system. In the middle of the research and development, we are conducting the project implementation, achievement test to perfect and project promotion. According to the requirements of function and system architecture design, we formed a integrated application system which meet the requirements of end users. In the latter part of the system, we prepared reports and maintained the project. After a half-year of the system development, testing, modification, promote the use, the system function has been improved. And it has been applied to the daily work.

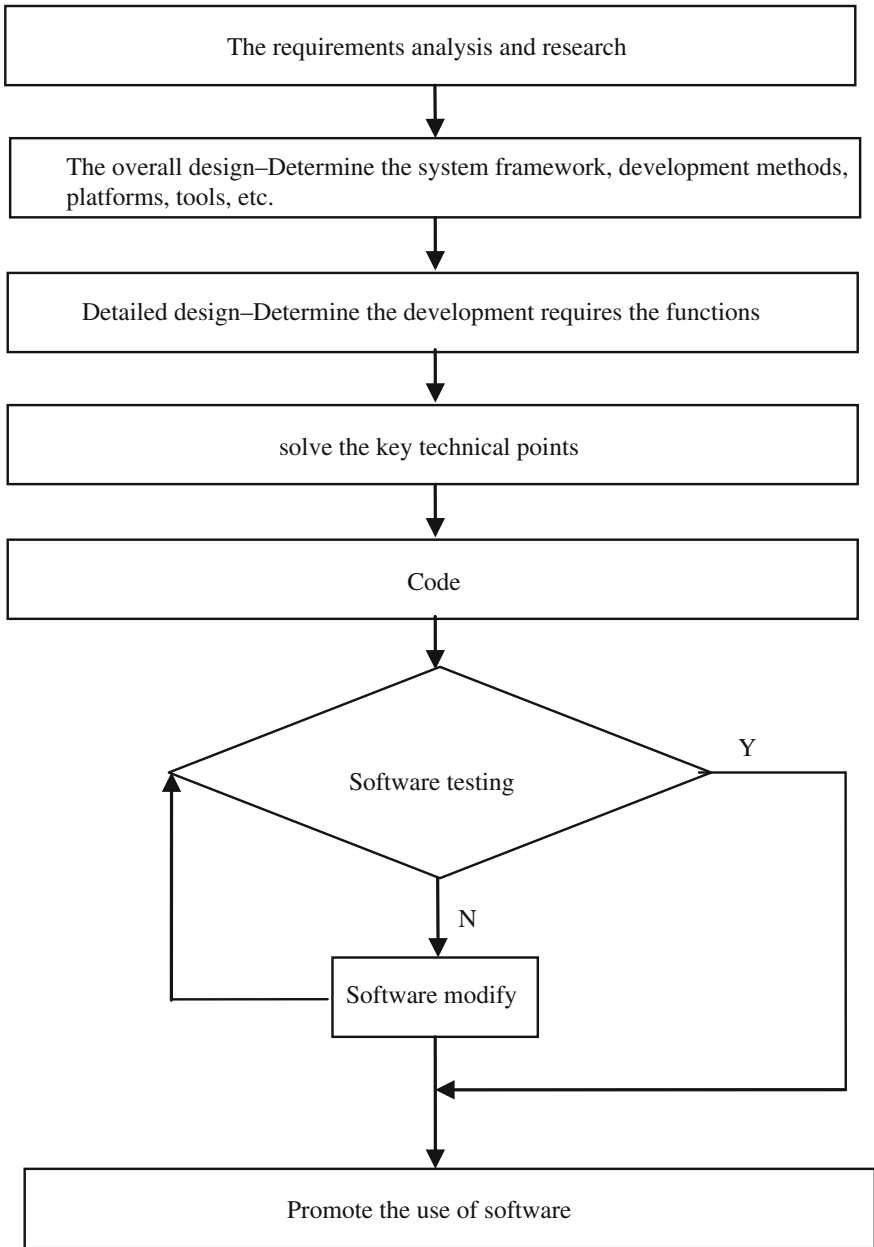System implementation process as follows (Fig. 2).

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│  The overall design–Determine the system framework,          │
│  development methods, platforms, tools, etc.                  │
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│   Detailed design–Determine the development requires the      │
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Fig. 2 The system development process

3   The Benefits and Application of Research Results

The development and application of national territory and housing administration application system in Tianjin has produced clear economic benefits [9]. Direct economic benefits include the following aspects: (1) The system has adapted to the working characteristics of the network, carried on the front of the government's service function, reduced the cost of the applying for personnel management, improved the work efficiency, reduced the service cost. (2) The system is integrated with the scanning system, reduced the amount of digital archives scanning, saved labor costs and equipment investment.

The system not only generates good economic benefits but also generates good social benefits, its main features are the following: (1) The system brings a change in the work way, improves the work efficiency, reduces the run time, and the number of the applicant to the hall for work, improves the user experience. (2) The system will provide good environment to the society and reduce social friction. (3) After the completion of this platform, it will greatly improve the soft environment, can effectively enhance the user quality and skill, reduce the overall cost, improve the image of the department. In order to speed up the construction of strong talent, build Tianjin development advantages to provide powerful guarantee.

4   The Test of the System

The test team from January 2014 began, based on the development of the report and user manual of "pre-application system of real estate registration" and based on the real estate registration procedures [10], we have conducted a comprehensive test to the system according to the following procedure. (1) The system customization. In the system of real estate surveying and mapping management, the system is the basis of real estate surveying and mapping management. In the test, the metering personnel authority and individual information will be truthfully recorded and classified according to the web access to personnel authorized. (2) The test of business process. The business flow is used in the pre-application management system is the core content, through entry the actual database on the basis of comprehensive consideration, give full consideration to the system. According to the set of permissions to log in the system and test. (3) The test of network environment. We can test according to the function of the frequently used in daily work, carry on the real data entry and reference to the daily work for testing. (4) The test of internal management environment. Through, entry the actual data and reference to the daily work for testing.

The conclusions of the system: the system interface esthetics, interface style friendly and easy operation; The system can meet the needs of the registration center of the daily work, fully functional, running accuracy; The system advanced design concept, high safety, easy to update maintenance and daily management.

5   Summary

We have completed the Tianjin national territory and housing administration application system research by our group. The system is based on the existing business registration of national territory and housing administration center of Tianjin and forming a set of system of efficient operation which the computer as support tools. The system uses modern methods to replace the traditional operation mode, achieves automation, standardization of the work window, improves the level, speed and efficiency of daily work, and enriches the work, provides the direction of the innovation and development for the national territory and housing administration work.

The research project have fully exercised the team members' independent innovation ability, research ability and accumulated valuable experience in scientific research project. We will make greater contribution according to the use of existing innovation platform, innovation environment. The development of this system is completed, just only one passage of the research. It is still demanded in further perfect and make it be more practical.

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