Design and Implementation of Sport Virtual Museum Management System Based on ASP.NET

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Abstract. At present, more common sports virtual museums are written in the language, but there are several problems in the following need to manually write code, which makes the efficiency of the creation of a museum is relatively low. Unable to connect to the database, the user can not use the unified management and use of the information. Due to the response of the event in the roaming process is the use of sensor mechanism, the function is relatively simple, so it can not meet the needs of users in the process of roaming. The sports virtual museum system mentioned in this article can solve the above three problems well. The system provides a convenient and efficient relics database management, database management, the establishment of virtual Sports Museum two-dimensional graphs of, sports virtual museum 3D browsing and other functions, the system is divided into three module user and relics database management module, physical virtual museum design module, Physical Virtual Museum browsing module. For user and relics database management module of cultural information and user information in the database management operations, the user can the cultural relics of the relevant information and model file and texture file stored in the database on the server according to the demand

1. Introduction
In the field of education, the computer virtual reality technology has a wide range of functions and effects. The reality of the presence of the scenery or things in the virtual reality of the computer to allow users to experience, which is more than the traditional empty Abstract professor more easily accepted by users, but also more likely to let users access to knowledge. Nowadays, virtual reality technology has brought people a new education method, which has solved many problems that have been difficult to solve in the past, and has brought a series of great convenience to education [1]. The study of cultural relics belongs to the field of the humanities, and has an important position in the history. The foundation of archaeological research lies in the research of the field. Archaeological research has focused on the past, including the various information left over from past cultures. So its research object belongs to a certain period of time ago. Through the study of the ancient past, it can be a good understanding of the development process of human civilization, summed up the law of human civilization development, and promote the development of productive forces. But because of the legacy of the ancient human many antiquities age-old, fragile fragile and relatively expensive, for the protection of cultural relics are more stringent. People in the museum is difficult to close observation of antiquities are less likely to take out of the museum, must also be in the museum opening hours to go in and browse. In view of a number of factors, the traditional sense of the history of the museum has the space and time limitations. With the development of Internet and multimedia technology, the use of virtual reality technology can be a good solution to the limitations of time and space in the traditional museum. The reality of the museum in the
computer virtual out, the user through the Internet anytime, anywhere convenient browsing. Virtual sports museum is a fusion of database storage technology, multimedia technology, computer network technology, virtual reality technology, human-computer interaction technology, artificial intelligence technology constructed distributed system of digital information resources, provide permanent digital preservation of cultural relics, and repair, management and display means. Digital museum breaks through the limitation of the time and space of the traditional museum [2]. It is suitable for the large scale knowledge center of information preservation, management, restoration and display of exhibits. The Virtual Museum of cyber sports, which is the theme of the museum, is a new product of the network information age. It is not based on the traditional physical museum, not on the basis of physical exhibits, but the direct use of graphic design, three-dimensional image or streaming media, such as multimedia, human-computer interaction, virtual reality technology in the network to create.

2. System requirements analysis

2.1. Functional requirements analysis
The user can through the mouse interactive convenient constructs a 3D virtual museum and the virtual museum was released for other roaming user's browsing for a virtual museum system it should possess the basic function. The specific functions that it wants to achieve are as follows: the ability to add sports to the museum system, modify the sports and delete the sports information. Sports should be included in the information of sports here name, physical model file, sports texture files, physical documentation and other, including such as hide address, Dynasty, grade, source, type, current situation, the host country and the texture of additional information. In the database should also be able to modify the role of the user, the user's access to the database in the database of physical access to his role in the limit. Here to modify the user role, mainly including the user information to add, delete user information, user information changes. The user's information mainly includes the user's ID, the user's name, the user's login password, the user's grade, etc. The system should also be able to make the server and client communication network, user login client, from the server get database contained in the list of sports and sports through the communication network will be selected by the model file and texture files downloaded to the client [3]. Client should have the function of painting, the user can use the client to draw a virtual museum of two-dimensional plan out. The client should provide the function of drawing straight line, curve, circle and so on. And in the process of drawing can be drawn on the curve has been modified. The client should also have the function of setting the texture, in order to make the virtual museum built more realistic, the user should also be able to use the client to set the texture of the indoor scene information.

![Figure 1. Sketch map of Virtual Museum](image)
2.2. ASP.NET technology introduction

ASP. Net is a part of the .Net framework, is a Microsoft technology, is a kind of embedded in a web page script can be executed by the Internet server server-side scripting technology, it can be in via HTTP requests the document again on the web server dynamically created them. Refers to the Server Pages Active (dynamic server page), running in IIS (Information Server Internet services, is the development of Web Windows server) in the program. ASP. Net is the predecessor of the ASP technology, is in the IIS2.0 debuted (Windows NT 3.51), at that time and ADO 1.0 with the launch of, IIS 3.0 (Windows NT 4.0) to flourish in the become server-side applications popular development tools, Microsoft is special for it to create a VisualInter dev development tools, between 1994 and 2000, ASP technology has become one of the key technology of Microsoft to promote Windows NT 4.0 platform, tens of thousands of ASP website this time began springing up appear in the network[4]. It's simple and highly customizable, and it's one of the reasons for its rapid rise. However, the shortcomings of ASP also gradually emerge: process oriented programming approach, so that the difficulty of maintaining a lot of maintenance, especially large ASP applications. Interpretation of the VBScript or JScript language, so that the performance can not be fully played. Scalability due to the infrastructure less constrained although COM components available, but the development of some special functions (such as file upload), not from the built-in support and need to seek control of third-party controls.

![ASP.NET architecture diagram](image)

Figure 2. ASP.NET architecture diagram

2.3. MFC technology analysis

MFC (Microsoft Foundation Classes) is referred to as the Microsoft Foundation Class Library, is the Microsoft implementation of a C++ class library, the main package of most of the windows API functions, VC++ is developed by Microsoft C / C++ integrated development environment, the so-called integrated development environment, that is to say and it can be used to edit, compile, debug, and instead of using the rotation operation of a variety of tools greater flexibility. VC also refers to its internal compiler, the integrated development environment must have a compiler kernel, such as DevC++ one of the compiler kernel is gcc. MFC in addition to a class library, or a framework, a new MFC in the vc++ project, the development environment will automatically help you generate many documents, while it uses the mfcxx.dll. XX is the version that encapsulates the MFC kernel, so you in your code can not see the original SDK programming in the news cycle, and so on, because MFC framework to help you a good package, so you can concentrate on considering the logic of the program you, and not the time programming to repeat things, but because it is a generic framework, no best targeted, of course, they also lose the flexibility and efficiency. But the MFC package is very shallow, so the loss of efficiency is not.

3. Design and implementation of the system

The user first login the system, the user is required to log on to the super user. You can add and modify user information in the user information panel. Click the view button to display a list of users in the
current user database, the user can not operate on the database, but you can design the Virtual Museum of physical education in the middle of the module. In this paper, the development of the Digital Museum of the development of the sports virtual museum system, can be easily created to meet the needs of users of the sports virtual museum. Sports virtual museum system is divided into three modules, the user and heritage database management module module is mainly for the heritage of the database and user database operations. Module can add or delete a cultural heritage to the database, or can modify the relevant information has been stored and set the level of heritage. Module one also realized the user role of the input, delete and modify the information, you can also set the level of user roles. The design module of the Virtual Museum of physical education is the design of the two dimensional plan of the virtual museum, and the user can get the available cultural relics according to the level of the user's role.

Users on the panel outline appearance Museum two-dimensional graphs, choose local image as a virtual Sports Museum walls, ceiling, floor, booth of the texture, the cultural relics is placed on Sports Museum virtual two-dimensional graphs, sports for virtual museum files are generated. Sports virtual museum browsing module (module three) read the analysis module two generated VM files, through the VM OPENGL file description of the Virtual Museum of sports drawing out. Virtual Sports Museum two-dimensional graphs of information recorded in the document, as well as cultural relics placed information and walls, ceilings, booth, floor texture information, module reads the information and by OpenGL, draw out the virtual museum for sports, users through the keyboard interactions can be browsed to roam in the Virtual Museum of sports[5].

4. Conclusion
The virtual museum system that we developed is simple and easy to use. For a user who does not understand any computer knowledge, it can also be easy to create a virtual museum. And the creation of the virtual museum files, other users can also use the virtual museum browsing module random access to other people or their own has been established by the virtual museum. User rabbit color to modify, where the user roles to modify the main include user information to add, delete, modify. User's information mainly includes the user, the user's name, the user's login password, user's grade and so on. At present between multiple clients on a virtual museum of planar map design did not set a good coordination mechanism, in the future work, the virtual museum plane is divided into a plurality of blocks, each user of divided blocks of layout, each other does not conflict with each other.

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