Research on the Development of Information Resources in Computer Network Architecture

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Abstract: With the changes in people's living habits and styles of working, information resources in the computer network architecture play an increasingly important role. The level of the development of computer network information resources affects the development direction of various industry sectors. In this situation, all kinds of resources of information development should be actively integrated and managed, and a perfect information database should be established to make the sharing and opening of network information resources become the dominant characteristics, giving full play to the greatest value of information systems. This paper discusses the development of information resources in the computer network architecture.

1. Introduction

The computer network is the product of the development of the times. It is a fusion of computer technology and modern communication technology. The concept was born in the 1950s. The emergence and application of computers have a profound impact on people's work and life and have penetrated into many aspects of the technology field, and people have gradually transitioned to the era of knowledge information characterized by digitization and networking [1]. In recent years, the development of information resources has come to the stage of comprehensive utilization and management. This evolutionary speed and development model have a positive effect on the utilization efficiency, and new social needs are derived from it. It is in this context that information resources in the computer network architecture have developed.

2. System design of the integration of computer network information resources and computer resources

2.1. The connotation of computer network information resources

The computer network information resource is the so-called virtual information that specifically uses a computer as a storage carrier and uses a computer network to aggregate traditional information. The entire information includes not only the information itself, but also various resources associated with the information, such as human resources, equipment resources, technical resources and so on. In a narrow sense, computer network information is information that exists on the Internet and does not include information in the LAN. The most critical aspect of the development of network information resources is the information itself, which plays a role in the entire link. At present, due to the development of information technology and the rapid changes in social and cultural forms, network information resources show new features compared with traditional information resources[2]. It is more complicated and cumbersome in terms of structure and quantity. These new changes put forward higher requirements in the choice of development methods.

2.2. Characteristics of computer network information resources

2.2.1. Digital storage

In the computer network, the storage of various information is transformed from the traditional text storage to the current network storage, and the main form of storage is electromagnetic signals.

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This not only saves a lot of storage space for information, but also makes the development and utilization of information more convenient and fast. The data the user needs can be directly obtained by computer search. Moreover, the network information is classified and saved in a modular manner, and the same type of similar information is uniformly saved.

2.2.2. Fast propagation velocity

At this stage, China is in the era of knowledge and information explosion, and the value of information and the timeliness of information are closely related. In this situation, network information maintains the characteristics of timeliness. Because of the rapid development of the network, it has become a common sense of people to access information from the network, and it is also an important channel for the use of information resources. The past passive information propagation methods were replaced. More and more people began to enhance their own value through the development of network information resources, narrowing the time difference between information release and information utilization[3], making the use of information resources more valuable and more efficient.

2.2.3. High sharing

In the network era, the time and space requirements for the development of information resources are relatively low. The various information that is ubiquitous in the Internet is not limited to the time and space to provide access to people in the local or in all corners around the world. As long as you have access to the Internet, you have the conditions for using resource information and you can obtain network information from it. The sharing is improved.

2.2.4. Information quality is uneven

The sharing and openness of network information allows anyone to easily request and save information via the Internet. In the absence of strict quality control and management, the quality of information can not be guaranteed without strict editing and auditing. The bad information in the network environment is rapidly disseminated. A lot of useless information is flooding the network, forming a complex and cumbersome world of information resources. It is not easy for users to search for high-quality information in a huge amount of information, which is a hindrance to the efficiency of development and use.

2.3. System design scheme of resources integration

In the process of information system operation, because of the lack of interoperability required for work, the compatibility on various information is also poor, resulting in a very serious situation of duplicate development and duplicate reports, which greatly increases the unnecessary workload. It is an inevitable trend of the development of information technology to realize the integration of information resources. Therefore, it is the focus of current research to use computer system software to integrate information resources. The specific business application in the example used in this paper is based on the unified data model to complete the generation and reading of relevant data reports. The original database can also store data in physical database in any way, and eventually present it to users in the form of XML documents. (See Figure 1) As the user's business process in using the system, the modules at different functional levels are divided into three modules: data acquisition, database generation and business application. The user can call them efficiently by means of the coordination service module. All system function services for the user community include registration, coordination and basic hierarchical services, and they are unified and integrated to form a while for users. Users can find the corresponding resource application service according to their own system function usage requirements. The business integration of power resources and the call for the basic services to interface parameters are achieved by the fully combined call for the interface services to the underlying services.

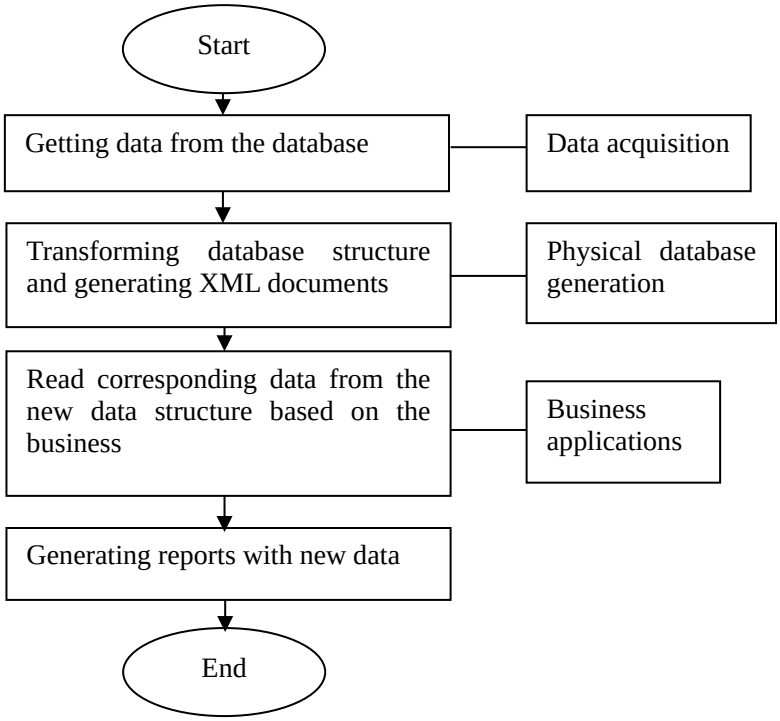

Figure 1 The Partition of Data Service Layers

The coordination service calls the data acquisition service. After making a specific request to the basic service, the related data service is read and the data object is returned through the coordination service module, and then the obtained related data is saved in a certain type of file. The categorical data is stored in the original format before integration. The returned objects are also used as multiple small data class objects. After that, the local service is effectively coordinated, and the functional combination is assembled to form a complete functional object. Calling the generation services of the physical database to transfer the relevant base class information to the underlying data object class. The basic service generates XML documents to satisfy multiple types of class objects, and implements the assembly of multiple XML to generates XML data files on the basic server. The business application service is invoked, and the uniformly generated XML document is read in the database, and the corresponding report is generated in time, and the data is returned to the report generation according to the coordination service eventually. As a variety of basic services, basic class services can effectively integrate related basic services, and achieve different business categories hierarchically.

3. Effective measures for information resource development in computer network architecture

3.1. Unified planning and joint construction

There is no unified legal system to manage the network, so it becomes confusing in the order and mode of information resource development. In the face of a large number of information resources with complex content in the network, we should adhere to the strategy of unified planning and joint construction. First of all, different types of information should be uniformly classified, and consistent standards should be used together to ensure the rationalization of network resource development. Secondly, the development and utilization of network resources should adopt a joint and co-construction approach, gathering elite talents from all walks of life to solve problems encountered in the development of information resources and to ensure the smooth implementation of information resource construction projects. Finally, the development of network resources must adhere to the method of farm-out. Establishing appropriate responsibility systems for different regional modules. The state administrative departments should continuously purify the network environment to give a pure land for information resources and establish a resource development and

utilization center.

3.2. Increase the intensity of the development of network information resources

As the main staff of network resources development, the government is not only responsible for the specific management work, but also should reflect its own actions from the following aspects. First, the government should increase financial support for the development and utilization of network information resources, and increase the financial input required for specific modules in the premise of comprehensive and in-depth understanding of network information resources. We can learn this from the experience of western developed countries, learn the advanced financial and investment methods [4], and transfer it to the development of network information resources. Second, the government can formulate relevant preferential policies to ensure the enthusiasm of technical personnel for network information resources development. For example, by reducing the industry tax rate, more funds will be concentrated in the development of network information resources. Finally, the construction of the network information database is the main task of the government. It is necessary to establish a database in management in order to effectively use high-quality information, thus meeting the needs of different groups.

3.3. Attach importance to the research on the development technology of network information resources

The development technology of network information resources is the basic premise to improve the quality and efficiency of utilization. According to the types of technology currently used, it mainly includes the following. One is push technology. The push technology specifically refers to a publishing technology for presenting various related information to the search user by automatic ejection windows and transmitting the demand information to the users when they are browsing for the specific information. When using this technology, the intelligent server will classify the information according to its own judgment and finally provides them to the user for choosing. The second is intelligent replacement technology. When the user does not express his or her own needs, the user's thoughts are guessed, and then the relevant data information is sent according to the predicted result. At this stage, this technology is mainly used in information resource navigation to provide services for search pages. The third is the meta search engine. This search technology directly enhances the actual effect of information retrieval when using multiple search engines to achieve the user's search needs in the user interface [5].

3.4. Improve the access threshold of information resources

The information in the the computer network architecture exists to meet the actual needs of users, which has a certain practicability. Faced with the uneven information data in the current network environment, different information resources should exert the actual effect of the difference. In order to achieve the purpose of improving the quality of development, strict restriction and review should be carried out according to the quality, source, characteristics and usage standards of the information. Only from this purpose can the establishment of a perfect screening standard be of practical significance. At present, the authenticity of network information resources is difficult to distinguish, the source channels are different, and the safety hazards occur frequently. The effective way to solve these problems is to improve the access threshold of information resources [6].

4. Conclusion

In summary, with the rapid advancement of information technology in the new era, computer networks have also begun to be widely used in various industries and plays a vital role. The development of information resources using computer networks as material carriers has become increasingly popular. Specifically, it refers to the collection of traditional information resources stored in computers, which is called virtual information. The search process of getting any information needed from the network information resources is the process of developing information resources. Based on the reality, this paper first gives a brief overview of computer

network information resources, and secondly proposes an effective strategy for information resource development in computer network architecture, hoping to be of some reference significance and reference value.

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