

Construction of Industrial Design Resource Sharing Mechanism Based on Cloud Service

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ABSTRACT. *With the continuous development of social economy and science and technology, we ushered in the information age. Under the background of this era, new requirements are put forward for the development of industrial design, which requires that industrial design should be based on the technology of cloud service in the process of development, and then establish a technology resource sharing platform, so as to promote the further development of industrial design. This is the inevitable trend of social development, and also the inevitable requirement of the construction of industrial design technology resource sharing platform. Therefore, this paper will discuss the construction of industrial design technology resource sharing platform based on cloud service, and then put forward practical measures for many problems existing in the construction process, so as to make industrial design innovate continuously in this era background, and then develop healthily and continuously.*

KEYWORDS: *Cloud service, Industrial design, Shared platform, Strategy*

1. Introduction

In recent years, the trend of economic globalization is deepening and deepening, and the world economy is increasingly becoming a whole in the process of development. Of course, the world competition is also increasing, and the competition among countries is becoming increasingly fierce. With the development of information technology, the competition situation is accelerating. In this era, the design resources of manufacturing enterprises are often unable to meet the diversified needs of customers. Therefore, we should combine the technology of cloud service and industrial design organically, so as to build a sharing platform of industrial design technology resources. The construction of this platform is conducive to giving full play to the advantages of the user oriented technology resource platform, so as to provide users with one-stop cloud design technology service experience. This is the inevitable trend of social development, but also the inevitable requirement of industrial design development.

2. Overview of Cloud Services

2.1 The Meaning of Cloud Services

Cloud service refers to the need to develop relevant services based on the Internet technology in the development process. At the same time, the delivery model can also be embodied in the development process. Cloud service refers to obtaining the required services by expanding on demand through the network, which can be it, software, Internet related services, or other services. The emergence of cloud services means that computing power can also be circulated through the Internet as a commodity.

2.2 Features of Cloud Services

Cloud services are distributed on a large number of computers through the Internet, rather than local computers or remote servers. The operation of enterprise data center will be more similar to the Internet, which enables enterprises to reflect the needs of resources in cloud services. Users can access computers and storage systems according to their needs, and then meet their needs[1].

3. Advantages of Cloud Service in the Construction of Industrial Design Technology Resource Sharing Platform

3.1 Scale Economy

By using the technology of cloud service, the industrial design developers can provide better, cheaper and more reliable applications compared with other developers in terms of providing infrastructure. Be able to utilize all resources of cloud services without requiring industrial design to reinvest other resources. The application of cloud service technology in the construction of industrial cloud service technology resource sharing platform can reduce costs and improve economic benefits.

3.2 Easier to Upgrade

The sharing platform of industrial design technology resources based on cloud services makes upgrading easier. Because upgrading a cloud application is easier than upgrading traditional desktop software. Only need to upgrade the application in cloud services, application features can be updated quickly and smoothly, which

greatly reduces the workload of developers. At the same time, it also makes the work efficiency continuously improve, thus saving a lot of time, manpower, energy, and improving its economic benefits. Therefore, cloud service plays an important role in the construction of industrial design technology resource sharing platform[2].

4. The Current Situation of the Construction of Cloud Service Industrial Design Technology Resource Sharing Platform

4.1 Lack of Adequate Financial Support

From the current development situation, the cloud service industrial design technology resource sharing platform needs to invest some funds in the construction process, and then provide economic support for its better development. However, from the current development situation, industrial design lacks sufficient funds in the construction of science and technology resource sharing platform, which hinders the construction of cloud service industrial design resource sharing platform and delays its work process. At the same time, it also reduces the efficiency of the construction of industrial design technology resource sharing platform. Therefore, we should take all measures to mobilize all the advantages of resources and provide financial support for the construction of industrial design science and technology resource sharing platform[3].

4.2 Lack of Professional Technical Talents

The construction of cloud service industrial design technology resource sharing platform needs professional technical talents. That is to say, professional technical personnel play an important role in the construction of cloud service industrial design technology resource sharing platform, which is in the core position. However, from the current development situation, this platform lacks professional technical talents in the construction process, so that the cloud service industrial design technology resource sharing platform cannot give full play to the talent advantage in the construction process, and then cannot provide strong knowledge and skills support for the construction of this platform. To a large extent, this hinders the construction of the industrial technology resource sharing platform for cloud services, making resources unable to be shared. At the same time, it can not make full use of industrial design resources, which greatly hinders the development of industrial design. Therefore, relevant departments should pay attention to this problem, realize the seriousness of this problem, take all measures to attract outstanding talents to invest in the development of this field, and better contribute to the construction of cloud service industrial design technology resource sharing platform, which is the inevitable requirement of the development of industrial design technology resource sharing platform[4].

4.3 Platform System Defense Level is Relatively Low

The construction of industrial design technology resource sharing platform for cloud services, that is to say, through the Internet technology, so that its resources can be shared. Of course, this puts forward higher requirements for the development of cloud service industrial design technology resource sharing platform. This platform is required to improve the level of system defense in the process of construction and development, avoid the invasion of virus, reduce the risk, so as to make the platform run continuously and stably. However, from the current development, some cloud service industrial design technology resource sharing platforms have relatively low level of defense in the process of construction and development, so that illegal elements and network viruses can invade. To a large extent, this has laid a hidden danger for information leakage and brought many negative effects for the healthy and sustainable development of industrial design. Therefore, it is necessary to improve the level of system defense, provide a safe and stable environment for the operation of the platform, and promote the further development of industrial design[5].

5. Strategies for the Construction of Cloud Service Based Industrial Design Technology Resource Sharing Platform

5.1 Adopt Scientific and Reasonable Measures for Financing

With the rapid development of global economy, information technology and Internet technology come into our life. At the same time, the market competition of information technology is becoming increasingly fierce. Science and technology greatly promote the development of new media. In this situation, the resources of enterprise design can not meet the diversified needs of customers, but with the emergence of cloud technology, this phenomenon has changed gradually, and makes the function oriented engineering design and the industrial design which pays attention to the appearance together. In order to effectively build and develop the cloud service industrial design technology resource sharing platform, we need to provide sufficient financial support for it, which requires the government to provide financial support for the cloud service industrial design technology resource sharing platform through financial expenditure. Of course, we can also solve the problem of lack of funds through other financing channels, so that the construction of industrial design science and technology resource sharing platform can obtain sufficient sources of funds[6].

5.2 Attract Outstanding Talents

The rapid development of cloud services has a certain impact on the transformation of manufacturing industry. In the field of industrial design, the transformation from single design service mode to whole industrial chain service innovation is the trend of future development of design service industry. In order to support this value chain innovation service mode, the fourth industry chain oriented industrial design is proposed Fang cloud service platform: through resource

integration, demand integration and optimized configuration on demand, it can realize the distributed heterogeneous and dynamic intelligent matching of platform resources, and effectively support the transformation and upgrading of manufacturing industry. In order to effectively build the cloud service industrial design technology resource sharing platform, we need to give full play to the advantages of talents and improve the quality of industrial design. This requires relevant departments to take all measures to attract outstanding talents. Of course, in order to enable excellent talents to invest in the construction of cloud service industrial design technology resource sharing platform, we can take all measures to attract excellent talents through good treatment and rich salary scale, give full play to the advantages of talents, provide strong skills and knowledge support for the construction of cloud service industrial design technology resource sharing platform, and improve its quality continuously High[7].

5.3 Improve Defense System Level

With the rise of virtualization technology and the concept of cloud computing, cloud computing has been closely related to people's lives. How to introduce the cloud computing model into the industrial design science and technology resource sharing service platform, so that science and technology resources can be shared quickly and simply, and give full play to the advantages of cloud computing, to realize that science and technology resources provide the driving force for science and technology innovation, and to build the ability of science and technology resource cloud service. It is necessary to discuss cloud computing technology in the construction of industrial design technology resource sharing service platform, so that science and technology can better serve the development of industrial design, so that this platform can be fully constructed. In order to effectively build the cloud service industrial design technology resource sharing platform, it is necessary to improve the level of defense system. This also means that the protection level of this platform needs to be improved. At the same time, relevant staff also need to improve the awareness of security protection, regulate their own behavior, and improve the ability of network security protection. It is also necessary to improve the network system level capabilities so that the cloud service industrial design technology resource sharing platform can run in a safe environment. Of course, the firewall and other devices can also be used to increase its ability to resist risks, reduce risks and reduce virus intrusion. So that resources can be shared, industrial design healthy and sustainable development[8].

6. Conclusion

With the continuous development of social economy and science and technology, new requirements for industrial design are put forward. In the development process of industrial design, in order to better comply with the development trend of the times, meet the needs of social development, and better meet the needs of the people, it is necessary to build a sharing platform of industrial design technology resources

based on cloud services in the development process, so that resources can be shared. At the same time, it also makes industrial design develop healthily and continuously. Of course, it needs to improve the defense system of industrial design, give full play to the advantages of talents, improve the quality of industrial design, speed up its progress, and make science and technology better serve the development of the people.

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References

- [1] Zhou Ao (2015). Research on Key Technologies of high reliable cloud service supply [D]. Beijing: Beijing University of Posts and telecommunications.
- [2] Guo Liang (2014). Research on Key Technologies of cloud manufacturing service platform for machining [D]. Chongqing: Chongqing University.
- [3] Yang Guocai (2012). Research on Key Technologies of agricultural and rural information cloud service platform integration [D]. Chongqing: Southwest University.
- [4] Peng Haoke (2018). Semi automatic construction and application of product boss model [D]. Zhejiang: Zhejiang University.
- [5] Lu Yu (2018). Research on modular product configuration design based on cloud platform [D]. Zhejiang: Zhejiang University.
- [6] Li Xiaobin (2015). Research on optimal allocation method and technology of machine tool equipment resources in cloud manufacturing environment [D]. Chongqing: Chongqing University.
- [7] Wang Yan (2011). Study on the hierarchy of power system information architecture [J]. Journal of Beijing Printing Institute, vol. 19, no. 6, pp. 62-65.
- [8] Wang Shouping, Peng Xinling, LV Qinglin, et al (2018). Overall framework design and implementation of Puguang intelligent gas field [J]. Natural gas industry, vol. 38, no. 10, pp. 38-46.