Application of Software Development Based on Computer Technology in Sculpture Design

Shui Liu¹, Jiao Huang²*  
¹Academy of Arts ,College of Humanities & Sciences of Northeast Normal University  
²International Academy,College of Humanities & Sciences of Northeast Normal University  
  
*Corresponding author e-mail: huangjiao@chnenu.edu.cn  
  
Abstract. With the development of science and technology, computer technology has also been developed rapidly. Computers have been applied to all aspects of people's lives. Computers have changed people's living habits and habits. To people's life and the development of the industry has brought great convenience. Now computer technology has also been applied to sculpture design, promoting the development of computer sculpture technology, computer virtual simulation technology has been widely used in sculpture, its development is also very rapid, in this article, we elaborate on the application of computer software in sculpture design.  
  
Keywords: Technology Development, Computer Technology, Sculpture Design  
  
1. Introduction  
How to judge the development level of a city? We can distinguish from the political, economic and cultural aspects of the city. If a city develops better, the quality of cultural life and the taste of people's life in this city will be higher, that is, the urban public art cause. In urban public art, cultural sculpture is a very important part. Sculpture is an important symbol of the image display. Urban public sculpture even condenses the course of urban development and has a profound influence on the rhythm of urban development and people's life. With the development of cities in China, the government pays more and more attention to the cause of urban public sculpture, and the humanistic spirit contained in sculpture can promote the spiritual construction of urban residents. With the continuous progress of technology, various industries in China have been widely developed, some developed cities also attach great importance to the cultural construction of the city, they also pay more and more attention to the sculpture design of the city. Many regions even regard urban public sculpture construction as the business card of city display. In the current development process, the image of sculpture is also very changeable, sculpture style, subject matter, production methods have changed, the domestic sculpture industry is in full swing, but in general, there are still some problems in the design of urban public sculpture in China, mainly in the following aspects:  
  
1.1. Lack of systematic planning  
First of all, the urban sculpture in our country lacks the overall planning. We all know that the
sculpture of the city belongs to a part of the city, and the sculpture should also be included in the design plan of the city, and the design of the sculpture should be consistent with the overall planning of the city. Before sculpture design, we should make a whole planning and design of sculpture, which requires the design and planning of urban public sculpture production. At present, with the acceleration of urbanization construction in China, the number of urban public sculpture works is increasing. At the same time, it is not conducive to China's urban construction planning, hindering the process of urbanization construction in China.

1.2. Lack of creativity and conciseness in spiritual culture
In the past two years, urban sculpture construction has played a vital role in the development of the city, sculpture design has also developed very rapidly, and the sculpture design of our country is also in its infancy. So the sculpture design of our country still needs to develop continuously, sculpture building still has a long way to go. In this process, many cities in the design of public sculpture, designers will learn from the design of other cities, so many sculpture design is the same replica, sculpture has no characteristics. Many public sculptures look much the same. We all know that every city has its own development history and process, and the culture of the city is different. In the process of sculpture design, we should maintain the essential difference. The cultural creativity in public sculpture works should also maintain the essential difference. Blind imitation can not only not reflect the cultural connotation of their own city, but also lead to the waste of public resources and bring people wrong ideological guidance. Each city has its own unique cultural epitome of development, so some sculptures can only appear in a particular city. Designers should consider a large number of poppies in the design, designers can not look at the sense of fashion, but also to understand the development history and urban culture of a city, designers should deeply understand the development history of the city, And design reasonable sculpture to refine the cultural essence of this history, in order to avoid face engineering from the source. In order to improve the present situation of face engineering, cities also need to accumulate certain cultural experience, so that designers can design and produce better urban public sculptures[1].

2. Application and embodiment of 3D technology in contemporary urban public sculpture design
The development of sculpture in our country is relatively late, and there is still a big gap between China and foreign developed countries. 3D technology is also a technology that has become popular in the past two years. In the initial development process, some sculptors began to try to use computer and software for 3D digital painting and 3D modeling. Compared with the traditional sketch drawing method, the imaging of the works made by 3D digital technology is more direct, accurate and beautiful, which has obvious advantages over the traditional drawing method [2]. 3D technology has been widely used in urban sculpture design. In the process of designing sculpture, many cities will present it in a 3D three-dimensional way, render the effect in the real scene, and even simulate different background elements. In order to increase the agility of the final sculpture. Chongqing's "Qingqing Mountain City" with "Yuanyuan Garden" are three D of technology to participate in the success of urban public sculpture [3].

This new technology accelerates the city sculpture design development, brings the vitality to the city sculpture design, we all know that the traditional sculpture way has the very big shortcoming, we do not know the sculpture overall appearance to start the construction, this will lead to a lot of sculpture consumption of human, material and financial resources, but the have little effect. 3D digital technology can not only avoid the above risks, but also reflect the public's demand for urban public sculpture to the maximum extent, and give full play to the aesthetic function of urban public sculpture in public resources. Therefore, this technology has been widely used in urban public sculpture in China [4]. This new technology can also bring designers a lot of new ideas, help designers to produce inspiration, 3D technology effectively broadens the diversified development of sculpture works. When there were no three D of technology before, many sculpture works could only show the effect roughly
by drawing. With the large area use of the three D of technology, the sculpture works can be presented more vividly in front of the designer in the early stage. It is beneficial to complete the designer's artistic conception from the angle of tool and discretion. Besides, 3D technology also brings many benefits to the development of sculpture. 3D digital technology also provides a wider experimental space for urban public sculpture designers. The sculpture industry has now been used in many parts of our country, through the relevant data we can get the following chart, as shown in Figure 1:

![Figure 1](image)

**Figure 1.** Sculpture product design distribution map.

3. **Virtual Simulation Technology for Urban Sculpture Design and Production**

In the process of traditional public sculpture design, we can only roughly present the appearance of sculpture in written form, so many details can be well grasped. There will be great differences between the designed sculpture and the actual construction sculpture. Sculpture can not reflect the designer's design effect. In addition, the final physical model also has obvious defects. The application of virtual simulation technology in urban public sculpture design can maximize the design work to "flexibility". The sculpture can also make the public feel the artistic conception [5].

Using computer simulation technology to design sculpture is a new direction of urban construction in China. This technology can also show the high development of information technology in China. At the same time, the application of this technology can maximize the advantages. A few days ago, in the study of a university in Japan [6], relevant scholars invented a virtual sculpture practical system, participants can create, rebuild and transform sculpture works according to their own preferences. Once listed, the operating system will soon cause violent repercussions in the surrounding countries, bring more convenience to the design of sculpture, and accelerate the development of urban public sculpture design in China. It can be seen that the design and production of urban public sculpture in the new period is due to the high development of information technology, for the construction of urban public sculpture to bring more intuitive progress. The rapid development of sculpture business has also brought spring to our country and great economic benefits to our country. The units shown in the figure are all ten thousand yuan, and the specific benefits are shown in Figure 2:
4. Conclusion
Through the elaboration of this article, we have a fuller understanding and understanding of sculpture design under computer. The development of computer technology has brought great benefits to the development of all aspects of our country. Especially in sculpture design, computer technology speeds up the progress of sculpture industry. 3D technology can also show sculpture more vividly. Computer technology promotes the good and rapid development of urban public sculpture in China. The development of computer software is also more convenient 3D technology, accelerate the development of 3D technology [7].

References
[1] Zhou Lizheng. A Return and Transcendence of Contemporary Urban Sculpture Development Science Public (Science Education),2018(09):184.
[2] Zhu Xiaowen. Current situation and Prospect of Urban Public Sculpture in Contemporary China [J] Beauty and Times (Urban Edition)2017(08):6-7.
[3] the embodiment of Chen Lixin's regional culture and humanistic spirit in public sculpture [J] Art Education 2017(2):247-248.
[4] Li Chuanwen. Current Situation, Problems and Solutions of Public Sculpture Creation and Furnishing in China [J]; 2 Qilu Art Garden 2015(06):34-40.
[5] innovative application of traditional arts and crafts in modern design [J] packaging engineering 2017,38(8):214-217.
[6] Zhao Hongyun on the innovative Application of Chinese traditional Arts and Crafts in Modern Design [J] Art Education Research 2016(3);:98.
[7] Research on Contemporary Sculpture Design and creation from the Perspective of inheritance and Development of Tian Qing traditional Culture [J] Journal of Harbin University ,2019(4);105-107.