

# Chapter 81

## Study on the Popularity Phenomenon of Digital Media Art

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**Abstract** City public art exists in city's public places, based on the self function and the connotative requirement of city. The public art media under the influences of digital age refers to those introduced digital content, mainly like the modern city public art with virtual display and the city public art with the controlling of computer to achieve certain interactive functions. With the development of the times, artistic form and media materials are also changing. The selection of media materials in city public art under the background of the digital age becomes increasingly diverse. Media materials which involves the integration of the latest achievements in digital technology, will comprehensively apply a variety of imaging, inductive devices. Thus, makes the interaction of public art more prominent, meanwhile it provides a strong material and technical support with the development of public art in the future.

**Keywords** Digital age · Digital media art · Popularity

### 81.1 Introduction

Digital art refers to various forms of independent art esthetic value and the basic characteristics of interaction and the use of the network media produces all kinds of digital and information technology since the twentieth century, it is undeniable

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that technological development has changed the world by many, including art [1]. Two powerful forces are to promote innovative art: First, is changing concept originated in quantum mechanics and relativity of natural science and other ideas, such as modern philosophy and social science and postmodernism [2, 3]. Second, it is scientific development tool changes from the media and network technology innovation. Effect on the innovation of the art can use the media. Fresh artistic experience of artistic creation and development trend of social life. The media were also compiling Therefore; the media change is one of the most profound historical events. The emerging digital media, not only provides an unprecedented strength, improve the means of communication with the new artistic forms, reflect the needs of social life, is to the scientific theory and social thought, but also improves the artistic research of innovative ideas and methods. Humanity is in an era, the development of high-tech. Fast and the accumulated knowledge of the past 30 years of sum is the equivalent of the past 2,000 years. We must admit that the development of science and technology develop a new batch of land for human civilization.

We are familiar with digital art and nothing like this; it is gradually developed in order to meet the needs of the audience with the development of social forms of multi-dimensional [4, 5]. The separation of science and art from the kind of phenomenon is a particular stage of human civilization. This separation does not only mean different areas of activity, vocational skills, and knowledge, but also means that different ideas of world. Arts and sciences have certain difference, but two ways to see the world. For example, it is accepted, art is a kind of ideology, but it is a controversial said science is a thought-form. However, the difference between art and science will not affect infiltration and fuses. Art cannot lack rational support, interference, and help. Artistic imagination can become orderly, free, can become the artistic esthetic emotion; Art creation can become corule and freedom and rational and scientific reason in particular. This reason is to provide largely on the development of science and knowledge structure. Art can be prosperous and different from intervention to support by science. Unlike traditional public art work is no longer entirely content by artist and creation of control rights are master audience. In the interactive process, artists will create rights to the audience's voluntary esthetic object ca play ads like a fish in water sharing.

## 81.2 Digital Media Art

Human evolution, the art is born. The "science and art is the two sides of a coin". Lee said, Tsung-Dao famous physicist in the world won the Nobel Prize, and also Zhenning Yang famous physicist in 1957. This means that art and science are the same and the indivisibility of each other. Now, computer technology and the rapid development of network technology, make technology a realistic tool and communication carrier for artistic creation.

The faster the speed, the development of science and technology, the more obvious digital art shows us its unique artistic form. Art is to adapt to the demand of people and evaluate, was born in certain social condition. Digital art, with emerging forms of mass artistic development is depending on the spread of digital media and the Internet. No doubt, because its work of art, show before the audience, the more influential . Digital art is really different from traditional art in communication than strong post-modern art features. This is generally thought of digital art is a kind of new art, which is based on modem. Today, we can clearly see the difference of digital art form and others. Like literature, painting, music, dance, although these art also depend on technology, for example, the application documents and printing technology, art and application of theory is music (musical instrument Angle of the manufacturing technology and application). But this is not to say that their direct product technology, because technology itself is external and acquired for them. On the other hand, literature, painting, music and dance can exist without this so-called technology, and digital art can't. Digital art, we know, is a kind of new art form, establishes new media is the carrier, dependence and means. Therefore, digital art concentration of science and technology. The birth and development of digital art is in the direct application of scientific technology revolution achievement in the field of art. It marks the beginning of human art into a new era. Digital art is close combination of information communication technology and new artistic conception. With digital technology and new media technology conditions, it was multidisciplinary integrated and media's vivid appearance, humanism and science and technology. It has a double attributes of science and humanities. It is an emerging art and scientific and cultural connection.

Digital art is according to the development of science and technology and culture media industry has become a new field of human creation. It provides an unlimited potential and high efficiency of the artistic creation and enriching its content, expands the space through the computer technology, such as input, storage, and process. Digital art is a kind of art form that is difficult to transfer performance traditional art form. It is a kind of burgeoning art; rely on the first productivity—science and technology.

Digital art does not change the nature of art. It is a kind of expansion form and traditional art. In fact the art language expressed traditional art into a new art form, is understandable, it is easy to use of high-tech means. It draws the distance between the other artists and audience, gradually formed a powerful integrated vector and makes it become a kind of independent art form. It is different from other art digital art element guidance. As a new category of art, art forms of digital art, far more than the traditional art. In addition to visual factors, such as image, pictures, text, digital art also have a voice, picture, audio, interaction, etc. And use of these basic visual elements, unlike other types of art, by direct processing, treatment, but the decisive technology tools, and modern high-tech tools—to deal with. As a result, because the tool itself is involved in the process of art creation, digital art marked with a technical brand, rather than single skills. Technology creates unprecedented new forms and new feeling of art. Therefore, digital art has a strong technical colorific art form in basic science and technology. And it is a

comprehensive new concept of the overall system, artistic style, and a set of artistic creation and digital technology at an organic whole, is relative to each other on scientific technology. This is true, digital art will increasingly become fully, as an important part of the art world.

### **81.3 The Development of Public Digital Media Art**

In this context, as of the digital age, the rapid development of information technology, the new media art, digital media and network platform, prosperity speed is brilliant all over the world.

Public art collection rich media materials and performance testing of the context of the digital age, it brought more interactive features and public works of art, creative rights provided more audience to participate in the work of development, in public art material mainly elaborated from two aspects to traditional media advertising media materials under the background of the digital age.

Technical progress pushes forward the development of media. Media material is the carrier of public art content. It is the bridge to transmit language information and symbols for public art. Media applications not only present the external beautiful work, but also reflect the connotative meaning of the artist's. Meanwhile, media materials are the product era and works reflect background.

Material selection in public works of art creation should consider material performance, material, and environmental match. The following section compares the form. As shown in Tables 81.1, 81.2, and 81.3.

### **81.4 The Application of Media Materials in Public Art Under the Background of the Digital Age**

#### ***81.4.1 The Application of Imaging Materials***

##### **81.4.1.1 The Application of LED Imaging Media Materials**

Millennium Park, completed in July 2004, is located in a Michigan place; this is in the busy downtown Chicago. The famous architect Frank Gehry designed park. Covers the area of 24 acres and costs 500 million dollars. People are fully interactive of art wisdom digital technology in its ads in Millennium Park.

##### **81.4.1.2 The Application of Project-Imaging Media Materials**

“Vector altitude” is a huge digital interactive art by Mexican artist, Rafael Lozano-Hemmer and could which carries on the projection. First, their work was

**Table 81.1** The analysis of media materials' types

	Material and environment
Metal material	<ol style="list-style-type: none"> <li>1. The conductor of electricity and therm</li> <li>2. With the surface of color an fluster</li> <li>3. Good ductility</li> <li>4. With lattice structure and formed by metallic bonding</li> <li>5. Intermetallic compounds ca be made</li> <li>6. More active chemical, oxidation ad rush easily</li> </ol>
Stone material	<ol style="list-style-type: none"> <li>1. Fire resistance</li> <li>2. Freeze resistance</li> <li>3. Higher compressive strength</li> <li>4. Acid and alkali resistance, corrosion resistance, no rust occurred</li> </ol>
Timber material	<ol style="list-style-type: none"> <li>1. Light and tough</li> <li>2. With the natural color ad patter</li> <li>3. With good property of insulation against electricity and therm</li> <li>4. Deformation and inflammable easily</li> <li>5. Processing ad finishing easily</li> <li>6. Plasticity</li> </ol>
Ceramic	<ol style="list-style-type: none"> <li>1. High strength and fully dense</li> <li>2. Not absorbing water, wear resistance</li> <li>3. Acid and alkali resistance, fireproof</li> <li>4. Clean easily and durable</li> </ol>
Glass	<ol style="list-style-type: none"> <li>1. Brittle material</li> <li>2. Higher hardness</li> <li>3. Highly transparent</li> <li>4. Poor properties of thermal conductivity and electricity</li> <li>5. Relatively stable chemical properties</li> </ol>
Organic material	<ol style="list-style-type: none"> <li>1. With solubility, thermoplasticity and thermosetting</li> <li>2. With insulation</li> </ol>
Composite material	<ol style="list-style-type: none"> <li>1. Excellent chemical stability</li> <li>2. Antifriction and antiwear, self-lubricating</li> <li>3. Heat and creep resistance</li> <li>4. Noise elimination</li> <li>5. With electrical insulation</li> </ol>

**Table 81.2** The analysis of media materials' performance

	Material application
Metal material	More used in indoor-outdoor sculpture and installation
Stone material	More used in indoor-outdoor sculpture, fresco and installation
Timber material	Used in indoor-outdoor sculpture and installation according to different timber characteristics
Ceramic	More used in fresco
Glass	Relatively less use than other materials, more used in indoor
Organic material	Indoor-outdoor sculpture, fresco, installation and public facility
Composite material	Wider used in comprehensive application of various materials

**Table 81.3** The analysis of media materials' types

	Media materials' types
Imaging media	LED, projection, touch screen, etc.
Photoelectric media	Impulsive speed of light, laser, etc.
Inductive media	Touching material, inductor, etc.
Composite media	Comprehensive application of materials such as imaging, photoelectric, inductive, etc.

built to let more than 80 million people from 89 counties in the two-week long-term involvement in celebration square millennium encounter Mexico. Rafael Lozano-Hemmer and shy; 18 RS-controlled hemmer installed on the roof of the searchlights square-round buildings. This radio sports mode, controlled by computer and people all over the world could not enter the website GUI application and production mode, thus the interaction can be realized. In this project, Rafa's video Lozano-Hemmer said, "Vector altitude has established a new public innovation relations connection control technology, urban landscape and family and distance". Bought the application of imaging media—in this work really deliver construction site audience art.

#### **81.4.1.3 The Application of Photoelectric Materials**

Since the industrial age, light, and electricity have the product's age. Their application becomes necessary energy in daily life. However, they are used for lighting in public space city in the first place. Wit the development of the Times, some artists began to try the current urban public art photoelectric material, the influence factors, such as increased technical level, in art colleges hassles. Install solar panels public art, it is located in Mueller Austin, village, Texas, United States, using photoelectric material. Environmental protection is a low carbon economy and could; Theme is affected by a couple of stylist and Lajos Maggie heder from Massachusetts harries.

Into the digital age, information technology and human wisdom get increasingly development. More advertising have more digital works using photoelectric for public provides a media and keep in the needs of the development of keep pace with The Times, reflecting the social life of the status quo.

#### **81.4.2 The Application of Inductive Materials**

##### **81.4.2.1 The Application of Touching Inductive Materials**

Far infrared sensor with your finger on the position of magic window on the screen get advertising recognition, and its physical coordinates logic coordinates computer screen instructions and control through a specific algorithm makes the system

control functions of moving advertising logo on the big screen finger or some similar finger and put into use.

#### **81.4.2.2 The Application of Other Sensor Inductive Materials**

Complete an interactive installation works of art; it needs the input device information interaction. That is to say, it is information collection. Therefore, sensor applications will require, such as photoelectric sensor, including infrared light, CCD image sensor, digital sensors, including grating sensor, induction sensor, contact encoders, piezoelectric sensors, and etc., also including superconducting sensor, intelligent sensor etc., all kinds of sensors.

Multimedia interactive job monitoring device, , produced by a Canadian artist David Rokeby two parts, take away by showing the huge projection on the wall. On the left of the exhibition space, manhunt tourists common trace system from the ground, wall, and other Angle.

#### **81.4.2.3 The Application of Composite Materials**

New digital materials such as imaging, photoelectricity, inductive comprehensive application of composite materials, it is highly integrated art and technology.

The application of composite material is combination of the video, audio, hypertext text, control technology, which links with its large variety of elements within a couple of possibilities. Every time, according to the different work of participants or creator could lead to different results; this brought endless charm of digital public art interactions.

Glowing works interactive public art “volume”, this shows up in London’s Victoria and Albert Museum (V) and playing computer games and finished joint you a (Manchester united) and compointsix visual artist. Public works of art has been placed in London’s Victoria and Albert Museum John Pitt garden. It has also been demonstrated in China, Hong Kong, and Taiwan. “Quantity” is a sound-light installation work, from a series of beams, becomes the beautiful scene of John madejski garden. “Incredible” has very good function interaction characteristic; it emits a series of visual and auditory mutagenesis according to the human body movement. When your body movements are interacted on each other “quantity”, you will enjoy the special enjoyment, sound, light. For each person’s “innovation” the sound and light is different.

### **81.5 Conclusions**

At present, we criticized for lack of digital art works Humanistic care. At the same time, we also confirmed that value Digital art characteristic. Because digital art make modems feeling on a global scale to the spread of culture through multiple

the media, leads to a new concept of ethics and human spirit using digital art, and has brought new challenges: that is how to live Style in modern society. This shows that digital art the culture connotation is permeated with the support and the support Technology. Artists continue to learn good nature from personal integrity and cultural knowledge level.

## References

1. Xu Z, Feng W (2010) Research on interactive design of city public facility. *Package Eng* 10:23–26
2. Graham Coulter-Smith <http://www.installationart.net>
3. Chicago Public Library <http://digital.chipublic.org/>
4. Fondation-Langlois <http://www.fondation-Langlois.org/>
5. DAC China Digital Art <http://www.dacorg.cn/>