Digital Promotion of Ethnic Art based on Virtual Reality Technology

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Abstract
The rapid development of digital and information technology brings new opportunities for the protection of national art. The combination of national cultural protection and modern high and new technology has broken through the traditional protection methods, and is convenient for people to browse, store and spread at any time. In this paper, the authors analyse the digital promotion of ethnic art based on virtual reality technology. The digital application can not only provide digital storage and cloud space permanently, and can provide more extensive publicity and promotion platform, to make the culture with national characteristics inherited, and let more people know and understand the national culture, and promote the development of national cultural industry and regional economy.

With the development of digital, ethnic culture is facing great changes.

Key words: Digital promotion, Ethnic art, Virtual reality, VRML

1. INTRODUCTION

Digitization directly promotes the process of "globalization", which is undoubtedly a new form of human civilization. The appearance of television has changed the traditional social and cultural communication, and the modern culture is constructed and reconstructed by the outside information(Denghua,2015). The modern dissemination of various cultural forms has fundamentally reconstructed the parameters of time and space. Media technology can currently in the global scope to rapidly re determine the symbolic effect, this new media technology has reconstructed the social life, so that we do not need to be an expert to participate (Qiang, 2004; Daiyong,2014). We are now living in a world of overlapping, which eliminates the separation between culture and the field. The main ethnic art groups in the television culture communication in the context of reconstruction of their own traditional social life, in the modern information and culture under their traditional sprint behaviour patterns, values, philosophy of life are quietly changing.

In the digital process of the development of ethnic culture, ecological is facing a huge change, the younger generation grew up in the digital culture environment, willing to accept the film pop dance, instead of the traditional ethnic arts and culture are poorly understood(Laurence,2014). The impact of television, mobile phone, Internet and other new media culture of the past ethnic stories, family heritage is like The wind puffs the clouds away(Zhou,2013). In addition, traditional houses, costumes, festivals are overbearing "modern convergence" wave of disappearance and retreat of minority culture modernization is an unstoppable process, the ethnic area of natural ecology, life style with the development of the society have made big changes(Qian,2013). Under the background of Digital Arts and culture communication have great impact on the traditional ethnic culture consciousness, the propagation speed is far greater than the people's cultural introspection and consciousness development, with strong ethnic characteristics and geographical and cultural characteristics of ethnic culture is gradually disappearing(Yang,2011). As a materialized form of ethnic culture, the ethnic art of the survival and development, evolution or inheritance, profoundly affected the development of civil society evolution, ethnic art and the disappearance of the decline, due to the evolution and development of ethnic culture, ethnic life form. The protection and inheritance of ethnic art should be combined with the reality of today's social development.

2. THE APPLICATION OF DIGITAL TECHNOLOGY IN THE INHERITANCE OF ETHNIC ART

2.1 Ethnic art digital exhibition hall
Digital exhibition hall construction is not only conducive to the protection and dissemination of ethnic costume art, but also can enhance the digital platform of ethnic culture art influence and authority, will both professional and artistic digital exhibition hall directly affect the site click rate and the effect of publicity. The construction of digital exhibition hall should give full consideration to the visitor's experience, to "people", to create a comfortable and convenient display space, pay attention to knowledge and interest, both art exhibits and programs, to provide better service for browsing and the viewer's experience.
The application of virtual reality technology in digital art exhibition ethnic costumes can provide real experience for the viewer, by the high performance computer through visual, auditory and tactile effects on people, which have personally on the scene feeling, in the interaction of sound at the same time, can help and inspire people to think. The clothing information as an object, in the computer in the form of digital production, coding, storage, and mutual transmission in the network, through decoding to restore the adults can feel the subjective representation. Especially the virtual reality modeling based on 3D (VRML) technology, with three-dimensional scene and model to restore the traditional ethnic costume structure, material and color, the audience can see the reality no longer exists or not full dress art picture in the digital processing technology of virtual exhibition hall, combination of sound, light and electronic technology simulation the real scene in the process, will give the viewer with a new visual and auditory enjoyment, let the participation experience more clothing culture, clothing craft and clothing form in the real space in the virtual exhibition hall. Taiwan Aboriginal Digital Museum Network Exhibition integration of virtual technology, using 3D technology to restore the traditional life style, Aboriginal costumes process the real scene, impressive, and through the cultural scene rendering will give an impression of vast imagination.

Figure 1. Digital exhibition hall

The virtual simulation is also well-known as the VR technology and simulation technique, is to use a system that was an invented to imitate another real system technology. Due to the development of computer technology, simulation technique is gradually, become the mathematical reasoning, scientific experiment after the third type of basic method of objective laws of nature in human knowledge, and is developed into human knowledge, the transformation and the creation of the objective world a generality, strategic technology. Virtual Reality technology, VR for short, is a comprehensive integrated in the 1980 s the rise of new technology, involved in a graphics that can be applied in computer, an interaction technology between human and computer, sensor technology and the artificial intelligence, etc. It is made up of the hardware plus software, and all kinds of sensor 3D information of factitious environment, a virtual environment, should be the one that can simulate the living world in a realistically way (even non-existent) people are into the environment, feel “in its” at once, and can be operated in person, naturally interact with the virtually environment.

Figure 2. Virtual reality technology

2.2 Costume art database
The construction of costume art database includes three parts: the image information base, the document information base and the research library. The construction of the image database uses the computer graphics processing and video processing technology to collect and sort out the data of the ethnic dress. Because the clothing art of digital image acquisition and storage, exchange and retrieval are required to handle large amounts of data, the processing speed and storage requirements are very high, so in some way from the image information given in the introduction of a simplified data expression by image compression technology, thereby reducing the amount of data. Ethnic costumes image information base suggestions on clothing construction techniques and materials, detailed records, such as clothing, in the elderly female young female clothing, children's clothing, men's clothing, patterns and other classified records. The combination of static image recording and dynamic image recording, to show the ethnic costumes, on the one hand, to provide image data for display and promotion; on the other hand, it also provides researchers with detailed image data.

The use of digital library document information processing method to effectively improve the document creation, management and maintenance efficiency, ethnic costumes in the art of clothing materials, clothing materials, records of clothing and other related documents through the use of scientific management and utilization be arranged, more conducive to the protection of ethnic costume art materials and efficient use.

Figure 3. Database management system

3. DIGITAL WAY OF ETHNIC ART

Digital protection provides a lossless, easy to spread data for the cultural heritage, but many for the protection of Yao clothing not from the perspective of cultural heritage and innovation to start, there are some repetitive or more commercialized protection model, Did not play the cultural heritage of their own vitality, and then little influence. With the arrival of the creative era, the digital protection and promotion of the Yao nationality's clothing culture need to break through the static records, repeat the simulation of a single model, so that protection and creativity to enhance the combination of development, to explore the inner meaning of the Yao nationality, to expand the national culture Of the value-added space, glowing new cultural and artistic value, to create a meet the aesthetic needs of the times a new national cultural products, fine, so that the connotation of Yao clothing culture become a propaganda, survival, long-term value carrier.
3.1 Digital innovation as the core of development

Yao nationality costumes digital protection in the camera, video, recording, recording and other digital collection and digital storage work level, this basic digital protection means also preserved a large number of Yan Yan extinction of Yao clothing culture resources, with the field of wind collection research. First-hand information, the use of text, recording, video, digital multimedia and other digital means, the existing and Yan Yan disappeared and has the historical value of the Yao clothing costume area, process, process materials, pattern symbols, subject matter, style style Characteristics and other information to carry out real, systematic and comprehensive records and induction, the establishment of a systematic, complete digital information database and digital network, so that the network to save, spread, display, share the multimedia digital information resources, the establishment of related data sharing platform. For any professional areas of demand, easy to retrieve, to achieve resource sharing, for the latter can be stored, availability and editable to provide protection, which is the entire "digital upgrade" basis, safe, complete, long protect the verge of disappearing precious resources.

Although the digitization of Yao nationality tribe cost is based on digital information technology, it involves the knowledge, interdisciplinary and inclusiveness of multidisciplinary aspects such as engineering, ethnology, art and even communication. It needs to be engaged in theoretical research, creative creation, Post-production and management, communication and other different areas of the compound talents to join in, build a more optimized structure, the system more complete work team, cultivate practical talents, focus on strengthening the training of qualified personnel, to solve the field of cultural and technological integration The need for high-level talent shortage, which the future development of a great help.

3.2 Digital protection
For the survival of the Yao nationality clothing culture status, through field field visits to collect accurate
digital resources, and the use of digital technology for recording, storage and management; on the existing
southwest of ethnic costumes cultural resources, with digital cameras or cameras for accurate text, graphics
Image, audio and video data and other data collection; combined with modern scientific and technological
means of different periods, different regions of the Yao costumes for digital mining, the construction of Yao
clothing materials, divided into different categories. The use of digital cameras, digital mapping, digital cameras
and other digital equipment, Yao nationality of the survival of the culture of the status quo field shooting,
measurement, video, etc. to collect, through field field visits, interviews, physical measurement storage for a
comprehensive, professional text library, Photo library, audio library and video library and other data platform.
The contents of the collection to the distribution of Yao clothing, branches and the legacy of ancient costumes,
national characteristics patterns, the traditional handicraft process as the main body. Regularly a year or a few
years on the Yao nationality dress culture of the development of the situation, changes in the detailed data
records and updates, especially the change is particularly important, the need for regular database improvement
and update to form the Yao nationality clothing culture dynamic data management, including construction and
management of Yao dress culture of data protection.
The use of planarization technology to achieve the Yao nationality clothing culture of historical data, the
status quo, the future development of information for digital processing and storage. First of all, we will
examine the real record picture resources and text resources of the Yao nationality costume culture, and use the
digital image processing software or other software to deal with the pictures, and strive to achieve the original
protection; on the other hand, you can use the clothing, Cultural relics and other assembly and handling of the
formation of 'visualization of the dynamic graphics, or the bribery Yao costumes culture history, stories, legends
and other graphic aspects of the animation scene design and display.

![Figure 6. Digital image processing software](image_url)

### 3.3 Digital network sharing platform

The establishment of independent network of Yao clothing network, set up an independent website, a
comprehensive coverage of the network, from the Yao nationality of the history of clothing culture, and now the
future development of 11 show, so that people around the world involved, without time and space constraints,
Raising the Thinking Consciousness of Yao Nationality’s Costume Culture Protection, Inheritance and
Development. In the resource database, people can browse their own resources of interest, different Yao
Department of clothing classification, the introduction of traditional handicrafts and accessories culture analysis
in which. (Including the relevant historical background; clothing introduction and description; related research
results and other text for the media reference material), picture library (to Shan Yao, Pingdi Yao and other Yao
Department of clothing, accessories category, The main category of jewelry), action library (folklore, dance,
etc.), video library (clothing culture cannot use the picture to show some of the audio library of national music,
language, professional commentary), and set up online resource sharing Interface, the user can collect,
download and other operations. Expand the propaganda degree and attention degree of the Yao nationality dress
culture, collect the valuable opinions and suggestions put forward by the society at all levels to protect the Yao
nationality costume culture, and provide the stronger support for the protection, inheritance and development of the Yao nationality dress culture in the future.

The rapid development and improvement of digital technology has promoted the development of cultural industrialization, the combination of digital technology and artistic creativity, resulting in digital art, network art and visual art, real-time interactive dynamic to replace the traditional text of the static, the culture The spread and development into a new field. It is mainly manifested in three morphological features: one is the traditional paper media, different from the electronic media; the second is the electronic media; third is the emerging digital media. The three can be transformed between each other, they are in the original tradition of protecting the national cultural heritage on the basis of the traditional national cultural heritage to go further and higher. For example, we are familiar with many of the film works using digital technology produced special effects lens, computer animation, network art works, etc., for the national cultural tiger heritage digital provides a new development model.

Figure 7. Digital network sharing platform

4. DIGITAL INHERITANCE AND INNOVATION OF ETHNIC ART

Digital and information technology for the rapid development of the protection of Yao clothing brought new living environment and new development opportunities, the protection of national culture and modern high and new technology, break through and beyond the traditional way of protection, easy to people at any time to browse, Storage and dissemination; with Yao clothing culture has a long history, broad and profound, enough to lead the trend of fashion. Nowadays, the combination of digital technology and national costume protection is a new idea to protect national culture costume. It integrates mining, protection, inheritance and utilization as one, realizes the technical foundation and operation possibility, promotes the innovation of cultural industry and Development, and promote the Yao nationality clothing culture protection and inheritance development. The use of digital not only can provide a permanent digital storage cloud and space, and can provide a broader publicity and promotion platform to effectively prevent the commercial development or destruction, with national characteristics of the national costumes are inherited, the purpose is better The protection and promotion of Yao clothing culture, the national dress culture to the world, so that more people know, understand the Yao clothing culture, and promote the national cultural industry and national regional economic development.

4.1 Digital video protection

The development of film art makes us realize the importance of science and technology, through digital shooting, artificial effects processing, virtual and other technical means, to the audience brought endless visual wonders, creating a number of amazing peculiar landscape phenomenon, through Ancient and modern, dreamlike virtual world of the lens, from the limitations of the actual situation and material constraints, the performance of more vivid and realistic. The use of digital visual technology, so that the viewer is like immersive, empathy, can be planted environment, enhance the national culture can be perceived. Through the special treatment and landscape manufacturing technology to create a real object with exactly the same props. On the protection and inheritance of the Yao nationality's clothing culture, the author also uses the modern media technology, mobile multimedia radio and television, Internet radio and television, digital multimedia broadcasting, mobile newspaper and other emerging forms of communication, and give full play to the set of space-time, diversity as one audio-visual Technical advantages, to create a realistic atmosphere of history and
culture, to show the unique artistic charm of Yao costumes, to expand the publicity and visibility, so that it has continued to develop.

4.2 Digital animation promotion

At present, the emergence of animation, film and other cultural patterns, so that animation art and national culture closely linked to the traditional performance techniques into the most advanced, the most advanced science and technology, so that the development of digital art for the form of Creative ideas, into the national theme or performance techniques, to provide all-round, full sense of the new media, to expand the animation in the national cultural heritage protection and heritage applications. The State Administration of Cultural Heritage began to host the cultural heritage animation contest, more emphasis on the culture and technology in a creative industry on the cultural heritage of the protection, popularization and promotion of the important role. The application of digital animation innovation, so that the spread of national culture more intuitive, realistic and vivid, for the national cultural heritage heritage and innovation to provide new ideas and methods, and opened up a new path. With the motion capture method, the use of sensors to record human limb movements, to capture the human movement of the trajectory and data, not only to obtain fast data, vivid and can produce many complex actions, so that data collection more focused, effective and adopted, rooted Local culture, broaden the space of animation creation, different forms of animation ideas can be better traditional handmade skills and clothing culture preservation and heritage, not only can enhance the visual dynamic beauty of animation works, and can enhance the relationship between man and animation Information transfer process.

4.3 Interactive display art

How to make the audience understand the artistic connotation and content behind the national culture in the inheritance and development of the national cultural heritage, which is also the most important part of the display of the national cultural heritage, and the digital interaction design is one of the problems The new art form, so that the audience and experience to participate in, interactive, experience, wholeheartedly into one, instead of the traditional text and graphics show the boring sense of the rich, the rich culture of national culture, but also to mobilize the enthusiasm of the audience Participation, for different national culture for innovation and display. Through the classification and sharing of network system resources, the protection and inheritance of Yao nationality costume culture resources, and put forward the use of digital film and television, digital animation and interactive display and other emerging digital art media means to make it better protection and heritage. With the development of the times, the progress of science and technology and the digital innovation, the digital technology basic protection and digital art innovation inheritance, broaden the traditional national culture protection and inheritance new vision

5. CONCLUSION

The combination of digital technology and the protection of national cultural heritage is the future development trend, and has a certain feasibility and operability, this research will promote the protection and inheritance of national cultural heritage. In this paper, the digital material and resources of the Yao nationality dress are collected and compiled, and the digital protection means and ideas are put forward. According to the actual situation, the digital network sharing platform is made. Although the professional knowledge is limited, there are many problems in the production, But for the Yao costumes digital mining, protection, heritage and innovation played a certain role in the demonstration, Yao nationality clothing digital upgrade can make more people understand the most original ecological ethnic customs, through digital means and protection methods to achieve network sharing, for the Yao The survival and development of clothing brings new directions.

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REFERENCES


