Research on Ontology of National Culture Protection and Inheritance Based on Big Data of Internet of Things

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Abstract. National culture (hereinafter referred to as NC) is the precious wealth created by the masses of all nationalities in the long-term development, which is the basis of a nation's survival. Therefore, we must strengthen the protection and inheritance of NC, which will better carry out a variety of cultural self-confidence. Through the Internet of things (hereinafter referred to as IOT) Big data (hereinafter referred to as BD), we can highlight the cultivation of cultural consciousness of cultural holders. With the rapid development of information technology, the IOT has become the main direction of future development, which will be applied in many fields, such as logistics, transportation, agriculture and animal husbandry, medical treatment, energy and so on. Therefore, we must strengthen the protection and inheritance of IOT BD and NC, which will help us better carry out the research of NC ontology. Through the concept of ontology, we can better protect the NC, which will become an important direction of the future development of NC. First of all, this paper analyzes the role of the IOT in the dissemination of NC. Then, this paper puts forward the mechanism of cultural protection with national characteristics. Finally, some suggestions are put forward.

Keywords: Internet of Things, Big Data, National Culture, Protection and Inheritance

1. Introduction
NC is the driving force of a nation's survival and development. The economy and society of the minority areas in China have made considerable progress [1]. However, in the process of social development, some national traditional cultural resources are facing a lot of pressure. Therefore, we must strengthen the protection and inheritance of NC, which will become the main driving force of social development in the future [2]. The IOT can create huge economic benefits, which will also create their own ideological and cultural forms. Therefore, we must strengthen the IOT in the protection of NC, which will create a new space for spiritual and cultural life [3-5]. IOT technology makes the way of Ideological and cultural communication more diverse, which will cause more complex content. Through the BD of IOT, NC will face new opportunities and challenges, which will ensure the security of NC. Therefore, we must accelerate the development of IOT applications, which will better build the management platform. Through the BD of IOT, we can use the media communication ability of new technology, which will enhance the productivity, inheritance, competitiveness, innovation and cohesion of China's ideology and culture [6].
2. The role of IOT in the dissemination of NC
The IOT plays an important role in the dissemination of NC, which is also related to the characteristics of the IOT itself, as shown in Figure 1.

![Figure 1. The role of the IOT in the dissemination of NC.](image)

2.1. More thorough perception
We can combine cultural products with information technology, which will divide the whole field into three parts: information acquisition, information transmission and information processing. People can skillfully use computers to carry out the information processing of cultural products. Through the IOT technology, we can take the self perception of cultural products as the core purpose, which can improve the information acquisition ability of cultural products. The IOT extends from the communication between people to the communication between people, people and things, things and things, which forms an all inclusive objective physical world. People or things under the technology of IOT pay more attention to the perceived goal and environment, which is to let the physical world actively inform human beings [7]. Therefore, the IOT is a system in which people interact with the objective physical world. The two processes of information processing and transmission of cultural products have been fully developed, for example, modern museums, which can be displayed in an all-round way through text, photos, video and other communication methods. Through the IOT technology, the cultural products of museums and archives will be diversified in the network world. The database system takes into account the needs of all aspects of society for collection information and archival information. Through online archives, we can go to the archives to use archives for research, which will be more convenient and fast. The era of IOT is not only about display and experience, but also the most important application means is to provide information access to cultural products. Therefore, the main purpose of the combination of the IOT and cultural products is perception, and the core is socialization [8].

2.2. More comprehensive connectivity
According to the latest forecast data released by the Internet Data Center (IDC), "by 2020, there will be 31 billion internet connected devices in the world." People will experience continuous and ubiquitous Internet computing. In the era of IOT, the interconnection of cultural products will be reflected in two aspects. On the one hand, it is the vertical interconnection of the life cycle of cultural products; on the other hand, it is the horizontal interconnection of the market application of cultural products. In the initial stage of production, cultural products will be labeled with a unique electronic label, which will be written into the electronic label successively with the life cycle of the product [9]. Through electronic tags, we can gather information into the IOT database. Therefore, consumers can easily query all the information of this cultural product, which strengthens the safety. Through the IOT technology, we can
improve the actual efficiency of production and circulation. Through the IOT, we can realize the interconnection between different types of cultural products [10].

2.3. With more in-depth intelligent

The sensor in the IOT system is a device to detect, feel and transform external signals, which can transform the analog information of nature into digital information. Therefore, devices in the era of IOT will become more "smart", which can have more precise sensing ability of temperature, light, gravity, location and other indicators [11]. The emergence of IOT technology in the community will give the grass-roots management a comprehensive and modern information platform. All kinds of advanced cultural products will also be widely spread at the grassroots level with the help of the IOT, which will greatly improve the humanistic environment of the current community. Through the IOT technology, we can shape a new community ecology. Harmonious community is the cell of harmonious society, which will strengthen the integration of culture and information [12].

3. The mechanism of NC protection

3.1. Live protection

NC is mostly living, which is active in the material life and spiritual life of various nationalities with strong local flavor. Our protection of traditional culture is mainly static. In recent years, in the aspect of cultural protection, there is a trend from static protection to active protection. We must let the NC live in the people's life today. By giving it new vitality, we can be sustainable protection and development. Most NCs live in people's real life, and many characteristic cultures still play an important role in people's production and life, which requires that the protection of NC is not static. Therefore, NC is dynamic, developing and changing, full of vitality and life flavor, which must continue and inherit their life course and customs. If the life process is not well continued, these characteristic cultures will automatically decline, and if the life customs are not effectively inherited, these characteristic cultures will disappear. The epochal and innovative nature of NC also determines that protection should not be a closed and conservative static protection, but an open and progressive dynamic protection.

3.2. Integrity protection

NC is often not a single existence, which can be composed of numerous specific cultural matters and cultural factors. Therefore, NC has integrity. In order to achieve good protection effect, we must respect the inherent richness of NC. We must pay attention to the protection of characteristic culture itself, which can separate its environment. In recent years, the national cultural industry has brought serious impact on the fragile ecological environment, which has also caused damage to part of the cultural ecology. In practice, the integrity of culture is not well protected. Through top-level design and special planning, we can put the protection of NC into the harmonious development of ethnic areas, which will protect people living in culture and create conditions for sustainable development.

3.3. Innovation is the means of protection

Culture needs innovation, innovation is not to separate the national cultural tradition. NC is a living system, just like other things. Therefore, we need continuous development to maintain our vitality. Without cultural innovation, there will be no cultural change. Without cultural innovation group, there will be no comprehensive cultural change. Cultural innovation is the aggregation of factors and conditions of cultural change, which have different types. On the basis of maintaining the core of national traditional culture, we must better carry forward NC, which can continuously develop and innovate, and give it fresh vitality. By exchanging new brilliance in the new era, we can integrate into the contemporary and life, which is a major issue. By taking the elements of NC as materials, we can adapt to the aesthetic and consumption needs of the times, which is to maintain the core of national traditional culture. Through modern creativity, we can inject new connotation of the times, which will
create a national cultural boutique. Through the innovation of NC and art forms, we can bring new vitality to NC, which will give enlightenment to the innovation of national traditional culture.

4. Protection and inheritance of NC based on Internet BD

4.1. Combine NC with economy
Cultural industrialization and economic development is a more respected development mode in the digital era, which is also different from the previous innovative development mode. In recent years, China has vigorously advocated cultural industry innovation and entrepreneurship development, which has also introduced relevant preferential policies. We can combine the traditional NC with the development of tourism industry, which will innovate the way of tourism industry development and cultural protection. With the improvement of our national living standard, the per capita income will increase. Therefore, the consumer demand of the masses no longer meets the basic requirements, which is to improve the quality of life. We must strengthen the protection and inheritance of NC, which needs to be combined with the local economy. Through cultural entrepreneurship, we can protect and publicize Guangxi NC in a relatively new way, which will obtain greater economic benefits. At the same time, we have also contributed to the development of NC.

4.2. Combining the inheritance of NC with digitization and informatization
Digitization and informatization are the trend of the times, which is also a more sustainable development. The development degree of information technology in China has also been improved, which provides technical support for the digital development of NC. The inheritance and development of innovation culture in the digital era. Through Internet technology, we can establish national cultural protection association, which can provide cultural activities. With the help of information technology, we can establish the data resource database of national cultural projects, which can collect and input the historical sources of various NCs. Through the IOT technology, we can apply it to the propaganda of NC, which can increase the spread of culture with the characteristics of instant and rapid communication.

4.3. Building IOT management platform
China should build the IOT management platform, which can enhance the competitiveness of Ideological and cultural. The successful operation of the IOT is inseparable from the huge and comprehensive technology management platform, which can collect and classify all kinds of sensor information. Through the IOT technology, we can achieve targeted transmission and utilization. At the same time, we also need to establish the rectification system and restraint mechanism of policies and regulations, which will realize the effective management according to law. Through the construction of management platform, we can break through industry barriers and information islands, which will achieve national regulation and world coordination. However, the overall flow of culture is like water flow, which flows from high to low. Therefore, we must ensure the safety of our ideological and cultural communication in the IOT. On the one hand, China must establish a perfect IOT security system, which can filter and purify the spread of ideology and culture. Through the IOT technology, we can prevent harmful information, which can make the national cultural ideas and values to be smoothly spread. At the same time, we need to vigorously enhance the national character and international competitiveness of China's ideology and culture, which can use the high position of national civilization to occupy the commanding height of cultural development. By letting the NC "go out", we can win respect and dignity in the fierce international competition.

5. Conclusion
The government strongly supports the protection and inheritance of NC from resources and policy environment, which will make a more superior development environment. Through the BD of the IOT, we can reduce the pressure on the development of NC, which will be more conducive to the future inheritance of NC. Through BD of IOT, we can combine technological innovation to develop NC.
Through economic protection, we can better promote the national cultural soft power, which can also enhance the national confidence of the public.

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