Research on Urban Intelligent Tourism Management System Based on System Management

Yuan Gao

Yunnan College of Business Management, Kunming, Yunnan, 650106, China

email: 256284535@qq.com

Abstract: With the rapid development of the economy, the current world infrastructure is moving in the direction of "wisdom", and information technology needs to become more "smart" to deal with the complex unknown world. In this context, the concept of a smart city was proposed. At the same time, the concept of smart city provides a new management concept for urban tourism management. The rapid development of social economy has put forward higher requirements for tourism, and smart tourism has emerged as the times require. Many scenic spots and tourist cities have achieved remarkable results after implementing smart tourism and smart city construction. With the development and application of digital technology, it has brought revolutionary changes again and again for the development and value enhancement of tourism industry. Many scenic spots of Grade 4A and above in our country are devoted to the construction of intelligent scenic spots. "Smart Tourism" is a brand-new proposition. It is an extension and development of tourism informatization. It is a highly intelligent tourism informatization that makes tourism management more efficient and convenient and creates greater value for tourism enterprises.

1. Introduction

Tourism is an information-intensive industry. Tourism informatization plays an important supporting role in the development of tourism and has increasingly become the core competitiveness to win the advantage of global resource allocation [1]. At present, tourism elements such as "eating, living, traveling, buying and entertaining" have applied advanced information technology on a large scale, and the tourism industry structure has been effectively and reasonably optimized [2]. In order to accelerate the pace of tourism development and further enhance its industrial position in economic and social development. At the same time, to better promote the integration of tourism and the new generation of information technology [3]. In recent years, the National Tourism Administration has always regarded smart tourism as a key work closely related to the overall development of the national tourism industry to promote [4].However, China's current tourism informationization development and management are relatively lagging, tourism resources are fragmented, and can not fully meet the needs of society and tourists [5]. Under the background of the maturity of enterprise management information system technology, China's urban tourism can promote and promote the development of national smart tourism through the construction and practice of smart tourism management system.

Smart tourism is a higher-level and more comprehensive guiding strategy for tourism information construction, and it is also a reflection of the value of tourism information construction [6]. With the theme of smart tourism, we will guide the construction of tourist destinations such as smart tourist cities and scenic spots. The urban smart tourism management system is fully designed on the basis of fully researching and understanding customer needs, and using information technology to strengthen the management and service functions of the tourism industry [7]. Develop application systems such as travel agency management platform, hotel management system, digital scenic area system, tourism supervision and management, and form a comprehensive public service system for collaborative office and information sharing [8].In particular, the development and integration of tourism resources and products should be strengthened in three aspects: intelligent

service, intelligent management and intelligent marketing, so as to promote information technology to drive tourism to transform into modern service industry [9]. It is the only way to improve the modern science and technology management level and service level of travel agencies, tourist attractions, tourist hotels and other tourism enterprises, innovate the development mode, and promote the sound and rapid development of tourism [10].

2. The Purpose and Significance of Urban Intelligent Tourism Management System Research

2.1. Purpose of system management research

Tourism informatization is a new concept that has been popular in recent years. It is based on the information industry. Informatization has a strong role in promoting the tourism industry and can provide tourists with more information. Due to the improvement of people's living standards, tourism is also more inclined to choose intelligent ways of tourism. This kind of tourism method is embodied in the fact that there will be more intelligent elements in tourism, such as "enjoy the intelligent tourism service" and "enjoy the intelligent tourism management". Actively developing smart tourism and taking "smart tourism" as an important component of "smart city" has become a widely accepted concept, but at present domestic tourism development faces many problems. The status of tourism industry and the image of tourism city need to be improved. The level of tourism product development is insufficient, and innovation and publicity are insufficient. The level of information construction in tourism industry needs to be improved. The "wisdom" of tourism management, marketing and service is not high. Lack of a unified tourism resources database. There is a lack of "one-stop" information platform for tourism public services.

2.2. Significance of intelligent tourism management system construction

Through the construction of a smart tourism management system, the level of tourism public services can be enhanced and the service potential of the industry can be stimulated. It provides visitors with a variety of application services covering pre-tour, in-tour and post-tour, improving the tourist experience and improving the satisfaction of tourists. The integrated tourism management system must include at least the following functions: to realize the registration, rating and management of the scenic spots. Realize the management of tour guide registration, tour guide qualification application and basic information. Realize the basic information of the travel agency and the management of its business orders. Realize the functions of data collection through a third party, data analysis based on the data collection and monitoring of tourism hotspot information. So as to assist tourism management departments to obtain valuable information and provide basic data and scientific basis for tourism decision-making. In addition, it provides a complaint and suggestion interface for scenic spots, tour guides and travel agencies to facilitate the tourism management department to assess and manage their qualifications. Announcement management module is provided to facilitate ordinary users to know the latest tourism information.

3. Basic Framework and Function of Intelligent Tourism Management System

3.1. Basic system architecture

As a space carrier for tourism, the city is constantly adapting, adjusting and changing. This puts forward requirements for the city to adjust the structure and mode of its tourism supply system in a timely manner in the form of smart tourism. The tourism industry believes that smart tourism is a new form of tourism that provides services to the public, businesses and governments in the future. The city's smart tourism construction should achieve the three core objectives. First, it provides visitors with a more convenient and intelligent travel experience. Second, create an efficient and intelligent information platform for tourism management. Third, to develop tourism resources in depth, to enlarge the benefits of resources, and to build a city tourism culture. Considering the three major goals, most of China's current tourism platforms, whether they are tourism websites set up by local tourism bureaus or comprehensive profit-making tourism websites, adopt a B/S three-tier

structure model. The adoption of B/S structure in the management system provides support to multiple systems. As long as there is a browser, users can perform system access operations and realize cross-platform requirements.

3.2. System function module

The city mainly has functions such as service, management, coordination and innovation. As an aspect of urban function, urban tourism, especially urban smart tourism, should systematically integrate and develop tourism resources such as materials and information, and serve the government, the public and enterprises in a new form of tourism. According to different needs and functions, the urban smart tourism management system should be divided into scenic area management module, information advertisement management module, data statistics management module and system management module. The scenic spot management is responsible for the information management work of the urban scenic spot. The module returns the scenic spot information corresponding to the urban scenic spot to the mobile terminal user who sends the request. Information advertisement management takes the city smart tourism system on the mobile side as the object, and transmits relevant data based on the needs of surrounding areas and advertisements. Data statistics management is to carry out management work on the data of urban scenic spots for the analysis of data by observers. System management includes user management and resource management. User management involves user registration and login, storage and inquiry of various information, etc. Resource management is used for management of system resources.

4. Realization and Application Effect of Urban Intelligent Tourism Management System

4.1. Design and implementation of management system

Database design is especially important in the design and implementation of smart tourism management systems throughout the city. With database technology, a large amount of data in the system can be reasonably organized and stored, data sharing can be realized, and the high efficiency and security of data processing can be guaranteed. Each functional module in the system has a rich data field and type, and each business function in the system involves at least one data table, which highlights the importance of the design of the table structure in the database and the design between the master and the slave. Analysis of requirements shows that database tables need to be classified according to different functions. As the basic content of database development, database needs analysis is divided into structure analysis, data definition analysis and integrity analysis. Data tables involved in business functions shall include member information table, city scenic spot table, scenic spot information table, engine record table, member comment table, information table, etc. Take the member information table and scenic spot information table as examples to design the table fields, as shown in Table 1 and Table 2 below.

Table 1 Membership information form

Field name	Data type	Maximum length	Allow empty
ID	INT	8	F
USERNAME	VARCHAR	255	F
PASSWORD	VARCHAR	255	F
PHONE	VARCHAR	20	Y
QQ	VARCHAR	20	Y
EMAIL	VARCHAR	100	Y
LIKE	VARCHAR	1000	Y
LEVEL	INT	8	F

Table 2 Scenic spot information form

Field name	Data type	Maximum length	Allow empty
ID	INT	8	F
TITLE	VARCHAR	255	F
KEYWORD	VARCHAR	100	Y
DESC	VARCHAR	1000	F
TYPE	VARCHAR	100	F
ADDRESS	VARCHAR	300	Y
AREA	VARCHAR	100	F
GPS	VARCHAR	100	F
SPENDTIME	VARCHAR	20	Y
PHOTOS	VARCHAR	1500	Y

4.2. Application effect of management system

As a national key "national smart tourism pilot city", Beijing, Wuhan, Chengdu, Nanjing and other regions have rationalized the process of smart tourism construction through scientific smart tourism planning and management system design. At present, the urban smart tourism management system has been applied in the "city tourist assistant" mobile phone client, the smart tourism central management platform, and the smart scenic spot pilot project. From the practice of smart tourism construction in Beijing, Wuhan, Chengdu, Nanjing and other places, the results of the management system have achieved good social and economic benefits, and the demonstration effect is remarkable. Social benefits are reflected in the improvement of urban tourism functions, providing all-round services to tourists, improving tourists' satisfaction and enhancing the tourism image and reputation of the pilot cities. And open up wider market space for tourism and improve the core competitiveness of tourism. The demonstration effect can be embodied in linking up the development strategies of smart cities such as smart Beijing, smart Wuhan, smart Chengdu, and smart Nanjing, radiating the surrounding areas, and setting up a typical demonstration of smart tourism in the national scope.

5. Strengthening the Management of Urban Intelligent Tourism System

5.1. Improving access control inquiry system and credit system

In the scenic spot ticket management, you can use a card to replace the ticket and build a scenic access control system. Implement a card in the whole city scenic spot and implement a card annual ticket system. After purchasing a card, visitors will swipe their cards when entering and exiting the scenic spot, and implement full WIFI coverage in the scenic area. Local people in the scenic area still implement the free ticket system, but they must enter and exit the scenic spot through the intelligent identification system. A local channel is set up in the access control system to control access by face recognition or fingerprint recognition technology. At the same time, relevant government departments should also try to build a credit mechanism and points system. Those with good credit should have corresponding points, while those with uncivilized and dishonest behavior should have their points deducted. When the points reach a certain amount, you can enter the scenic spot free of charge, or join forces with other scenic spots. When the scenic spot reaches a certain amount, you can give free tickets to other scenic spots, etc. Through the establishment of a credit database to enter the credibility of tourists and businesses, the caught or reported flight and other dishonest businesses and uncivilized tourists should be included in the integrity file. Deduct credit points to resist uncivilized tourism.

5.2. Upgrading industry development and implementing humanized tourism service

Make full use of the statistics of the number of tourists in scenic spots and the number of tourists in tourist cities to build a smart management system, and use the big data and cloud platform to build a unified smart city or smart scenic tourism platform for accommodation, famous food and

entertainment in the vicinity of cities and scenic spots. Integrate and unify management to form a smart ecosystem of tourism. And use the marketing of this platform to bring a lot of traffic to relevant suppliers to help them market. In turn, the tourism economy of the entire city and the entire industry was promoted, and the tourism industry was upgraded. In addition, tourist cities and scenic spots should establish a unified and comprehensive service public number and portal, APP client and other systems, and can cover the entire city's scenic spots and scenic spots, folk customs, former residence, ancient residence, surrounding tourism, shopping, entertainment, accommodation and food, etc. Customized travel and virtual experience can be realized before traveling, navigation, tour guide, tour guide and shopping guide can be realized during traveling, and after traveling, full-course services such as travel sharing, interaction and evaluation can be carried out.

6. Conclusion

Smart tourism is a sub-module under the framework of smart city construction, and the construction results need to be incorporated into the system of smart city construction. Therefore, the construction of smart tourism cannot be separated from the norms, standards and support of smart city construction, especially the generation and subsequent interaction of big data, which is in the core position, all need to consider the standards of smart city construction. Smart tourism and smart cities should coordinate and link. It is difficult for the tourism authorities to take independent actions in terms of tourist safety, emergency rescue, scenic area environmental protection, supervision and law enforcement by the tourism industry, etc. It is necessary to unite other departments of the smart city to achieve linkage and collaboration through the smart city platform. The Tourism Bureau needs to realize the connection with the relevant department data through the cloud data of the smart city, and provide data support for smart tourism data mining and analysis. As the smart tourism management system is too large, it is necessary to further improve the design of the framework system. Make full use of existing hardware and software resources, tap the potential of the system, and make deeper optimization of the system.

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