Research on Key Technologies of Xi'an Smart Tourism Commonality

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Abstract: In recent years, with the emergence of smart tourism, the stable development of social economy has been promoted to some extent. Xi'an City vigorously promotes the development of smart tourism, and focuses on the key technologies of smart tourism commonality. This paper will elaborate on the design scheme of the key technologies of smart tourism in Xi'an, analyze the key technology modules of smart tourism common in Xi'an, and gradually optimize the system design scheme and system composition framework of the key technologies of smart tourism commonality, aiming to improve the wisdom of Xi'an and the key technical level of tourism commonality.

1. Foreword

Xi'an vigorously promotes smart tourism in line with the actual situation of current social reform, pays attention to research on the key technologies of smart tourism commonality, and effectively uses the advantages of modern scientific information technology, and will use wifi positioning module and broadcast communication module. The intercom module between the point and the point and the map display module are comprehensively researched, integrating the advantages of Xi'an's excellent tourism resources, formulating perfect strategies for the development of smart tourism, providing personalized services for tourists to adapt to socialist modernization. The actual needs.

2. Xi'an Smart Tourism Common Key Technology Design

2.1. System design

Smart tourism is to effectively integrate Internet of Things technology and cloud computing technology, and connect with corresponding mobile terminals to effectively obtain location-related information, with the service demand of tourists as the main body, and accurately display the information needed by tourists in tourists. In front of the company, the tourism resources are continuously integrated to provide personalized services for tourists. In Xi'an Smart Tourism Key Technology System Design, due to the diversity of aspects involved in the system design, in the actual design process, real-time, interactive, and guide maps should be classified into scientific integration and analysis. Reflecting the real-time nature, when the tourists are in different tourist locations, the advantages of the corresponding tour guide equipment can be fully exerted, and the pictures and text information required by the tourists can be accurately presented in front of the tourists, which is beneficial to the tourists to find the tour. position. Interactivity, through the form of human-computer communication, through a simple dialogue to help visitors to obtain relevant information on the attractions, thus providing personalized service for tourists. The classification of guide maps, due to the geographical differences between the attractions, the geographical location information of the attractions should be effectively presented in front of the visitors, so as to obtain the correct location information. When designing the design of the tour guide system, it is necessary to combine the information broadcast function and the intercom function according to the actual characteristics of the scenic spot, which is conducive to ensuring the smooth progress of subsequent research.

2.2. System composition framework

In the process of designing the key technology system of Xi'an smart tourism, the wireless signal

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is effectively integrated into it. The real-time detection of the scenic spot by sensing the change of the sensing information of different scenic spots can effectively realize the automatic video explanation, which is the perfect electronic tour guide system. The key link. The intelligent tour guide system involves many aspects, and in the actual design process, it must be effectively combined with the relevant extension equipment. The main function of the positioning base station is to provide specific location information for the tourists according to the actual situation of the scenic spot based on the wireless signal. The handheld terminal is a tour guide device that is managed by the tourists according to the individual needs of the tourists. The server can transmit data information according to the actual needs of the tourists and the actual situation of the scenic spots, and provide the tourists with the necessary scenic spot information through the form of human-computer interaction, which is a key component of the design of the tour guide system. The multimedia content is to make full use of the advantages of modern scientific information technology, and display the scenic spots in the form of video, audio and pictures in front of the tourists, which is conducive to ensuring the smooth visit of tourists. The research equipment is an auxiliary guide device, mainly including headphones. The intelligent tour guide system mainly checks the personal information of the personal information reader, and the corresponding background management system will scan the relevant information of the Navigator with the scanner, which is beneficial to provide personalized travel routes for tourists.

3. Xi'an Smart Tourism Common Technology Module

3.1. Wifi positioning module

The design of the wifi positioning module is an important part of the research on the key technologies of Xi'an smart tourism. The wireless access signals in the scenic spots are detected by wifi, and the access points are scientifically analyzed by professionals to determine the positioning base stations of different scenic spots. In the design of the wifi wireless positioning module, a wireless device with less energy consumption is generally used, and the wireless signal around the scenic area can be detected according to the reception condition of the wireless signal in the scenic area, and the transmitting power of the wireless device is determined according to the actual situation of the network coverage. To ensure the accuracy of the location location. The design of the wifi positioning module provides a certain degree of convenience for tourists to visit the scenic spot. In the actual application process, the wireless environment around the scenic spot is detected by means of wifi wireless automatic detection, which is beneficial to prepare for grasping the specific location of the tourist, according to The change of signal strength sets the threshold of different signals, which lays a foundation for the smooth progress of subsequent research work. The wifi positioning module design involves many aspects. When the wifi signal is close to the scenic wireless device, the corresponding terminal device will detect the wireless signal of the scenic spot, compare the previously set threshold, and perform the detection after a limited time. After many tests, the majority of the detected results exceed the threshold, and the location of the attraction is the spot where the wireless signal is located.

3.2. Broadcast communication module

The design of the broadcast communication module is mainly carried out by means of the udp connectionless protocol. The design of the broadcast communication module is to some extent beneficial to enhance the dynamic information of the scenic spot for tourists. When entering the scenic spot, visitors will wear the corresponding tour guide terminal equipment to facilitate visitors to have a detailed understanding of the number of people in the scenic spot and the activities. The design concept of the broadcast communication module should reflect the advantages of the broadcast service function. The server is optimized according to the distribution of the local area network in the scenic area to ensure the accuracy of the information transmitted by the mobile terminal device. At this time, the advantages of the udp wireless protocol and the broadcast communication service function are The organic combination can quickly provide visitors with the

information they need to provide personalized service [1].

3.3. Intercom module

The intercom module between points and points is an important part of the key technology modules of smart tourism. When visitors are in the scenic area, they can communicate through human-computer interaction. When the tourists are in a lost state, they can pass the point. The intercom mode between the point and the point sends help information to the terminal, which is beneficial to ensure the safety of the visitor. In the point-to-point voice communication, it is necessary to pay attention to the real-time detection of the voice system, and collect the detected voice, and the professional technical analysts organize the collected data to ensure the authenticity of the voice transmission. To ensure smooth intercommunication between points. In the process of collecting voice data, the advantages of low-level audio equipment should be fully utilized to ensure the accuracy of the calculation results of the driver function. In the design process of the intercom module between the point and the point, according to the actual situation of the collected sound information, the collected sound information is analyzed and stored, and the sound data is edited. In the process of voice transmission, the intercom mode between the point and the point is perfected by means of the udp wireless protocol to ensure the real-time of the information received by the tourists. The intercom mode between the point and the point is to collect the voice information by means of the mobile tour guide device of the tourist audience, and timely transmit the received voice, thereby effectively avoiding the occurrence of retransmission [2].

3.4. Map display module

In the design process of the key technology modules of smart tourism common, pay attention to the design of the map display module. The map display module design involves a variety of aspects, and its key technology code mainly includes displaying static images, determining the starting position and drawing the circuit diagram. The map display module is an important part of the key technology module of smart tourism. It is the key to ensure that the key technologies of smart tourism common play fully play the role. By using static maps to optimize the corresponding display modules in the map to ensure map query and display functions. The normal operation. In the link of the map display module society, it is necessary to control the information of the corresponding jpg static map to ensure the accuracy of the map information obtained by the tourists. In the static map, “Please select the starting point and the location” and “Love to terminate the attraction” will appear. When the information is entered by the visitor, the system will prompt “This is the same place”. According to the actual situation of the input geographical location information, the route map is drawn. At this time, the tourists can confirm the direction of the tour through the actual situation displayed by the route map, which provides convenience for tourists to visit the scenic spot [3].

4. Conclusion

With the continuous development of information technology of the Internet of Things, the key technology of smart tourism in Xi'an promotes the smooth transformation of tourism to a certain extent. In order to promote the healthy development of tourism in Xi'an, we must pay attention to optimizing the responsibility of relevant management departments. Take the actual needs of tourists as the starting point. Give full play to the advantages of cloud computing and combine theoretical knowledge with practical experience to further promote the development of smart tourism in Xi'an, which is conducive to improving the service level of smart tourism as a whole.

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