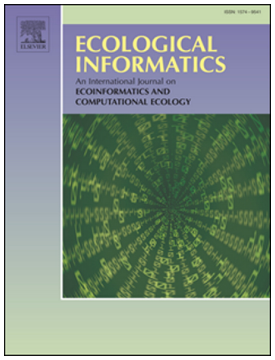

Rural smart tourism under the background of internet plus

Wenjie Zhu, Fengbiao Shang

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Rural Smart Tourism under the Background of Internet Plus

Wenjie Zhu* projessicazhua@163.com, Fengbiao Shang
Yiwu Industrial & Commercial College, Yiwu, Zhejiang 322000, China.
*Corresponding author.

Abstract: Rural tourism under the background of Internet plus needs to improve the tourism model and improve the modernization process of rural tourism. In order to improve the efficiency of rural tourism, this paper constructs a rural smart tourism system under the background of Internet plus, combines the actual situation of rural tourism to improve the traditional rural tourism model, and analyzes the application of Internet plus technology in the architecture of smart tourism system. Moreover, this paper builds a cloud service-based rural tourism cloud data system architecture, and discusses how to build related systems, including the introduction of the cloud data center architecture and functions, the introduction of the architecture, composition and functions of the cloud business management platform, the introduction of the architecture and functions of the tourist behavior intelligent analysis system, etc. Finally, this paper analyzes the performance of the rural smart tourism system through experiments. From the experimental research results, we can know that the rural smart tourism system constructed in this paper has certain effects.
Keywords: Internet plus; rural tourism; smart tourism; system construction

1 Introduction

The rural tourism innovation ecosystem under the background of rural revitalization strategy is a complex system, and its main characteristics are shown in the following aspects. As stated in this hallmark section excellent with UNDP, rural revitalization is a method of constructively altering rural communities for present generations. These elements can help to develop viable rural places that attract and retain engaged, skilled, and healthy individuals. The first is the complexity of the rural tourism innovation ecosystem, which is prominently manifested in the inconsistent understanding of the rural tourism innovation ecosystem at home and abroad, and the complexity of the objectives and behaviors of different subjects in the rural tourism innovation ecosystem. The goal of rural tourism is to play an active role in a nomadic community. It could be a type of ecotourism. Rural tourism intends to reach enhancing human safety and welfare thru the sustainable socioeconomic development of the community, to decrease growing poverty, unfairness, and regional disparity, to create income and employment for residents, and to create and maintain house and tiny tourist industry. The second is the dynamic characteristics of the rural tourism innovation ecosystem, which is reflected in the continuous changes in the innovation environment and interrelationships faced by different rural tourism innovation entities. The third is the openness of the rural tourism innovation ecosystem. The fourth is the cluster symbiosis characteristics of the rural tourism innovation ecosystem, which is manifested that in the entire rural tourism innovation ecosystem, different subjects need to maintain a close coordination relationship, so as to maintain the stability of the entire rural tourism innovation ecosystem [1]. The functions of the rural tourism innovation ecosystem are manifested in the following aspects. One is the resource allocation function. The innovation ecosystem can coordinate the internal and external allocation of various resources in the rural tourism industry, and enable the specialties of different subjects to be brought into play. The second is the conditional debugging function. Different subjects in the rural tourism innovation ecosystem can respond to changes in the environment and transmit information according to their own characteristics, so as to achieve the stability and efficiency of the entire system. The third is the risk aversion function [2]. In the rural tourism innovation ecosystem, entities such as universities and intermediaries can reduce the risks of rural tourism enterprises in technological innovation and new product research and development. The fourth is the information sharing function. In the entire rural tourism innovation ecosystem, various entities have rich resources through the acquisition of information, and ultimately guide rural tourism enterprises, universities and scientific research institutions and other core innovation entities to achieve scale effects [3].

With the development of China's social economy, tourism has gradually become an important pillar industry in my country's national economy. Among them, rural tourism has also become one of the vigorous development directions of my country's tourism industry in recent years, and China's rural tourism industry has shown a "blowout" growth trend. However, with the large-scale development of rural tourism, more and more problems have surfaced [4].

Moreover, the role of "Internet plus" in rural tourism is becoming more and more important. The internet is now one of the most important factors in accelerating economic growth. To encourage the transformative upgrading of the regional livelihoods, inject fresh vitality into the Internet Plus local economy initiative, and generate new possibilities through e-commerce, all regions have begun to carry out different Internet Plus operations. The Internet can assist the business in gaining greater earnings and increasing the unit size. To help integrate to the development trend of the Web, the tourism destinations business, that has been operating in the conventional manner, need a fresh design [17].

Nowadays, some brands of rural farmhouse have low brand awareness, and the location of farmhouse is relatively remote. It is difficult to give consumers the most intuitive choice, resulting in a narrow sales range. Therefore, through the use of the Internet as a medium, accurate information and information analysis provided by search engines and big data, it is possible to provide consumers with farmhouse information that meets the needs of consumers. Moreover, through the Internet, the "point-to-point" contact between consumers and farmhouses in rural tourism can be accurately achieved, thereby increasing the visibility and selection of local tourism and promoting the development of local rural tourism. Both for producers and consumers, the Online world seems to have had a significant impact on the tourism industry. The internet's influence has evolved in innovative business models and, in so many instances, increased customer choice and knowledge. The Internet seems to have had a huge impact on tourism, as evidenced by the large number of researches looking at various aspects of the subject. The tourism industry is a heavy user of data, and businesses have turned to information systems to supply trustworthy and accurate data. Travel companies, for example, use of IT to handle reservations, bookkeeping, and inventory [18].

Rural tourism planning includes the planning of the village itself and the planning of rural tourism areas. The planning of the village itself is mainly to improve the living environment and supporting service facilities of rural residents, and to improve the quality of life of rural residents. Only a beautiful rural posture can attract tourists better, better publicize the reputation of "village", and better develop rural tourism. The main service target of the rural tourist area planning is tourists. Its purpose is to serve tourists, and it combines rural and regional cultural characteristics and adapts measures to local conditions to develop a variety of cultural tourism projects to give tourists a better tour experience. Rural tourism planning is not only distinguished from other tourism industries by its "rural nature", it also requires rural tourism areas to have their own characteristics and themes to distinguish them from other rural tourism areas, and to design tourism products based on their own cultural characteristics, regional environment, and customs. In addition, it is necessary to appropriately increase night project activities. Nightlife is not only different from the city, but can also retain more tourists. Only by retaining tourists, rural tourism can provide more services.

Based on the above analysis, this paper constructs the rural smart tourism system under the Internet plus background, and analyzes the rural smart tourism situation under the Internet plus background to improve the effect of rural tourism marketing.

2 Related work

Brandt et al [5] believed that the rapid development of rural tourism is mainly due to the fact that the urbanization of rural areas cannot keep up with towns. Through rural tourism, not only allows residents of long-lived cities to experience traditional rural culture, but also effectively promotes the economic level of the rural. Tripathy et al [6] believed that the rural

infrastructure and commercial development are not sound, which causes many young people to flock to the cities and makes the rural aging seriously. Through the development of tourism in rural areas, work can be provided to rural residents, thereby reducing the migration of migrant workers, effectively reducing the serious problems of left-behind children and aging in rural areas.

Sigalat-Signes et al [7] judged the rationality of the plan by the degree of tourist gathering. By analyzing the concentration of people flow, it determined the popularity of tourism routes and tourism projects, and then judges whether the planning of tourism projects and routes is reasonable. Lee et al [8] believed that the ecological environment is an important resource for rural tourism. The development of rural tourism relies on the natural landscape of the countryside. The ecological nature of the natural landscape is the selling point of rural tourism. Therefore, it is very important to pay attention to the ecological development of the rural environment in rural tourism planning.

Tourism development in rural areas not only promotes the rapid development of rural economy but also accelerates the transformation of agricultural structure. Koo et al [9] analyzed the economic income of villagers in rural tourism destinations through investigation. The study found that the poorer farmers in the village did not become wealthy because of the development of rural tourism. Only those farmers who participated in work through rural tourism improved their home economic conditions, which resulted in the divergence of the income of the rural population. By investigating the development of rural tourism, Zhang et al [10] found that only those villagers who participated in the rural tourism industry benefited from the economic benefits brought by the tourism industry. However, villagers who did not participate in rural tourism are still in poverty, and the gap between the rich and the poor in the village is slowly widening. Therefore, it is necessary to improve the participation of villagers and distribute the income to each villager, so that all the villagers can benefit from it and the development of rural tourism can be better [11].

Ruíz et al [12] put forward the relationship between the government, villagers and investors in the development of rural tourism by analyzing the development of rural tourism. The development of rural tourism is related to the living standards and development of residents. The government is in a leading position in the development of rural tourism and plays a regulatory role in the development of rural tourism. In addition, investors gain benefits through specific rural tourism resources, through capital investment, and construction and development of some tourism projects. Investors pay more attention to the benefits of rural tourism. Therefore, it is necessary to better maintain the relationship between the government, villagers and investors, follow the path of sustainable development, and achieve common benefits in order to better develop the village and build a beautiful village.

Wang et al [13] found through comparative analysis that in the formation process of rural tourism in various places, the factor that has the greatest influence on its causes and characteristics is location. At present, scholars' comprehensive classification research on rural tourism in terms of spatial location characteristics shows that rural tourism can be divided into four types: suburban type, scenic suburb type, traffic route type and self-contained type [14]. A suburban area is a mixed-use or homebuyers that exists as either component of a bigger urban setting or as a distinct housing complex in reasonable commute. Residential communities planned as a medical retreat from of the metropolis, with curved roads and irregularly shaped lots set up in reference to the natural terrain, take the picturesque suburban areas. Although there are strong links between air and noise pollution along road traffic routes, there are two types of simple and complex navigation. It builds system paths and distributes them to every subdomain in a virtualized environment instantly. Self-contained housing, such as an apartment, contains all of its own amenities, allowing residents to avoid sharing areas including the cook or bathroom with everyone [22]. Among them, the most advantageous and characteristic of tourism resources is the suburban rural tourism or the rural tourism at the edge of the scenic spot. The scenic spots are highly dependent, have obvious performance in

sharing with the tourist source market of the scenic spots, and are highly complementary in products and resources with the scenic spots [15]. Therefore, in the context of the continuous improvement of people's consumption level and the urgent need to upgrade the quality of the rural tourism industry, more and more difficult problems than other types have been exposed [16].

3 Rural smart tourism system under the background of Internet plus

The cloud data center is the technical basic part of smart tourism construction, and provides data sources for the construction and application of business application systems of various components of rural smart tourism. The construction of the smart tourism cloud data center is centered on co-construction, sharing, and interconnection. The smart tourism cloud data center mainly uses data warehouse and cloud computing technology to classify and manage all the databases that make up the new Xitang Water Street smart tourism [19]. On the basis of data integration management, cloud computing technology is used to provide data information and computing services for various application systems through a shared service platform. The cloud data center has innovated the data collection, transmission, storage and processing methods. The public cloud, too, is made up of data centers. When workloads are stored on the cloud, the cloud supplier's data center capabilities are used. The transmission of data through one electronic file to the other in a cloud data center is known as data transmission. This is accomplished through the use of point-to-point streaming data or conduits. The hardware, systems, and computer solutions that allow data and application retention inside a data center facility are referred to as data center storage. A data processing center is a location wherein modern digital and telecommunications technology is used to process information required business [23]. It is the fundamental requirement for the construction of smart tourism in the new countryside and the foundation for ensuring that tourism services are more intelligent [20]. A data center is a structure that houses a firm's common IT processes and technology in order to store, analyses, and distribute applications and data. Data centers used to be tightly managed physical architectures, but the cloud service has transformed that. This allows commercial cloud users to concentrate more resources on their core business. Consumers normally have shared access to virtualization computational power or exclusive access to certain computers running, memory, and network equipment from the cloud service [24]. The system architecture of the smart tourism cloud data center is shown in Figure 1.

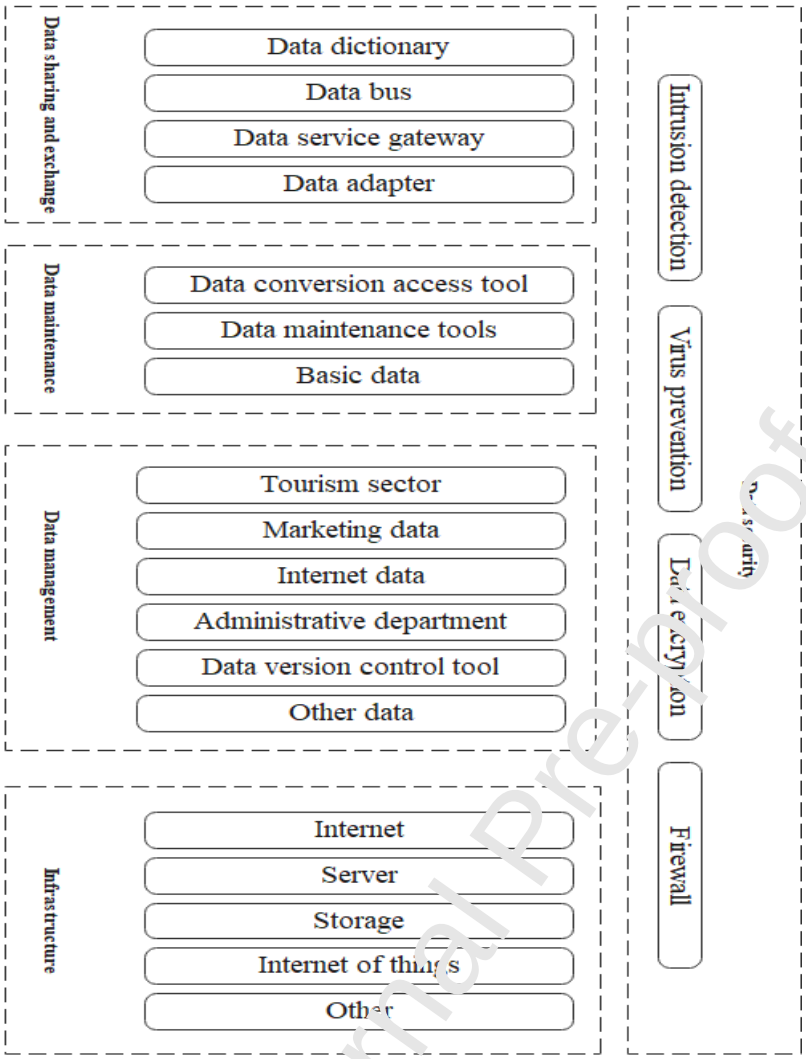

Figure 1 System architecture of smart tourism cloud data center

» Data exchange: complete vertical data exchange between upper and lower levels, horizontal data exchange between application systems of tourism-related departments, and data sharing and exchange facing external users.
» Data integration: Receive data from the data exchange platform and integrate heterogeneous data. For all kinds of data, it automatically senses the incremental data of each business library, and adds and updates data in batches to the cloud data center in a regular or real-time dynamic manner. The use of distributed technology can ensure the high performance of integrated data and low interference to the business system platform.
» Data sharing service: Develop data sharing models and strategies for different business data in different sharing scenarios to ensure data access performance, and ensure data security while data sharing, as well as the stability and reliability of business systems; complete application interfaces Open source, convenient for secondary development, and support users to conveniently and flexibly carry out system transformation according to their own needs and styles, thereby developing their own cloud application systems.
» Multi-source heterogeneous data integration: to realize the efficient integration of heterogeneous multi-source data such as spatial data, relational data, real-time data, text knowledge data, and multimedia data in the data center.

» Cross-platform data access and application: realize the cross-platform data access function, support PCs and various mobile smart terminals (including iOS, Android, etc.) to freely access data resources in the cloud data center. For scenic application systems, it provides a complete standard data open protocol, supports multiple development protocols and development methods, adapts to various intelligent terminal system applications, and realizes unified application development and consistent user experience under different software and hardware environments.
» GIS service: to realize the seamless connection between the cloud data center and the 3DGIS engine, and provide basic map services, virtual roaming services, and thematic analysis services for upper-level application development based on the GIS platform.
» Programming-free customization: Through the programming-free customization function, the upper-level business system construction process can be fully customized and free of programming, and the process customization can be graphically and visualized.
» Data security: to achieve authorized access and security management of data in various business systems or cloud data centers according to business and management requirements.
» Data management and maintenance: to ensure that the management function of the data set can be realized, and the related functions of the data set can be dynamically set to support the management and maintenance of metadata, and provide the use of metadata publishing, maintenance, subscription, browsing, and relationship maintenance. It can also complete the functions of importing and exporting metadata in batches.
» Unified intelligent search: Supports unified search of business data, real-time data, spatial data, relational data, and multimedia data, enabling direct access to related business systems from the search page. Figure 2 shows the functions of the smart tourism cloud data center.

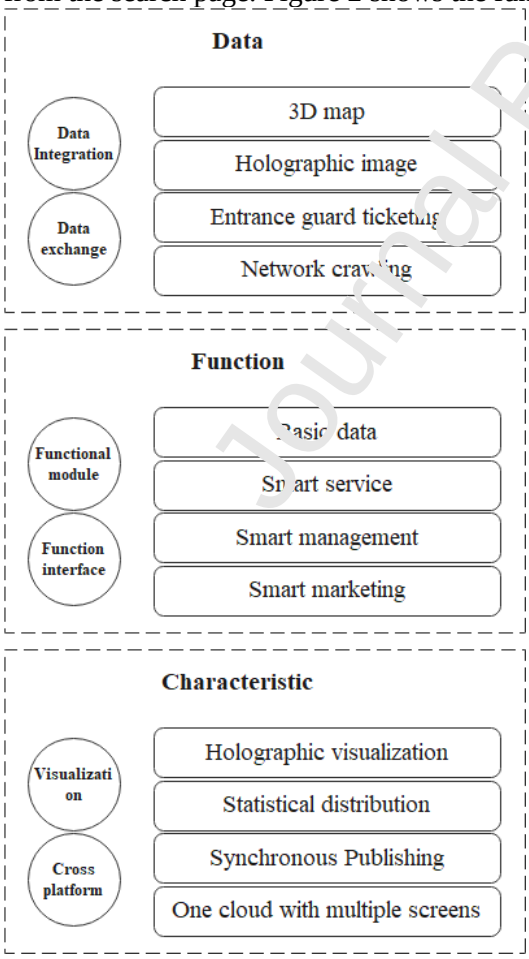

Figure 2 Functions of cloud data center

The architecture of the smart tourism marketing decision support system includes four levels: data warehouse management layer, data layer, decision analysis layer, and application layer [21]. A cloud database is an organized collection that is designed for analyses, scalability, and simplicity of use is supplied as a management solution on the cloud platform. As businesses migrate to the cloud, they're ditching on-premise document management systems like Hadoop in favor of these newer data storage platform. A data layer is a standardized entity that gathers information on a webpage. Whatever tool you use to connect to your web, such as statistics, heatmapping, and online chat. It only has access to this one level of information, ensuring two things. Every tool collects the signal it needs, and the information every tool use is same. Cloud Decisions is a set of tools designed to help Gartner for Technological Professional customers achieve speedier cloud vendor choices. Use our research to find the best cloud operator and product options for particular workload. Most applications use higher-level protocol for data transmission, which are found in the application level. In both the OSI and TCP/IP architectures, the activities connected with the virtualized environment this level factors allow the humans network to interface with the underneath cellular connection. The specific system architecture is shown in Figure 3 [30s].

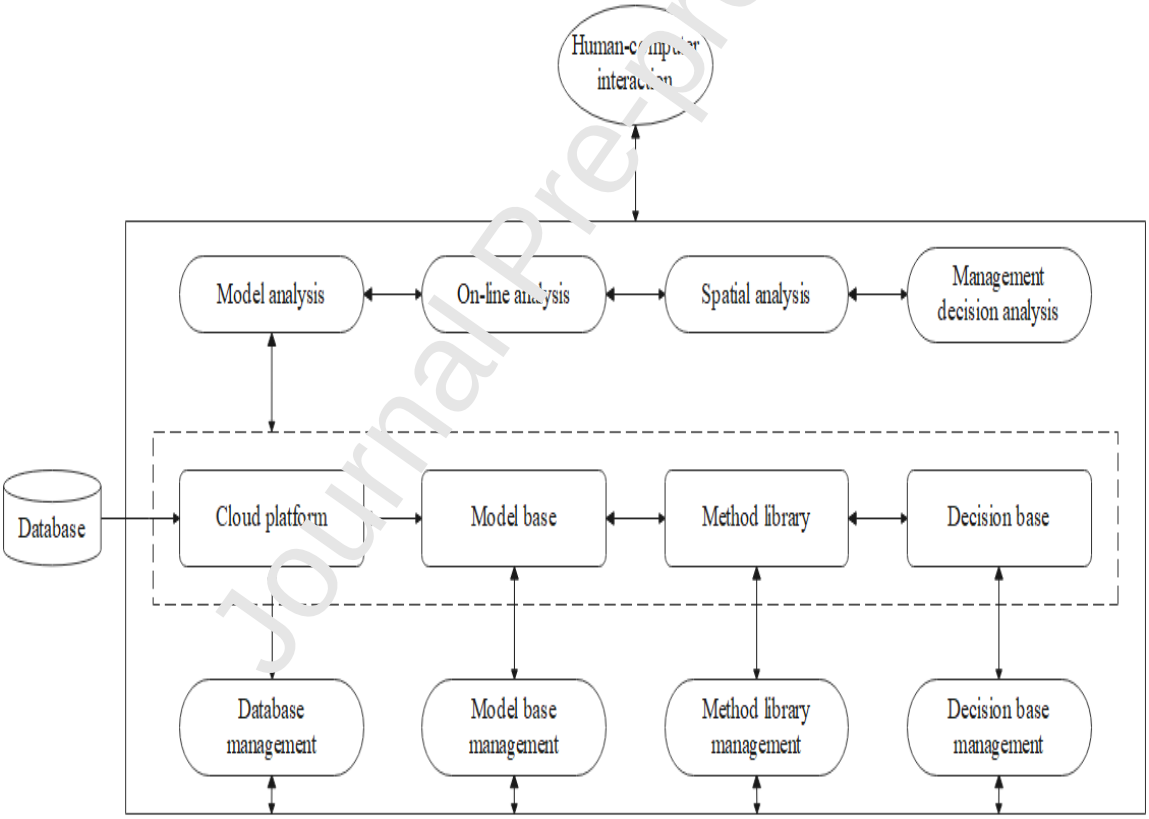

Figure 3 Architecture diagram of cloud business platform system

In order to understand the various behaviors and needs of tourists in tourism activities, to accurately describe the characteristics of the population, to aggregate and analyze user characteristics from multiple dimensions for specific business scenarios, to guide and drive the marketing of scenic spots and the development of tourism products, and to discover and grasp the huge business opportunities hidden in the subdivided masses of users, it is urgent to build an intelligent analysis system for tourists' behavior, as shown in Figure 7.

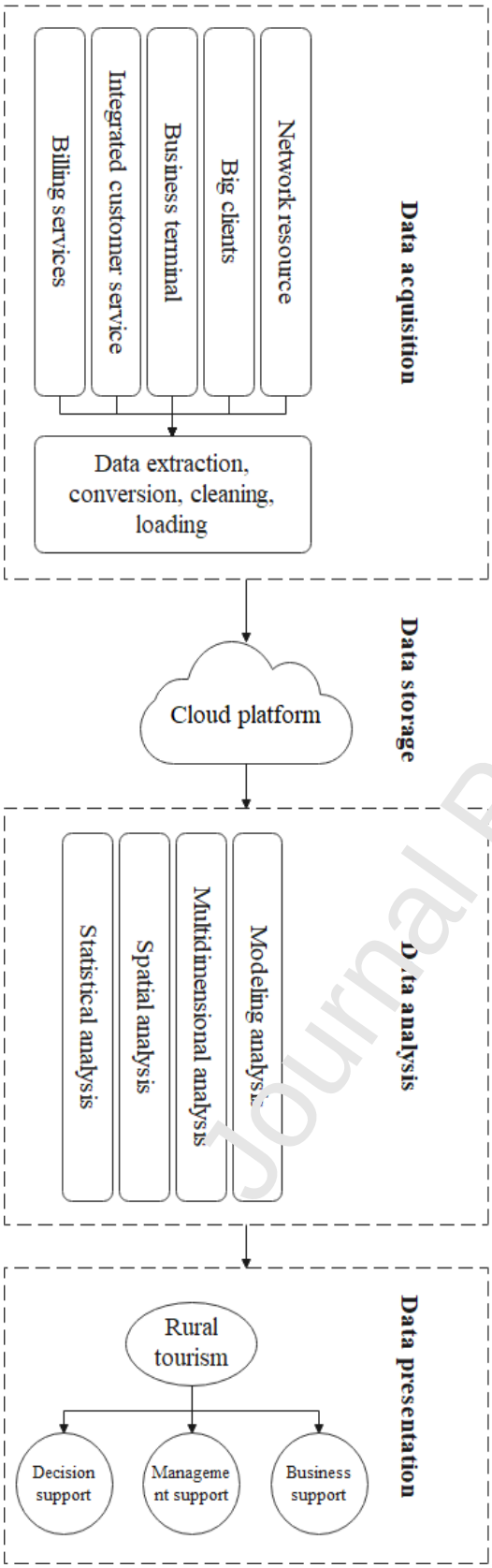

Figure 4 Architecture diagram of the tourist intelligent analysis system

Data acquisition: collect various data sources together. Data storage: store the collected data. Data analysis: analyze and process the stored data. Data display: visually display the analysis and processing results to users [25].

The function diagram of the intelligent analysis system for tourist behavior is shown in Figure. Intelligence executives are aware that AI can aid in the management of this data avalanche, but they may be concerned about the effect AI would have on the work and staff. According to private-sector studies, there is a substantial gap among AI's adoption and comprehension of its significance. It will also include suggestions for businesses looking to increase widespread adoption and transition from trials to full-scale operations. Its main functions include: the analysis of the basic attributes of tourists, which focuses on analyzing the gender, age and source of tourists, etc.; the analysis of tourists' purchasing power, which counts and analyzes the purchasing power of tourists and the region of source of tourists based on the consumption of tourists; the tourist interest preference analysis, which counts and analyzes tourist consumption preferences based on tourist consumption, and provides data support for precision marketing of scenic spots.

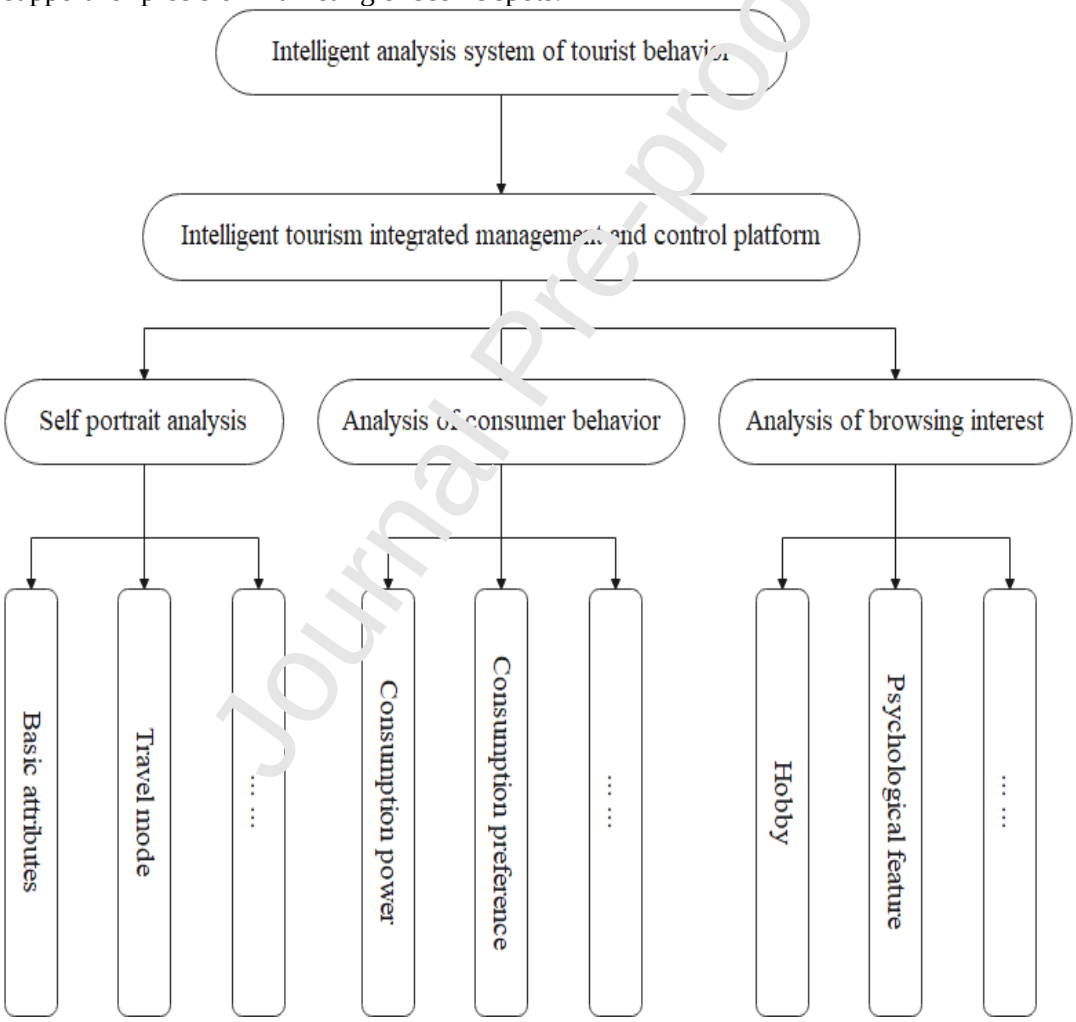

Figure 5 Function diagram of the intelligent analysis system for tourist behavior

The 3DGIS engine is to connect 3DGIS and cloud computing, and put elements such as infrastructure, system software, and platform content on the cloud infrastructure. The ArcGIS API for JavaScript was used to create the interactive 3D web service. A three-dimensional Geographic Information System (GIS) is a technology that geographically incorporates the third dimension in information. As a result, spatial entities now have a z element in addition

to only x and y. The most prevalent application of 3D GIS is in street scenes, where it gives a sense of reality in location known [28]. It provides three-dimensional geographic information infrastructure services (3DGIS IaaS) based on WEB services, three-dimensional geographic information platform services (3DGIS PaaS), three-dimensional geographic information software services (3DGIS SaaS) and three-dimensional geographic information content services (3DGIS CaaS). Moreover, it solves the problems of information isolation and repeated construction of information in tourism construction, and meets the needs of a large number of tourists for ultra-large-scale platforms and software. The application model of cloud 3DGIS is shown in Figure 6.

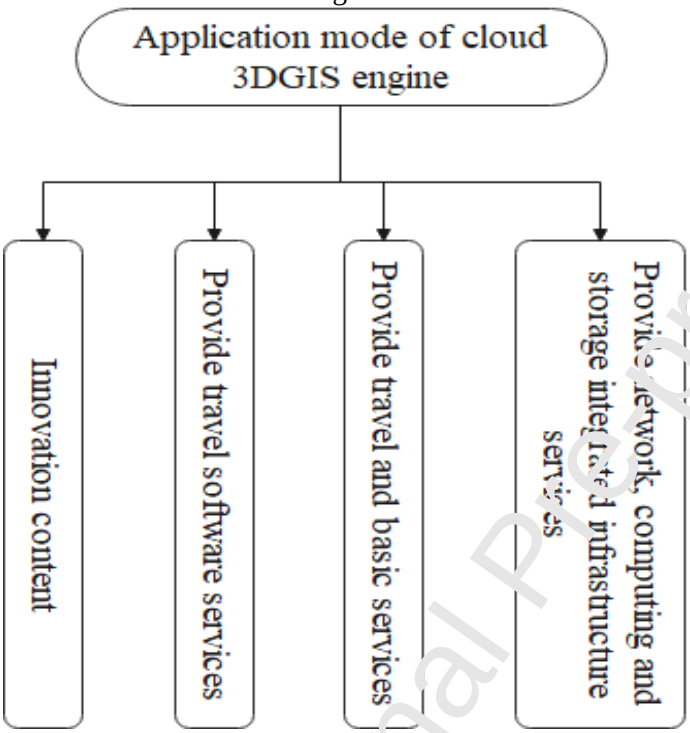

Figure 6 Application model of cloud 3DGIS.

The architecture of the rural tourism cloud 3DGIS engine system is shown in Figure 7: The cloud 3DGIS engine forms different cloud 3DGIS application interfaces and provides layered services according to the needs of different users. The cloud 3DGIS engine includes the cloud 3DGIS interface at the tourism infrastructure level, the cloud 3DGIS interface at the transportation level, the cloud 3DGIS interface at the cultural level, the cloud 3DGIS interface at the scenic spot level, the cloud 3DGIS interface at the tourism service industry level, etc., and can use dynamic data collection and adaptive learning. And other methods to keep the application-level spatial data updated automatically. The cloud 3DGIS engine is based on a large-scale virtualized hardware architecture, provided with a micro-kernel cluster (MicroCore) as the support, has an efficient and reliable spatial information data center (SCenter), and can quickly build and configure, cross-platform, and expandable design and development. Frame (DCenter). Provide a wide range of application services and solutions in a mode of distributing services according to needs. SCenter provides multi-mode service aggregation strategies and security management and maintenance strategies, the sharing of multi-dimensional spatio-temporal geographic information and the integration of multi-source heterogeneous data. MicroCore and the service integrated management SCenter form a powerful DCenter. Tourism management departments, scenic area managers, and tourists can all obtain services in AppCenter. In addition to providing GIS services, AppCenter can easily communicate with smart services and wisdom in rural tourism. Subsystems such as

management and smart marketing are organically integrated to provide users with customizable GIS services in a timely and efficient manner, construct rural tourism solutions, and provide multi-level services for users at all levels.

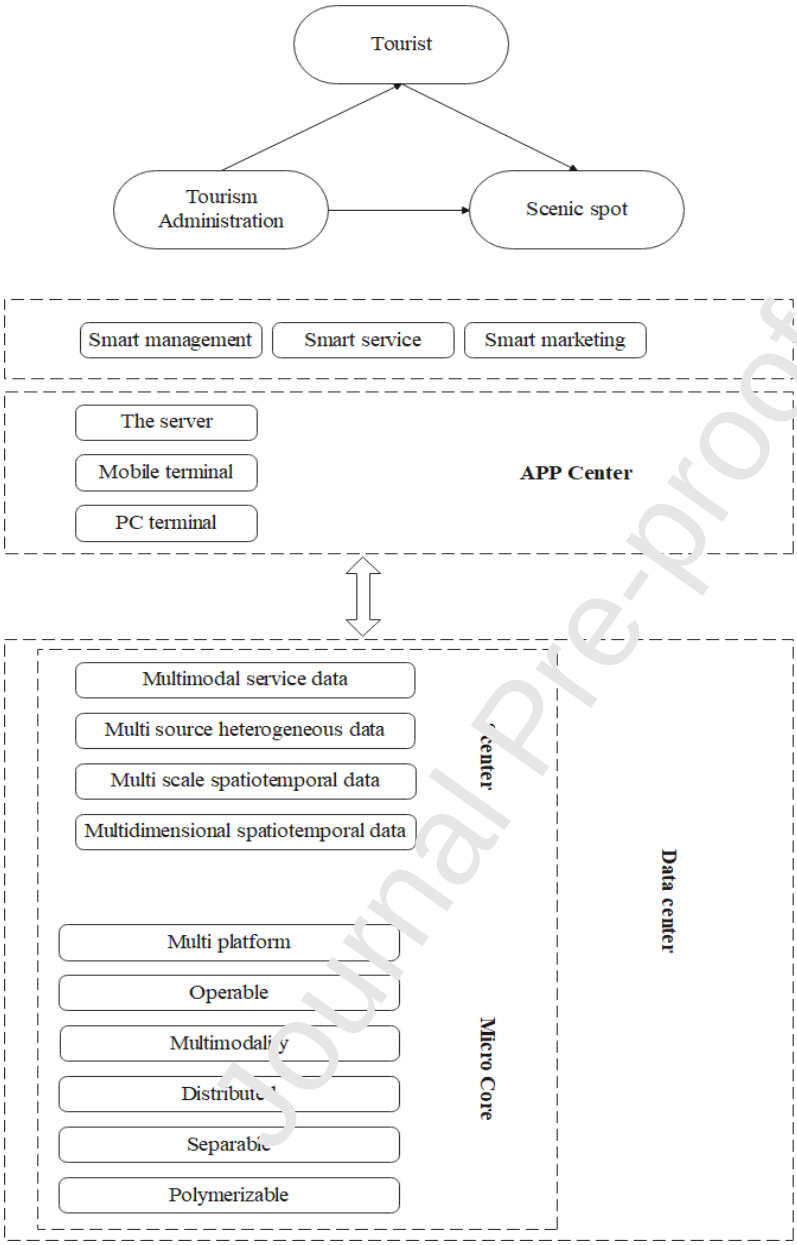

Figure 7 Architecture diagram of cloud 3DGIS engine system

In order to solve the safety problems in the travel process, ensure the safety of tourists, and protect the ecological balance of the scenic spot, it is urgent to build an intelligent video monitoring system to realize visual monitoring and management. According to the cloud data center and 3DGIS engine, this paper combines 3G/4G wireless network technology to establish an intelligent video surveillance system, which fundamentally guarantees the safety, stability and effectiveness of the video surveillance system of the scenic spot, and realizes the comprehensive monitoring of the visitor center, scenic spot access control, important roads, parking lots and tourist gathering areas [26]. Intelligent video surveillance can recognize anomalous and suspicious behavior and perform an analysis in actual environments. The

system can then transmit an alert, which will cause the desired reaction. This developing technology has the potential to provide high-value-added use applications, such as identifying or forecasting crimes [29].

The intelligent monitoring management system includes management module, device access module, alarm management module, Web service module, streaming media forwarding and management module, storage module, mobile access module, client access module, intelligent analysis service module, etc. [27].

Management module: It is the core component of the entire system, mainly for centralized configuration management of users, roles, permissions, alarm equipment, video surveillance equipment and various servers in the system. The central management module also contains modules such as client access port and NTP full network calibration.

Equipment access module: The equipment access module is mainly responsible for the access of the platform and front-end equipment. For the information sent from the front-end, the equipment access module connects it through fixed network IP or dynamic IP.

Alarm management module: It processes all kinds of alarm information in a timely manner through Email, SMS, and video retrieval, etc., and it is convenient to query after the record. .

Web service module: It mainly provides unified Web access configuration for application servers such as system management, storage retrieval, streaming media, and alarm forwarding, and provides a unified remote monitoring query interface for front-end monitoring equipment.

Streaming media forwarding and management module: It supports real-time video playback and stored video playback, prioritizes management of emergencies in travel, and supports statistics about video streaming related information.

Storage module: It stores data through virtual storage technology and supports distributed storage and centralized storage. For a large amount of video data, its storage, search and automatic data supplement recording can be realized. At the same time, it centrally stores alarm events.

Mobile access module: It can perform functions such as video preview, picture shooting, and video storage on the mobile phone client. Moreover, it supports Ipad, Iphone, and Android operating systems.

Client access module: The client access gateway is mainly to facilitate the communication between the customer and the platform. The client sends a request, and the client accesses the gateway to make an application. After the application is passed, it is forwarded to the corresponding server.

Intelligent analysis module: The intelligent analysis module provides intelligent analysis results before, during and after the event. It directly obtains video streams for video detection and analysis, and supports applications such as parking, important road detection, and tourist traffic statistics. Through the intelligent detection module, you can quickly check and locate the video. The main function of the rural tourism intelligent monitoring system is shown in Figure 8.

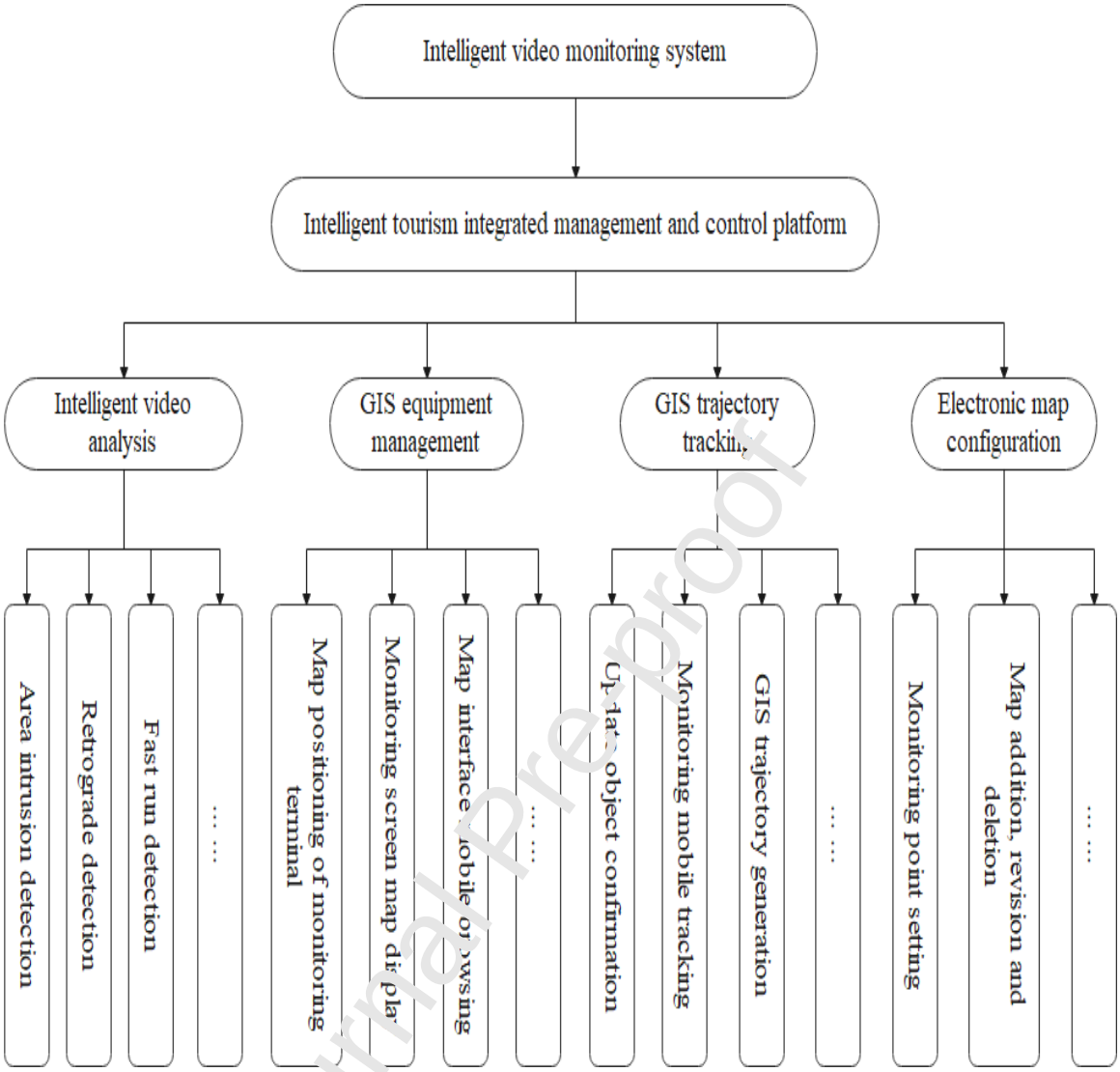

Figure 8 The main functions of the intelligent monitoring system

In order to achieve the effective integration of various information systems in the later stage and avoid the phenomenon of information islands in the future, it is necessary to establish a unified scenic spot operation command and dispatch center. Managers can timely understand the operating status of the scenic spot, and monitor the operation of the tourist industry in the scenic spot in real time. Efficiently support leadership decision-making and respond to travel emergencies in a timely manner. Scenic area managers can access the information system through smart terminals to realize remote command and decision-making. Scenic spot managers use effective means to locate in time to eliminate system failures and deal with accidents. Establish a network system security audit function, and safely share information resources of various functional departments to achieve functional linkage and coordinated command. To establish a command and dispatch center for smart tourist attractions, it is necessary to establish an operation monitoring mechanism with complete functions, orderly coordination, responsiveness, and efficient operation. Provide basic support for the future informatization construction of the scenic spot, effectively monitor the operating status of the tourist market in the scenic spot, provide support for leadership decision-making, improve the emergency response capability of tourism, and reduce the loss of life and property and economic losses caused by emergencies.

The command and dispatch system centrally sets up video, vehicle command, GPS monitoring and command, information application integration resource coordination and other systems, access to display video of each monitoring point, and use multiple screens to simultaneously display video of important locations, scenic tourism data information, etc. In the event of an emergency, the operator can immediately understand the on-site situation, quickly take out the best measures, and report to relevant functional departments in a timely manner for rapid processing. Through the construction of a command and dispatch center, the traditional management mode of scenic spots will be innovated and improved, and the problems of poor information and poor dispatch between tourism management departments will be thoroughly improved, and the monitoring and management capabilities of tourism resources and usual conditions will be improved. The command and dispatch system adopts a hierarchical structure, including supporting environment layer, data layer, business application layer, and access layer. Its framework is shown in Figure 9:

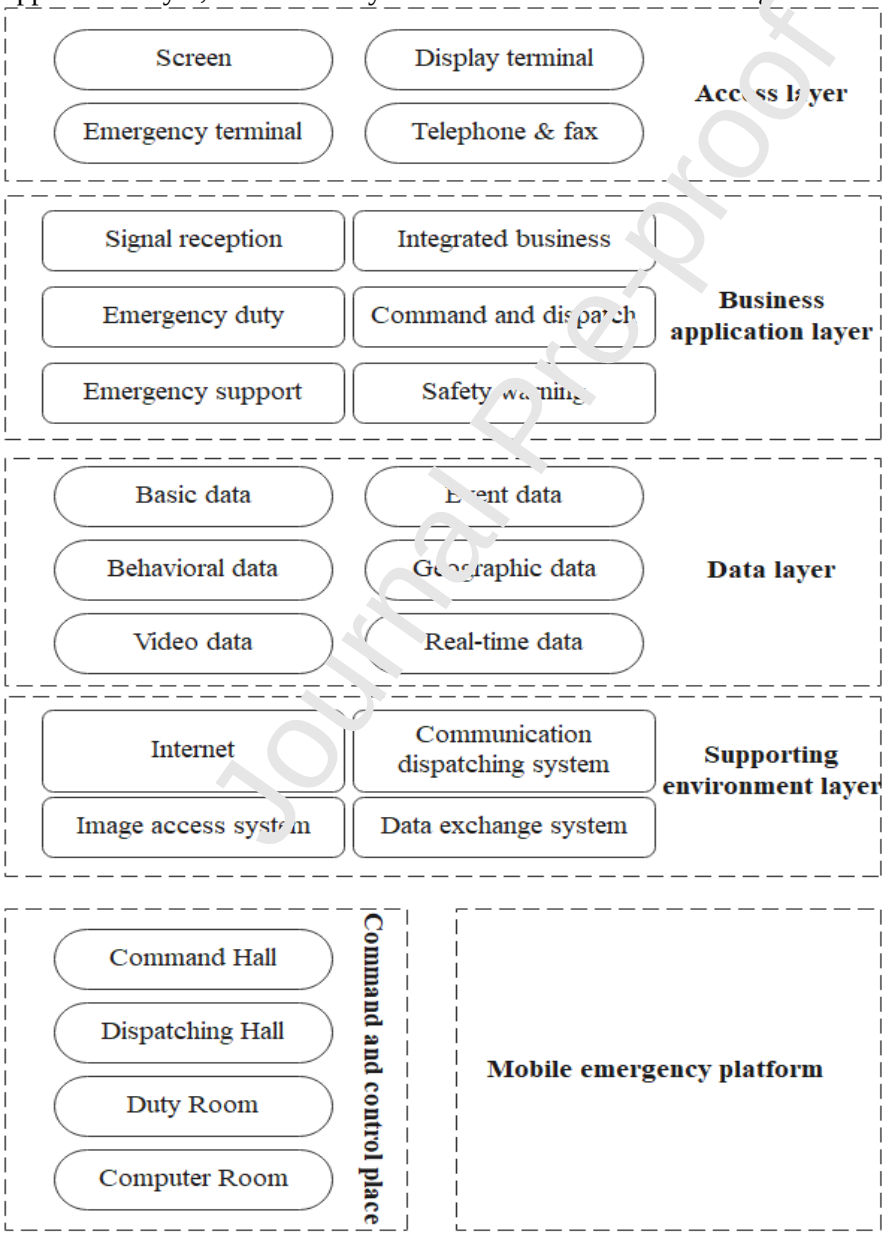

Figure 9 Architecture diagram of the command and dispatch center

4 Satisfaction analysis of rural smart tourism system

This paper combines Internet plus technology and smart tourism technology to construct a rural smart tourism system, and evaluate the performance of the system. The smart tourism system in this paper can effectively improve the marketing effect of rural smart tourism, and at the same time provide greater convenience for tourists. Therefore, the verification of system performance in this paper mainly focuses on marketing effects and tourist satisfaction.

First of all, this paper conducts the verification of the marketing effect of the system smart tourism system. The verification is carried out through the method of expert evaluation, and 75 sets of data are counted. The results are shown in Table 1 and Figure 9.

Table 1 Statistical table of the marketing effect of the smart tourism system

Number	Marketing Effect	Number	Marketing Effect	Number	Marketing Effect
1	88.5	26	89.7	51	93.6
2	90.3	27	90.3	52	92.4
3	94.0	28	92.2	53	93.9
4	89.8	29	89.9	54	90.9
5	93.4	30	93.7	55	88.3
6	90.8	31	88.9	56	93.7
7	93.7	32	89.0	57	91.1
8	92.5	33	88.2	58	91.9
9	91.6	34	88.3	59	90.5
10	89.9	35	93.6	60	88.4
11	93.2	36	93.2	61	90.9
12	92.9	37	88.9	62	93.9
13	93.9	38	92.7	63	93.2
14	91.8	39	92.4	64	93.2
15	92.7	40	92.9	65	88.2
16	89.1	41	89.3	66	92.5
17	88.7	42	92.9	67	92.8
18	91.4	43	90.1	68	89.0
19	89.3	44	89.3	69	88.4
20	91.0	45	93.2	70	91.2
21	93.5	46	89.6	71	88.4
22	88.5	47	93.8	72	91.3
23	93.1	48	89.8	73	91.3
24	91.2	49	90.8	74	91.1
25	93.0	50	93.9	75	91.7

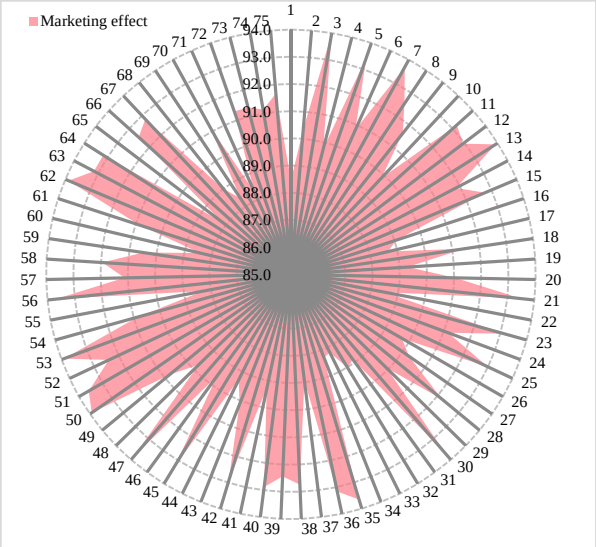

Figure 9 Statistical diagram of the marketing effect of the smart tourism system

From the above experimental analysis, we can see that the rural smart tourism system constructed in this paper has a good marketing effect. On this basis, this paper conducts a customer satisfaction survey of the rural smart tourism system, and the results are shown in Table 2 and Figure 10.

Table 2 Statistical table of the satisfaction survey of the smart tourism system

Number	Satisfaction	Number	Satisfaction	Number	Satisfaction
1	89.0	26	89.7	51	87.4
2	90.1	27	87.0	52	84.5
3	89.1	28	83.0	53	89.9
4	89.1	29	83.8	54	90.7
5	84.5	30	90.4	55	88.8
6	90.7	31	90.7	56	84.5
7	86.2	32	90.1	57	84.9
8	84.0	33	88.2	58	88.9
9	83.8	34	87.0	59	85.9
10	82.4	35	86.8	60	89.1
11	86.0	36	85.3	61	88.1
12	86.1	37	89.1	62	89.6
13	89.0	38	85.4	63	90.0
14	82.7	39	84.4	64	82.6
15	84.5	40	86.6	65	87.7
16	82.1	41	90.2	66	88.7
17	82.5	42	89.2	67	83.0
18	85.1	43	87.7	68	86.7
19	89.8	44	89.1	69	85.7
20	84.2	45	83.0	70	89.8
21	85.3	46	90.8	71	90.6
22	85.2	47	89.2	72	87.8
23	89.3	48	86.8	73	87.9
24	82.6	49	86.8	74	86.6
25	86.1	50	86.1	75	84.1

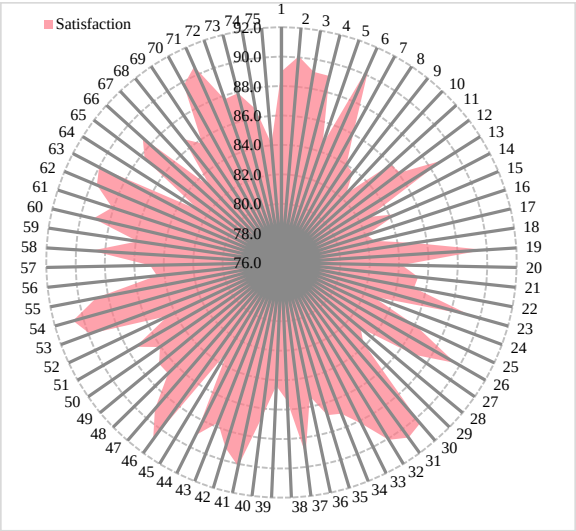

Figure 10 Statistical diagram of the satisfaction survey of the smart tourism system

From the above chart, the smart tourism system constructed in this paper has good customer satisfaction, so the smart tourism system constructed in this paper has good practical effects.

5 Conclusion

With the rapid development of smart tourism, the configuration of information technology in the six elements of tourism has become more and more common. Using information technology to change the backwardness of rural tourism has become an effective method. This paper builds a smart tourism architecture based on cloud services. The main research areas are the application of cloud services and Internet plus technology in the smart tourism system architecture. Moreover, this paper builds a cloud service-based rural tourism cloud data system architecture, and discusses how to build related systems, including the introduction of the cloud data center architecture and functions, the introduction of the architecture, composition and functions of the cloud business management platform, the introduction of the architecture and functions of the tourist behavior intelligent analysis system, etc. In addition, this paper constructs related module functions in cloud business, including the design and implementation of part of the cloud hotel business management system platform, cloud catering management platform, and smart business circle platform. Finally, through experiments, it is found that the smart tourism system constructed in this paper effectively improves the modernization of rural smart tourism, facilitates tourists to conduct rural tourism more conveniently, and promotes the development of high rural tourism.

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Highlights

- This paper constructs a rural smart tourism system under the background of Internet plus
- Application of Internet plus technology in architecture of smart tourism system is analysed
- Builds a cloud service-based rural tourism cloud data system architecture
- Analysed the performance of the rural smart tourism system through experiments