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Exploration of the Application of Internet+ Mode in Intelligent Planning and Emergency Response of Tourist Attractions

Yan Zhuang[1], Xiaodong Mao[2,*] and Yanling Yu[1]
[1] University of Sanya, Sanya, Hainan, 572011, China
[2] Sanya Institute of Technology, Sanya, Hainan, 572011, China
Corresponding authors: (e-mail: zhuang_0409@163.com).

Abstract In recent years, the tourism market has become increasingly hot, in order to realize the improvement of tourists' travel experience, this paper carries out spatial intelligent planning for tourist attractions through the "Internet +" mode, and designs the emergency treatment plan for tourist attractions by using heterogeneous data sharing and spatial and temporal streaming models. This paper evaluates the intelligent planning of tourist attractions and emergency treatment methods, and deeply researches the current advantages of tourist attractions and the focus of future development. Tourists' overall rating of this paper's "Internet+" tourist attraction intelligent planning and emergency treatment method based on heterogeneous data sharing and spatial-temporal diversion model is 4.31, and this paper's intelligent planning and emergency treatment of tourist attractions have produced better results.The mean value of satisfaction of tourist attractions in S city is 4.30, and the mean value of importance is 3.98, which is higher than that of importance, indicating that tourists' satisfaction with tourist attractions is higher than that of importance. Satisfaction is higher than importance, indicating that most of the expectations and needs of tourists for tourist attractions are met.Tourist attractions in S city have advantages in the arrangement and functions of telephone alarm points, rescue and complaint telephones, monitor screen monitors, coverage of digital broadcasting, and monitoring of accident risks in tourist attractions.There are also advantages in the access to broadband Internet, the establishment and operation of portals, the establishment and operation of electronic tour guides and traffic navigation, and the intelligent scenic spot information There is still room for further improvement in such aspects as broadband Internet access, portal establishment and operation, electronic tour guide and transportation navigation, intelligent terminal release of scenic information, etc., and it is necessary to focus on the development of these aspects.

Index Terms Internet+, heterogeneous data sharing, spatial-temporal diversion model, intelligent planning, emergency treatment

I. Introduction

With the continuous development of Internet technology, the Internet + mode of intelligent tourist attractions has become an important trend in the future development of tourism [1], [2]. The "Internet +" mode is mainly embodied by the application of cloud computing, Internet of Things, big data and so on [3]. Cloud computing improves the statistical level and efficiency of data, the Internet of Things can build an industrial chain characterized by integration and unity, and big data can improve the credibility as well as the accuracy of data analysis, which plays an important role in the intelligent planning of intelligent tourist attractions and emergency treatment [4]-[7].

Intelligent tourism scenic spot planning refers to a new type of tourism scenic spot planning mode that applies modern information technology, artificial intelligence technology, big data analysis and other means to efficiently integrate and optimize tourism resources, tourism products, and tourism services in the planning process of tourism scenic spots in order to meet the individualized and diversified needs of tourists [8]-[11]. This model takes the enhancement of tourism experience and tourism industry efficiency as the core objective, and realizes the rational allocation of tourism resources and precise marketing of tourism market through intelligent means [12], [13]. And with the booming development of tourism, the number of tourists received by scenic spots is increasing, and the probability of various emergencies also increases [14], [15]. In order to protect the life and property safety of tourists, the application of Internet + is an important means to maintain the normal order of scenic spots and improve the ability of emergency treatment in tourist attractions [16]-[18]. In the emergency treatment of tourist attractions, IoT+ can build an intelligent emergency management covering the whole process of early warning and rescue through intelligent perception and collaborative response, which is an important guarantee to ensure the safety management of tourist attractions and the safety of tourists' travel [19]-[21].

According to the application of “Internet+” in the current tourism field, the author carries out spatial (physical space + virtual space) intelligent planning for tourist attractions. Considering the emergency treatment of tourist attractions, the author constructs the emergency road network model and spatial-temporal diversion model of tourist attractions through the sharing of heterogeneous data from multiple sources in tourist attractions, and completes the design of the emergency treatment method of tourist attractions based on the heterogeneous data sharing and spatial-temporal diversion model. Using hierarchical analysis method to construct “Internet +” scenic area intelligent planning and emergency treatment evaluation index system, and empowerment, to obtain the evaluation of tourists on this paper's scenic area intelligent planning and emergency treatment method. Based on the evaluation results, the importance and satisfaction of tourist attractions are further studied to find the direction for the long-term development of tourist attractions.

II. “Internet +” intelligent planning for scenic spots

II. A. Spatial layout of the landscape

II. A. 1) Spatial layout of the scenic area logical ideas

The spatial layout and organizational logic in the Internet era presents a flexible layout and functional composite state. The spatial organization mode also presents the characteristics of network and decentralization. At the same time, the scenic area presents the network and leisure tourism development trend of “no attractions” year by year, therefore, the future wisdom scenic area should be grouped in the inner layer of excursion, accommodation, comprehensive services and other functions of the network layout is appropriate, and the peripheral expansion and extension of the industry presents different specialization of the production and service links in the spatial decentralization of the layout characteristics. In addition, the Internet era tourists and innovative people present leisure work, work and leisure characteristics, innovation space, leisure space and livable space into one, highly composite layout, high-end innovative functions and human-oriented needs of the function of a high degree of coupling. Scenic space creation pays more attention to good ecological environment, pleasant spatial scale, high-quality cultural and leisure facilities and rich and varied public interaction space to promote the communication of innovative people and stimulate innovative vitality.

II. A. 2) “Virtual and real integration” scenic space layout mode

Thanks to the rapid development of information technology, the virtual space based on the Internet platform has been growing day by day, and has now become an “invisible” but realistic space form that can be equated with the physical space on which we live. And in the process of continuous development of the two are not opposed to each other, but the boundaries between the two more and more fuzzy, showing a trend of integration. Accordingly, the author proposes the spatial layout model of “integration of reality and reality” for the future spatial development of intelligent scenic spots.

Physical space for shaping for tourism activities participants to provide a variety of activities (thematic cultural planning, diversified experiential activities, industrial function upgrading, etc.) of the physical activities of the place, the space was a group layout, composed of a number of spatial units, between the units by the convenient transportation network, information network interconnections, and there is a buffer zone of vegetation isolation.

Virtual space for the construction of tourism activities to provide participants with virtual activities in the form of virtual network system (virtual service management, virtual interactive experience, connecting functional space, etc.), the space is a network layout, composed of a number of network lines flat “mesh” space, part of the network set up in the area of information nodes.

The concept of “virtual integration” is to integrate the physical space of the physical place, and the virtual place in the virtual network space, complement each other and penetrate each other, the physical space scattered group layout by the network of virtual space is responsible for the association, which is one of the best ways to meet the increasingly diversified demand for tourism experience, and is also the future of the space This is one of the best solutions to meet the increasingly diversified demand for tourism experience, and it is also the trend of future spatial development. The schematic diagram of the “virtual-real integration” spatial model is shown in Figure 1.

II. B. Physical space planning for scenic areas

The planning and design of the physical space of the scenic spot mainly follows the two basic principles of enriching the tourists' experience and perfecting the scenic spot's functional business settings. With the main goal of setting up distinctive cultural themes and expanding the existing functions of scenic spots, adhering to the planning concepts of "large-scale, small-volume, and high-compound" and "people-oriented, experience-oriented, functional, and public participation", we will create a plan that allows tourists to get rid of the "guest scenery turn" and experience and perceive according to their own wishes, so that managers can get rid of boring management procedures and coordinate supervision in interaction with tourists, so that aborigines can get rid of the dilemma of "loss of land and unemployment" and settle down. Let entrepreneurs realize the real sense of wisdom scenic spot in leisure and creation.

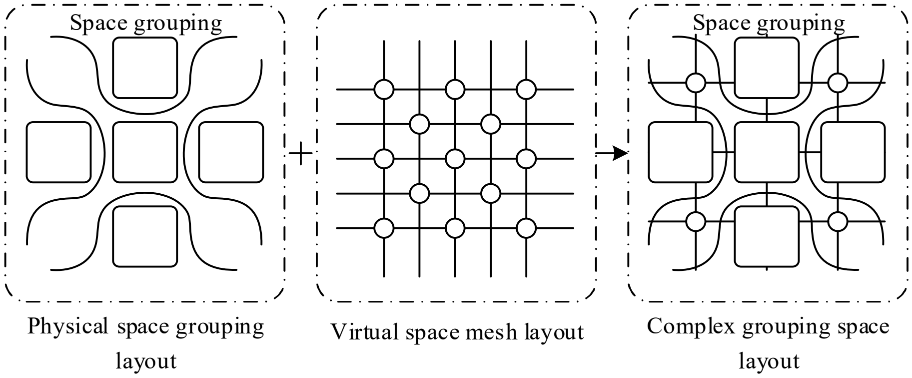

Figure 1: "Virtual-reality integration" space mode

In this paper, physical space is defined as the material entity in the tourist attractions that gives it certain functional attributes, including architectural elements, road transportation elements, public service facilities, etc. These elements often constitute the spatial places where various experience activities of the participants of tourism activities take place. These elements often constitute a variety of tourism activities participants experience activities occurring in the space, so the physical space elements of reasonable planning and design to meet the tourists' “multiple experiences, composite function” of the specific tourism needs.

Based on the people-oriented, eco-first planning concept and sharing economy thinking, this paper comprehensively analyzes and refers to the layout forms of traditional scenic spots, such as the ring core layout mode, the concentric circle layout mode, and the composite layout mode, and from the perspective of tourism participants, with the goal of providing rich new tourism experience for tourism participants, it tries to make the spatial layout mode of scenic spots gradually break the mindset of "scenery-oriented" and "guest-encircled scenery", and finally proposes that the most suitable mode for the layout of smart scenic spots is the composite group layout mode.

II. C.Landscape virtual space planning

Virtual space corresponds to the physical space mentioned above, that is, the network space with multiple functions such as commodity trading, social communication, leisure and entertainment, business office, resource sharing and storage, etc., which is composed by relying on Internet technology. The virtual space referred to in this paper is the space form with convenient management, virtual experience and other functions that complement the entity physical space in the process of space planning and design of intelligent scenic spots.

The virtual space system of scenic spot mainly consists of the front-end intelligent application management platform and the back-end intelligent support system. The application system at the front end is mainly oriented to tourists, managers, aborigines and entrepreneurs, and it is an important main line for the development of scenic virtual space. The back-end wisdom support system is mainly relying on wisdom technology, building the Internet of Things platform, video monitoring platform, network data center and related intelligent terminals, unified for the front-end application system to provide comprehensive and powerful support services. The front-end and back-end systems work together to unify three types of virtual space in the scenic area, respectively, for the scenic area comprehensive management class virtual space, scenic area interactive experience class virtual space, scenic area industry expansion class virtual space three types. The virtual space system is summarized as shown in Figure 2.

III. Emergency response based on heterogeneous data-sharing and spatio-temporal triage models

III. A. Multi-source heterogeneous data sharing

The scenic emergency management system for intelligent terminals obtains information from a variety of terminals and platforms, and faces the ability that multi-source data should carry communication and information format conversion. On the one hand, it receives the data on various types of navigation and communication terminals and analyzes and packages them into the format required by the database according to different contents. On the other hand, the command and control data for each terminal is sent to the navigation terminal through the communication network to provide a basis for the command and control information can be sent from the management command center to the terminal through the 4G wireless network, but also can be sent to any personnel in the emergency response through the short message service of any operator. It will also be connected to the command type BeiDou navigation terminal [22], which is able to directly use the command type terminal of BeiDou navigation, and in the case of serious damage to the basic communication facilities on the ground (e.g., earthquakes), it can be used to directly carry out the emergency command and control scheduling of personnel and vehicles loaded with terminal equipment directly through BeiDou satellites. The multi-source data flow is shown in Figure 3.

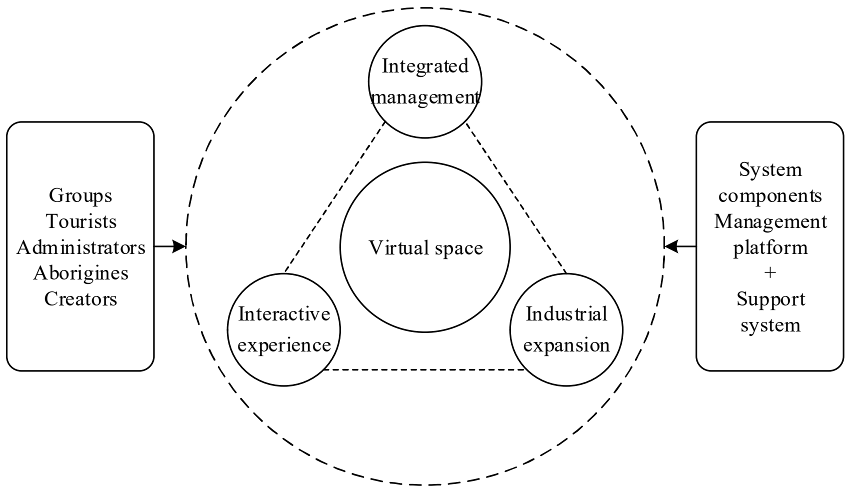

Figure 2: Virtual space system profile

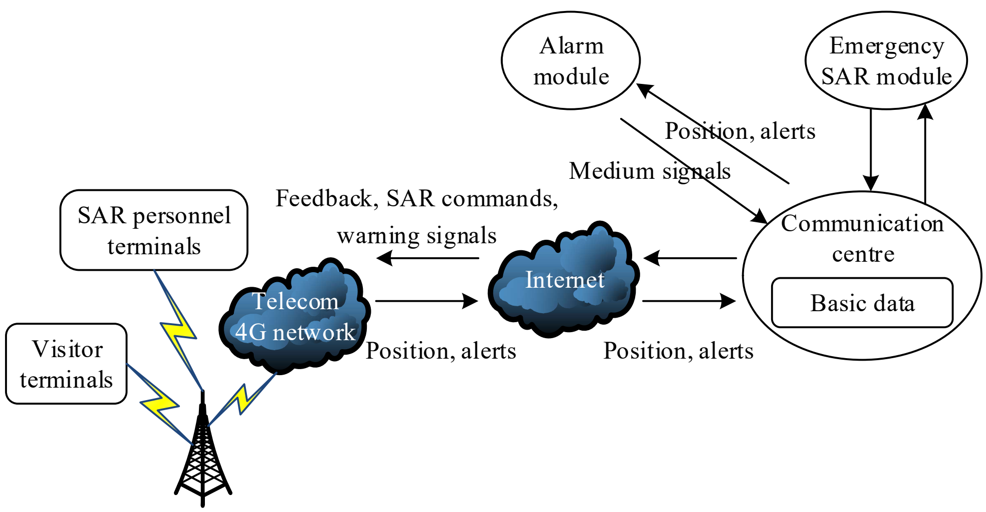

Figure 3: Multisource data flow analysis

III. B. Emergency road network model

The selection of the optimal path as part of the network analysis is an important manifestation of the GIS analysis function, but also a controlling function of the emergency rescue of this system, the mainstream development has three kinds of ways: independent development, pure secondary development and integrated secondary development independent development, refers to the realization of the required functions without the help of any GIS platform, relying only on the underlying programming tools. Pure secondary development refers to completely rely on the open interface provided by the GIS platform for programming, although it can also complete the basic tasks, but for this project, due to the consideration of too many factors affecting the real-time requirements of the system, it is not possible to completely rely on the API interface to realize. Therefore, combining GIS tool software with local algorithmic modeling becomes the primary implementation mode to be considered for this system.

This paper discusses the general process of establishing and optimizing a path algorithm through the path algorithm based on ant colony. Firstly, the ant colony algorithm is abstracted into a class [23], [24], and the class implements the expansion interface provided by the GIS platform, using attributes and functions to simulate the behavior of ants. Then we set up operation functions according to a certain process, which are responsible for controlling the "ants" participating in the algorithm and realizing the ant algorithm. A single ant releases and senses "pheromones" during the movement process, so a large number of ants will form a kind of positive feedback in the process of traveling, so as to ensure that most of the ants are traveling on the optimal path. The data model can be abstracted as:

$$p_{ij}^k = \frac{\tau_{jk}^{\alpha}\eta_{ij}^{\beta}}{\sum_{j\in A}\tau_{jk}^{\alpha}\eta_{ij}^{\beta}} \tag{1}$$

$$\tau_{ij}(n+1) = p\tau_{ij}(n) + \sum_{k=1}^{m}\Delta\tau_{ij}^k \tag{2}$$

$$\Delta\tau_{ij}^k = \frac{Q}{\sum L_k} \tag{3}$$

where m is the number of ants, n is the number of iterations, i is the location of the ants, j is the location that the ants can reach, and A is the set of locations that the ants can reach. η_{ij} is the illuminating information, here is the visibility of the path from i to j, i.e., it is the objective function, here is the Euclidean distance between two points. τ_{ij} is the pheromone intensity of the path from i to j, $\Delta\tau_{ij}^k$ is the number of pheromones left on the path from i to j for ant k, α is the path weight, β is the weight of illuminating information, ρ is the coefficient of evaporation of pheromone quantity on the path, Q is the pheromone quality coefficient, and p_{ij}^k is the transfer probability of ant k moving from position i to position j.

III. C. Temporal and spatial diversion models

III. C. 1) Mathematical model of space-time shunt navigation

The passenger flow in an attraction forms a spatial distribution over different time periods, and this spatial distribution condition still exists when this time period is reduced to a single point (moment). Ideally, if the load of each attraction is equalized at any moment t, then it can be assumed that the load of each attraction is equalized over the entire time period consisting of these several consecutive moments t. The problem translates into modeling the loads of all attractions that are in optimal equilibrium at a given moment in time.

Prerequisite assumptions:

(1) The capacity of each attraction in the scenic area and the capacity of the walking path around the attraction are sufficient.

(2) The capacity of other resources in the scenic area, such as tour buses and rest booths, is sufficient.

(3) Different tourists visit the same attraction for the same amount of time.

Parameters and Variables:

A - attraction set, B - visitor set, C - vehicle set, n - attraction number, c_j - capacity of attraction j, x_j - capacity of attraction j, t_j - length of stay of attraction j, s_{jh} - distance between attraction j, h, l_{kh} - distance between vehicle k that generates dispatch and attraction h, p_{jh} - - the probability that a tourist chooses the next attraction h at attraction j, r_{ij} - the probability that a tourist i chooses a ride at attraction j, t_{ij} - the probability that a tourist i enters attraction j at the moment, v - the speed of the vehicle. Where at moment t, the variables are defined:

$$x_{ij} = \begin{cases} 1 & \text{Tourist } i \text{ is located at attraction } j \\ 0 & \end{cases} \tag{4}$$

$$y_{kjh} = \begin{cases} 1 & \text{Vehicle } k \text{ transports tourist from attraction } j \text{ to } h \\ 0 & \end{cases} \tag{5}$$

$$q_{ij} = \begin{cases} 1 & \text{Tourist } i \text{ finishes at attraction } j \\ 0 & \end{cases} \tag{6}$$

Mathematical modeling:

$$z = \min \frac{1}{n-1} \sum_{j \in A} \left(R_j - \bar{R} \right)^2 \tag{7}$$

$$\bar{R} = \frac{1}{n} \sum_{j \in A} R_j \tag{8}$$

$$R_j = \frac{\sum_{i \in B} x_{ij}}{c_j} \left(0 \le R_j \le 1; j = 1, 2, \cdots n \right) \tag{9}$$

$$\sum_{j \in A} \sum_{h \in A} y_{kjh} \le 1 \left(h \ne j \right) \tag{10}$$

$$0 \le p_{jh} \le 1 \tag{11}$$

$$0 \le r_{ij} \le 1 \tag{12}$$

The meaning of each equation is:

Equation (7) represents the selection of minimizing the variance of the load of each attraction as the objective function.

(8) Eq. is the average load of each attraction.

(9) Eq. is the load of attraction j.

(10) Eq. denotes that a vehicle can travel at most one route in a given dispatch.

Equations (11) and (12) denote the probability of tourist choice.

Due to the dynamic variability of x_{ij} and the scale of the values of each parameter, the model cannot be solved by an exact algorithm, so the problem is transformed into a search for the optimal scheduling scheme that makes the loads of all the attractions as balanced as possible at any moment.

III. C. 2) Description of the Time-Split Navigation Algorithm

Solve the problem of uneven spatio-temporal distribution converted to the problem of minimizing the variance of the load of each attraction at a certain moment in space.

(1) Count the number of tourists in each attraction at a certain moment t within the scenic spot, calculate the load number of each attraction according to the pre-evaluation of the tourist capacity of each attraction with the comfort and safety of the tourists as the main evaluation objectives. And calculate the load variance value of attractions in the whole scenic area.

(2) Sort the size of the conformity number of the attractions, and calculate the size of the gravitational force between each attraction according to the principle of maximum priority based on the gravitational force model.

(3) Estimate the probability of tourists leaving the attractions according to their stay time in the attractions, and thus calculate the passenger flow that needs to be diverted from each attraction.

(4) Referring to the magnitude of gravitational force between attractions calculated in (2) and the number of visitors to be diverted calculated in (3). Scheduling the resources (the main diversion resource of sightseeing buses is considered in this algorithm) by traversing.

(5) Calculate the load variance of the attraction after the diversion in (4) and compare it with the load variance calculated in (1). If it is less than the value calculated in (1), the scheduling plan in (4) is adopted, and if it is greater than the variance value calculated in (1), the scheduling method is reset.

(6) Return to (1) after completing the above steps.

III. C. 3) Time-sharing navigation management

With the support of 3S and other information technologies, the emergency management system based on the model of “spatial and temporal diversion” will automatically generate the visitor diversion plan for the next day according to the number of bookings in the e-commerce system, and the relevant management departments of the sightseeing vehicles, palisades, toilets, restaurants and other related departments will form their own work programs according to the diversion plan and carry out their work in an orderly manner. The emergency management platform for intelligent terminals, after counting the visitor carrying capacity of each attraction, the distance between the attraction and the neighboring attractions, the time spent by the visitors in viewing the attractions, and the time needed by the visitors in the process of connecting the attractions during the journey, etc., the number of people entering the scenic spot through the ticketing system will be imported into the system, and with the support of the database, it will collect and predict the number of visitors of each attraction. Based on the model of “spatial and temporal diversion”, fitting and evaluation are carried out, combined with the optimal path algorithm, the optimal route is selected, so as to carry out scientific navigation and diversion, and to improve the scientific nature of management.

IV. Scenic planning and visitor perception analysis

IV. A. Intelligent Planning and Emergency Response Effectiveness in Scenic Areas

In order to explore the evaluation results of this paper's scenic area intelligent planning and emergency treatment methods in the tourists' groups, the author firstly constructs the evaluation index system of intelligent planning and emergency treatment of tourist attractions through hierarchical analysis method as shown in Table 1 [25].

Table 1: Intelligent planning and emergency treatment evaluation index system of tourist attraction

Target layer	Criterion layer	Index layer
Intelligent planning and emergency treatment of tourist attraction	A. Network infrastructure	A1. Telephone alarm
		A2. Rescue complaint telephone
		A3. Broadband Internet
		A4. Wireless network coverage
		A5. LED screen setting in scenic area
	B. Intelligent tourist service	B1. The establishment and operation of the portal website
		B2. Website link and language version
		B3. Ticket online consulting and language version
		B4. Travel products online purchase service
		B5. Panoramic 720P view
		B6. The setting of the self-service ticket drawer
		B7. Electronic tour guides and traffic navigation
		B8. Intelligent terminal release of scenic spot information
		B9. The setting of the screen multimedia terminal
		B10. Multimedia display experience center construction
	C. Intelligent comprehensive management	C1. The layout and function of the monitor
		C2. Layout and function of resource environment equipment
		C3. Automatic identification checkout equipment application
		C4. The coverage of the digital broadcast
		C5. GPS parking and entry and exit electronic instructions
		C6. Camera, alarm terminal placement
	D. Intelligent marketing system	D1. Wechat public platform
		D2. Mobile app
		D3. Network media channel
		D4. Internet portals and BBS
		D5. Scenic spot simulation game download
	E. Intelligent emergency treatment	E1. Accident risk monitoring
		E2. Hazard analysis
		E3. Emergency response
		E4. Emergency guarantee
		E5. Supervisory management

Hierarchical single ranking is the calculation of the weights of the order of importance of the factors associated with the present level with respect to a factor of the previous level based on a judgment matrix. It is the basis and weighting coefficients for ranking the importance of all factors at this level relative to the previous level. In this study, the hierarchical single ordering refers to the impact of the project indicator on the target level and the impact of each specific indicator under the project indicator on itself. The weighting values are calculated using the arithmetic mean method. The weights of the evaluation index system for intelligent planning and emergency treatment of tourist attractions are shown in Table 2.

Table 2: Weight of intelligent planning and emergency treatment evaluation index

Target layer	Criterion layer	Weight	Index layer	Weight
Intelligent planning and emergency treatment of tourist attraction	A. Network infrastructure	0.199	A1	0.186
			A2	0.182
			A3	0.244
			A4	0.203
			A5	0.185
	B. Intelligent tourist service	0.237	B1	0.103
			B2	0.118
			B3	0.102
			B4	0.092
			B5	0.089
			B6	0.092
			B7	0.122
			B8	0.089
			B9	0.119
			B10	0.074
	C. Intelligent comprehensive management	0.184	C1	0.169
			C2	0.174
			C3	0.149
			C4	0.164
			C5	0.177
			C6	0.167
	D. Intelligent marketing system	0.173	D1	0.165
			D2	0.224
			D3	0.205
			D4	0.199
			D5	0.207
	E. Intelligent emergency treatment	0.207	E1	0.185
			E2	0.208
			E3	0.224
			E4	0.166
			E5	0.217

In this paper, the intelligent planning of "Internet" tourist attractions and the emergency treatment method based on heterogeneous data sharing and spatio-temporal diversion model are applied to the tourist attractions in S city. Combined with the evaluation index system and related literature, a tourist questionnaire was formulated, 1000 questionnaires were distributed to tourists, and 926 valid questionnaires were recovered, with an effective rate of 92.6%. The index score was calculated using a five-level Likert scale, with 1, 2, 3, 4, and 5 representing "very poor", "poor", "fair", "good", and "very good", respectively. The recovered questionnaire data were summarized and calculated, and the evaluation results of intelligent planning and emergency treatment of tourist attractions are shown in Table 3.

From the results in Table 3, it can be seen that the overall evaluation of the intelligent planning of "Internet" tourist attractions and the emergency treatment method based on heterogeneous data sharing and spatio-temporal diversion model is 4.31 points. The scores of the criterion layer indicators are as follows: network infrastructure (4.42 points), intelligent tourism services (4.22 points), intelligent integrated management (4.41 points), intelligent marketing system (4.17 points), and intelligent emergency response (4.32 points). The evaluation score range of the index layer was [4.01, 4.61], the index with the highest score was "the application of automatic identification of ticket inspection equipment", and the lowest score was "scenic simulation game download". The scores of all indicators are above 4 points, and the intelligent planning of "Internet" tourist attractions and the emergency treatment method based on heterogeneous data sharing and spatio-temporal diversion model have achieved good results and obtained good evaluations among tourists.

Table 3: Evaluation result of intelligent planning and emergency treatment of tourist attraction

Target layer	Criterion layer	Score	Index layer	Score
Intelligent planning and emergency treatment of tourist attraction (4.31)	A. Network infrastructure	4.42	A1	4.51
			A2	4.42
			A3	4.22
			A4	4.59
			A5	4.39
	B. Intelligent tourist service	4.22	B1	4.22
			B2	4.21
			B3	4.46
			B4	4.05
			B5	4.31
			B6	4.09
			B7	4.28
			B8	4.18
			B9	4.15
			B10	4.24
	C. Intelligent comprehensive management	4.41	C1	4.49
			C2	4.43
			C3	4.35
			C4	4.61
			C5	4.39
			C6	4.17
	D. Intelligent marketing system	4.17	D1	4.21
			D2	4.03
			D3	4.27
			D4	4.34
			D5	4.01
	E. Intelligent emergency treatment	4.32	E1	4.36
			E2	4.24
			E3	4.29
			E4	4.06
			E5	4.59

IV. B. Analysis of importance and satisfaction

IV. B. 1) Descriptive Analysis of Importance and Satisfaction

The above evaluation results were analyzed together as tourists' satisfaction and importance, and the data on the importance and satisfaction of each evaluation index were substituted into SPSS software for descriptive analysis, and the results are shown in Table 4. The mean value of the perceived importance of tourist attractions is between 3.72-4.27, indicating that the respondents' expectations of the 31 evaluation indicators in this survey are in the middle of the range, and the standard deviation of the importance of each evaluation indicator is between 0.758-0.967, with a small deviation, indicating that the respondents' opinions and attitudes towards the importance of tourism are more consistent.The mean value of the perceived satisfaction of tourist attractions in S city is between 4.01- 4.61, it can be seen that the respondents' satisfaction with Henan Baoquan Tourist Resort is at a better level, and the standard deviation of satisfaction for each evaluation index is between 0.729-0.947, with a small deviation, which indicates that the respondents' opinions and attitudes towards the satisfaction of tourist attractions in S city are more consistent.

From Table 4, it can also be concluded that the mean value of the importance of the evaluation indicators is 3.98, and the mean value of the satisfaction is 4.30. In general, the overall mean value of the satisfaction of the evaluation indicators of the satisfaction of the tourist attractions in S city is higher than the mean value of the importance, which indicates that most of the interviewees' perception of the actual playing experience exceeds the expectation, and indicates that the tourists have a higher level of satisfaction with the tourist attractions in S city.

Table 4: Descriptive statistics of importance and satisfaction

Evaluation index	N	Importance		Satisfaction	
		Mean	SD	Mean	SD
A1	926	4.23	0.918	4.51	0.888
A2	926	4.14	0.909	4.42	0.909
A3	926	4.25	0.839	4.22	0.729
A4	926	3.86	0.781	4.59	0.755
A5	926	3.78	0.877	4.39	0.757
B1	926	4.19	0.881	4.22	0.878
B2	926	3.77	0.758	4.21	0.894
B3	926	3.77	0.875	4.46	0.821
B4	926	3.80	0.881	4.05	0.745
B5	926	3.72	0.892	4.31	0.777
B6	926	3.88	0.943	4.09	0.733
B7	926	4.07	0.865	4.28	0.866
B8	926	4.20	0.846	4.18	0.759
B9	926	4.02	0.914	4.15	0.844
B10	926	3.86	0.871	4.24	0.947
C1	926	4.18	0.842	4.49	0.856
C2	926	3.85	0.953	4.43	0.928
C3	926	3.90	0.796	4.35	0.838
C4	926	4.14	0.777	4.61	0.844
C5	926	3.83	0.967	4.39	0.833
C6	926	4.19	0.958	4.17	0.933
D1	926	4.27	0.924	4.21	0.891
D2	926	4.09	0.864	4.03	0.871
D3	926	3.84	0.949	4.27	0.772
D4	926	3.90	0.823	4.34	0.837
D5	926	3.89	0.869	4.01	0.893
E1	926	4.00	0.873	4.36	0.901
E2	926	4.03	0.765	4.24	0.877
E3	926	4.07	0.851	4.29	0.938
E4	926	3.85	0.765	4.06	0.787
E5	926	3.72	0.805	4.59	0.887

IV. B. 2) Two paired samples t-tests

In order to make the survey results more scientific, the study used SPSS software to carry out two paired samples T-test on the data of importance and satisfaction of satisfaction evaluation indexes of Henan Baoquan Tourism Resort to compare whether the difference between them presents a significant difference. According to experience, if $P > 0.05$, it means that the difference is not significant. If $0.01 < P < 0.5$, the difference is significant. If $P < 0.01$, the difference is highly significant. The results of the two paired samples t-test for importance and satisfaction are shown in Table 5.

According to the results of the paired test, except for broadband Internet, the establishment and operation of the portal website, the intelligent terminal release of scenic area information, the placement of cameras and alarm terminals, the WeChat public platform, and the cell phone APP, the P value of the other 25 evaluation indexes is less than, with a highly significant difference, which rejects the hypothesis that there is no significant difference between the importance of various evaluation indexes and the satisfaction, i.e., it means that the respondents are satisfied with the S There is a significant difference between the perceived importance and satisfaction of the evaluation indicators of satisfaction of tourist attractions in the city. From the t-value, it can be seen that except for the five evaluation indexes of broadband Internet, intelligent terminal release of scenic area information, placement of cameras and alarm terminals, WeChat public platform, and cell phone APP, the difference between the mean value of importance and satisfaction of the other evaluation indexes is negative, which proves that the respondents' actual post-tour perception does not show obvious characteristics of perception weakening, and then indicates that the respondents' post-tour satisfaction reaches the expectation. This result indicates that tourists have high expectations of the tourist attractions in S city, and the tourist attractions basically meet the various needs of tourists.

Table 5: The matching sample T test results of importance and satisfaction

Evaluation index	Importance	Satisfaction	Mean difference	t	sig.(2-tailed)
A1	4.23	4.51	-0.28	0.500	0.000**
A2	4.14	4.42	-0.28	0.593	0.000**
A3	4.25	4.22	0.03	-0.558	0.689
A4	3.86	4.59	-0.73	7.101	0.000**
A5	3.78	4.39	-0.61	5.083	0.000**
B1	4.19	4.22	-0.03	3.049	0.584
B2	3.77	4.21	-0.44	2.694	0.000**
B3	3.77	4.46	-0.69	0.735	0.000**
B4	3.80	4.05	-0.25	5.307	0.000**
B5	3.72	4.31	-0.59	6.876	0.000**
B6	3.88	4.09	-0.21	5.893	0.000**
B7	4.07	4.28	-0.21	5.497	0.000**
B8	4.20	4.18	0.02	-0.791	0.523
B9	4.02	4.15	-0.13	1.834	0.001**
B10	3.86	4.24	-0.38	4.627	0.000**
C1	4.18	4.49	-0.31	2.406	0.000**
C2	3.85	4.43	-0.58	7.106	0.000**
C3	3.90	4.35	-0.45	2.926	0.000**
C4	4.14	4.61	-0.47	5.517	0.000**
C5	3.83	4.39	-0.56	4.243	0.000**
C6	4.19	4.17	0.02	-0.515	0.874
D1	4.27	4.21	0.06	-0.971	0.665
D2	4.09	4.03	0.06	-0.399	0.695
D3	3.84	4.27	-0.43	4.597	0.000**
D4	3.90	4.34	-0.44	3.258	0.000**
D5	3.89	4.01	-0.12	7.164	0.000**
E1	4.00	4.36	-0.36	3.394	0.000**
E2	4.03	4.24	-0.21	6.751	0.002**
E3	4.07	4.29	-0.22	2.206	0.000**
E4	3.85	4.06	-0.21	6.821	0.000**
E5	3.72	4.59	-0.87	7.424	0.000**

IV. B. 3) Tourist Importance and Satisfaction IPA Analysis

Taking importance as the horizontal axis and satisfaction as the vertical axis, the matrix is divided into four quadrants according to the respondents' importance and satisfaction evaluation mean of each influence factor, with the average of the mean of importance (3.98) and the average of the mean of the mean of satisfaction (4.30) as the dividing point, and then the mean of the 31 evaluation indexes' importance and satisfaction are mapped to the four quadrants, and the IPA quadrant analysis of the tourist attractions of S City The map is shown in Figure 4.

Quadrant Ⅰ is the dominant area, which is a high importance and high satisfaction area, and there are five indicators falling in this quadrant, which are telephone alarm point (A1), rescue and complaint telephone (A2), the arrangement and function of monitor screen monitor (C1), the coverage of digital broadcasting (C4), and accident risk monitoring (E1). This indicates that the scenic area is doing relatively well on these indicators in this quadrant and needs to continue to maintain this advantage. The scenic spot needs to maintain continue and further strengthen for these aspects to enhance visitor satisfaction.

Quadrant II is the maintenance area, which is of low importance, but the actual experience is good and the satisfaction performance is high, and there are 9 indicators falling on this quadrant, which are wireless network coverage (A4), the setup of scenic area's LED display (A5), the online consultation of tickets and the language version (B3), the scenic area's 720P panoramic view tour (B5), the arrangement and function of resource environment equipment (C2), the automatic identification ticket checking equipment application (C3), GPS parking positioning and electronic instructions for entry and exit (C5), Internet portal and forum (D4), and supervision and management (E5). It indicates that the above aspects are recognized by the respondents, but their importance to the satisfaction evaluation is relatively low, so for these indicators in this quadrant can continue to do a good job in maintaining and stabilizing the current advantages, but it is not recommended to invest too much time and energy in these indicators.

Quadrant III is the slow improvement zone, an area of low importance and low satisfaction, and there are seven indicators falling in this quadrant, namely website links and language versions (B2), online purchase service of tourism products (B4), the setup of self-service ticket pick-up machines (B6), the construction of multimedia exhibition and experience centers (B10), online media channels (D3), the download of simulation games in scenic spots (D5), and the emergency protection (E4). . Indicators on this quadrant need to make improvements but are not urgent.

Quadrant Ⅳ is the key improvement area, which is of high importance, but the actual experience is poor and the satisfaction performance is low. There are 10 indicators falling in this quadrant, which are broadband Internet access (A3), the establishment and operation of portals (B1), electronic tour guides and traffic navigation (B7), intelligent terminal release of scenic area information (B8), the setup of touch-screen multimedia terminals (B9), and cameras, Alarm Terminal Placement (C6), WeChat Public Platform (D1), Mobile APP (D2), Hazard Analysis (E2), Emergency Response (E3). The above indicators are the aspects that the scenic spot needs to focus on in the future, and the scenic spot urgently needs to strengthen the improvement of these indicators in this quadrant in order to enhance the viscosity and satisfaction of tourists.

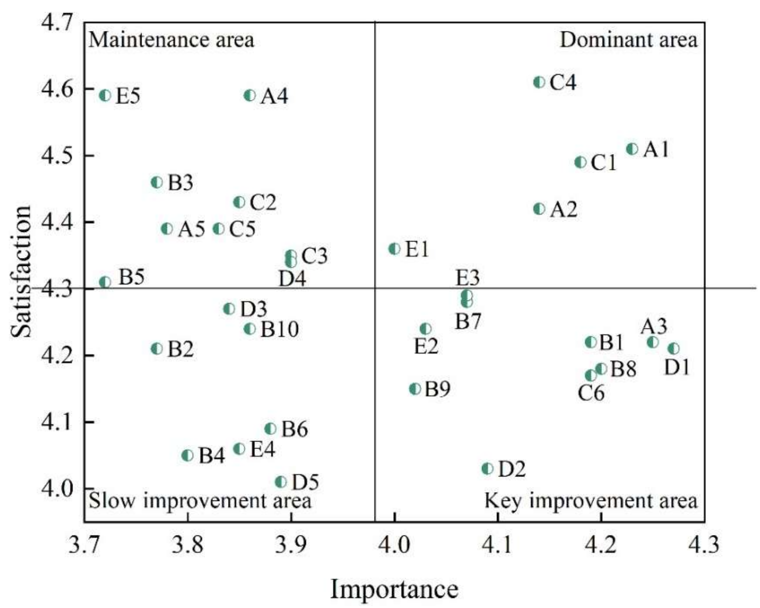

Figure 4: The IPA quadrant analysis chart of the tourist area of S city

V. Conclusion

Based on the characteristics of “Internet+”, the article carries out intelligent planning for the spatial layout of the current tourist attractions, and then constructs the emergency road network model and spatial-temporal diversion model for emergency treatment of the tourist attractions through the sharing of heterogeneous data of the scenic spots from multiple sources. The target layer score of this paper's “Internet+” tourism scenic area intelligent planning and emergency treatment method based on heterogeneous data sharing and spatio-temporal diversion model is 4.31 points, and the scores of each index in the guideline layer and index layer are not less than 4 points, and tourists have a better evaluation of this paper's tourism scenic area intelligent planning and emergency treatment. satisfaction of tourism scenic areas in S city The overall mean of satisfaction of the evaluation indicators (4.30) is higher than the importance mean (3.98), indicating that most tourists are satisfied with the tourist attractions in S city, the tourist attractions, tourist attractions can meet most of the needs of tourists. All indicators are divided to establish the advantages of the tourist attraction and the places that need to be focused on improvement, so as to point out the direction for the development of the tourist attraction.

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