# Real-Time Platform Construction of Red Tourism Resources and Smart Education Based on Random Mobile Station Communication

Jiashu Peng Nanjing Xiaozhuang University, Nanjing, Jiangsu, China

Abstract—The advancement of computer technology, network technology and Internet technology has brought about the rapid development of data mining technology. Red culture is the unique material and spiritual wealth of ideological and political education formed by the Communist Party of China through long-term accumulation. Red tourism resources are also a kind of wealth, and it is one of the important resources for colleges and universities to carry out ideological and political education at this stage. Ideological and political education is the key point for teachers to help students establish a correct world outlook, values, and outlook on life, and to fully implement the task of moral education. Smart education is leading the development direction of national education informatization and has become the main theme of education development in the era of technological change education. Smart education is a grand system project, and its overall architecture can be summarized as "one center, two types of environments, three content libraries, four types of technologies, five types of users, and six types of services".

**Keywords**—Real-Time Platform, Red Tourism Resources, Mart Education

#### I. INTRODUCTION

In recent years, with the advancement of computer technology, computing power and storage capacity, the scale of mining data sets has grown rapidly, and most of these data sets are geographically distributed [1] in multiple places. The current data mining algorithms and models are mainly centralized. A software-defined decentralized mobile network architecture [2] SoflNet is proposed for 5G diverse communication scenarios. By analyzing the communication requirements of future mobile communication [3] scenarios and the characteristics of the existing LTE network architecture, the design principles of SoftNet are pointed out [4].

The basic structure, working method and basic mobility management process of SoftNet are expounded. In the 21st century, scholars began to study related issues of red resources. On the basis of determining the concept of red tourism resources [5], a new trend of education development that combines red tourism resources with ideological and political education has emerged. In general, scholars' research on red tourism resources mainly focuses [6] on the following aspects. The ideological and political courses in colleges and universities are courses set up to improve the ideological and political literacy of contemporary college students [7]. The main contents of the courses are Marxism-Leninism, Mao Zedong Thought, and the theoretical system of socialism with Chinese characteristics. As of today [8], there are many red tourist areas in China, which have become classic bases for ideological and political education [9].

The traditional ideological and political education method, which is mainly based on classroom teaching, has gradually become inefficient [10], and students' vision is more attracted

by novel and creative self-media. "Internet + ideological and political education" has gradually become an irreversible educational reform and development trend [11]. Technology is the key force driving educational reform. The early papermaking and printing techniques changed the oral education model. Modern information technology has broken through the time and space limitations of the homogenous centralized education model [12]. Since IBM first proposed the concept of "Smarter Earth" in 2008, the "Smarter Earth" strategy has been generally recognized by countries around the world. As an important part of the smart earth strategy, smart cities have been included in the scientific and technological development plans of many developed countries. [13].

The concept of distributed data mining originates from the physical distribution of users, data, hardware resources and software resources required for mining [14]. Distributed data mining is a new research field proposed in recent years. In distributed data mining, computers are distributed, and each computer enjoys its own resources [15], and the machines communicate through message passing. Based on the idea of on-demand mobility management and network slicing technology, this paper proposes an [16] on-demand mobility management enabling method for 5G networks, namely the mobility-driven network slicing technology MDNS. Firstly, the internal relationship between [17] on-demand mobility management and network slicing is analyzed from a theoretical point of view. Application [18] research of red tourism resources. Scholars have conducted more in-depth research on this issue [19], and most teachers combine red resources with students' ideological and political education. Niu Yanna (202) believes that red practical education should be widely carried out through red tourism, bases and related groups, so as to give full play to the educational function of red tourism resources.

Smart education is a good orientation for future educational reforms empowered by technology [21], but it is only in progress and not completed. It is necessary to recognize the basic truth of "no best, only better". Therefore, compared to "Smart Education" [22], the team is more willing to Use the comparative "Smarter Education" to highlight this idea. The theme of red tourism resources is prominent. Red tourism resources have obvious political colors [23], but as a tourism industry, its development cannot rely on special policies, otherwise it will be difficult to achieve sustainable development [24]. With the advent of the self-media era, college student groups have suddenly increased their contact with the outside world through the Internet and its carriers, and the share of passively accepted social education in college education has continued to increase.

#### II. THE PROPOSED METHODOLOGY

#### A. Random Mobile Station Communication

At present, distributed data mining is a new research field. Data mining algorithms based on various distributed technologies can be roughly divided into two types: algorithms in which data is distributed but computation is not distributed, and algorithms in which both data and computation are distributed. Algorithms in which both data and computation are distributed conforms to the development trend of distributed data mining because it achieves distributed data mining in the true sense. The traditional mobility refers to the mobile target (user or terminal) in the process of moving within the coverage area of the network.

$$T_{total} = p T_{doc} + T_{room} \tag{1}$$

$$\chi_i^t = \chi_i^{t-1} + v_i^t \tag{2}$$

Regardless of its location, the network continues to provide it with the ability to communicate. Therefore, the mobility management in the mobile communication network is mainly used to ensure the reachability of the terminal service and the continuity of the communication when the terminal moves. This article takes the red tourist resort of Xibaipo as an example, combines it with the ideological and political education of students in Hebei Institute of Engineering and Technology, and reveals the means and methods of combining red tourism and ideological and political education for college students with a case. There are very practical guiding significance. The ecological learning environment takes learning as the center and data as the link.

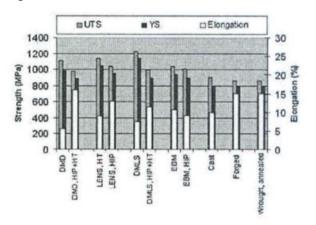


Fig. 1. Real-time platform

And reflects the six characteristics of seamless connection of learning space, agile perception of learning situations, natural interactive learning experience, accurate adaptation of learning services, full recording of the learning process, and open and integrated learning resources. The distribution of red tourism resources is extensive and regional. China's red tourism resources are widely distributed, and there are abundant red tourism resources in the eastern, central and western regions. Under the circumstance that educational resources are already constituted, ideological and political education in colleges and universities needs to go out of the classroom.

#### **B.** Red Tourism Resources

Connect with new technologies and new social dynamics, and appropriately adjust, guide and extend them, forming an educational framework of "classroom foundation + extracurricular guidance". At present, smart education has been mentioned more at the practical level. Some domestic and foreign IT companies (such as IBM, Founder, Huawei, etc.)

have proposed smart education solutions, and the research at the academic level has just started. Since 2011, there have been research results dedicated to discussing smart education from the perspective of education informatization development. The main content of this paper is the application of mobile agent technology in distributed data mining, and researches on the distributed data mining prototype system and distributed association rule mining algorithm based on Aglet technology.

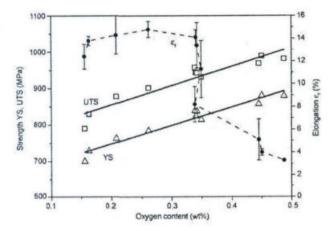


Fig.2. Red tourism resources

To sum up, the specific research contents are as follows. In a mobile communication network, the purpose of location management is to track the location of the terminal to ensure the reachability of downstream services. The specific operation of location management includes three aspects: location area management, location inquiry (paging) and terminal reachability management. Relevant statistics of Hebei Province show that: in the middle of 2012, the number of international tourists received by Hebei Province reached 111. 140,000 passengers, of which the number of Asian tourists is the largest, reaching 49.9%. 540,000 passengers.

Mainly from South Korea and Japan; the number of European tourists was 40. 530,000 person-times, a year-on-year decrease of 4. 08%, the source of customers mainly comes from the United States, the keynote report "Smart Education: A New Realm of Education Informatization" made by the first author of this paper opened the curtain of the era of smart education in my country. After nearly six years, my country's smart education has entered the pilot and demonstration stage from the embryonic stage in 2018. The purpose of ideological and political education in colleges and universities is to improve the ideological and moral level of college students.

#### C. Real-Time Platform Construction Of Smart Education

And the content of ideological and political education is positively related to the effect of ideological and political education. At present, the ideological and political courses in most colleges and universities are the main channels for ideological and political education for students. Different from the shallow memory and understanding of "socialist core values", ideological and political education in colleges and universities should spread outward on this basis, and use this as the measurement standard for educational results. In terms of smart education technology architecture, some scholars have studied the architecture of smart education cloud platform from cloud computing. It studied the methods, technologies and strategies for the construction of regional smart education cloud.

$$H(x, y, z, t) = L(x, u, t) + \sum_{i=1}^{n} \gamma(t)$$
 (3)

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$$\frac{\partial}{\partial x_i} \left[ \left( \upsilon + \frac{\upsilon_i}{\delta_k} \right) \frac{\partial k}{\partial x_i} - \rho \upsilon_i k \right] + \rho P = 0 \tag{4}$$

Pointed out that regional smart education should realize the informatization of education management. Data mining is an emerging technology that has emerged with the development of artificial intelligence and database technology in recent years. Data mining is an interdisciplinary subject, which uses classification, correlation analysis, sequence analysis, cluster analysis, machine learning, knowledge discovery and other statistical methods to filter out implicit, credible and novel data from a large amount of data, Advanced processing of effective information. In the research of 5G network, the 3GPP organization proposed a terminal in MICO (Mobile Initiated Communication Only) mode. Downlink paging is not monitored, so after the terminal is disconnected from the network, the network cannot find its location, that is, the terminal in this mode cannot be paged. In the past 10 years, Hebei Province has attached great importance to the development of the red tourism industry, and has taken active development measures, which have also achieved some remarkable results. At the same time, the Hebei Provincial Government has been strengthening the protection of the existing red tourism resources, and has built a number of new red tourism attractions, providing good materials and content for the ideological and political education of college students in Hebei.

### III. EXPERIMENT

Intelligent Design of Social Innovation Service is shown in the figure.

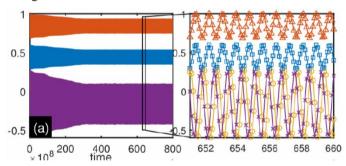


Fig.2. Intelligent Design of Social Innovation

The real-time platform construction of smart education is shown in the figure.

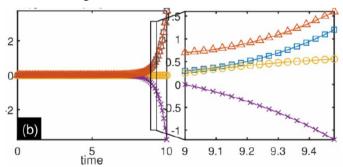


Fig.3. Real-time platform construction of smart education

Random mobile station communication is shown in the figure.

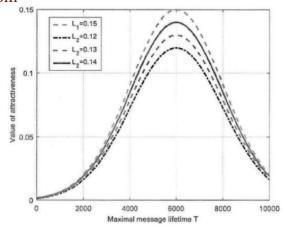


Fig. 4. Random mobile station communication

#### CONCLUSION

At present, the international research on smart education is mainly based on Korean scholars. South Korea officially promulgated the "Smart Education Promotion Strategy" in 2011, and then a large number of researchers began to explore smart education. The ideological and political education service system in colleges and universities based on tourism resources is established based on the idea of "platform + application + service". In the era of tourism big data, it integrates tourism-related application systems and information resources mainly based on red tourism. The purpose of ideological and political education in colleges and universities.

## References

- Lu Chenghua, Kou Jisong. Multi-attribute decision-making and adaptive genetic algorithm for solving QoS optimization of Web service composition [J]. Computer Science, 2019.
- [2] Cheng Bo, Han Qingmian, Zhang Wenkai, et al. A Service Automatic Combination Proxy System for Multi-objective QoS Optimization: CN111639741A[P]. 2020.
- [3] Lin Jian. Research on QoS-based Web Service Prediction and Recommendation Mechanism and Algorithm. Wenzhou University, 2019
- [4] Hu Zhiyuan. Research on cloud manufacturing service combination based on intelligent optimization algorithm [D]. Nanjing University of Posts and Telecommunications, 2018.
- [5] Kong Lingbiao, Cui Jie, Yang Ming, et al. Intelligent QoS routing optimization method based on deep reinforcement learning in SDN environment, System:, CN112491714A[P]. 2021.
- [6] Zeng Lingfang, Cheng Wen, Li Chunyan, et al. An intelligent monitoring and management method and system for a large-scale distributed system: CN109587217A[P]. 2019.
- [7] Zhao Dong, Liu Jun, Gao Yulin. Reflections on the innovative development of smart education in colleges and universities: Based on the background of building a lifelong learning education system that serves the whole people [J]. Journal of Liaoning Radio and Television University, 2021(2):4.
- [8] Chen Nanxi, Zhang Roujia. A distributed QoS prediction method, system and device based on 5G access network: CN111083743A[P]. 2020
- [9] Zhang Kai. Path optimization of the national fitness service system in the era of self-media [J]. Journal of Shenyang Institute of Technology: Social Science Edition, 2020, 16(4):5.
- [10] Lu Chenghua, Kou Jisong. Multi-attribute decision-making and adaptive genetic algorithm for solving QoS optimization of Web service composition [J]. Computer ence, 2019, 46(002):187-195.
- [11] Gao Xincheng, Liu Deju, Wang Lili, et al. Design and Optimization of QoS Routing Model Based on Ant Colony Algorithm [J]. Journal of Shaanxi Institute of Technology (Natural Science Edition), 2019, 035(002):67-72.
- [12] Jin Yunan. Research on the way to carry out national fitness services based on intelligent Internet [J]. Sports Time and Space, 2018(24).
- [13] Zhang Lei. Research on the Effective Supply Path of National Fitness Public Services in my country——Analytical Framework Based on Collaborative Governance [C]// The 11th National Sports Science Conference Abstracts Collection. 2019.
- [14] Li Xinming. Research on multi-constraint QoS unicast routing problem based on swarm intelligence optimization algorithm [D]. Huazhong University of Science and Technology, 2019.

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- [15] Zhou Xinxin, Zhang Long, Gao Zhirui, et al. Architecture Model Design of a Mobile Distributed File Sharing System Based on QoS [J]. Wireless Internet Technology, 2019, 16(22):2.
- [16] Yan Yongming. Research on SBS cloud application performance adaptive optimization method based on dynamic adjustment of component service resources [D]. Northeastern University, 2019.
- [17] Xu Zhenglun, Yang Hebiao. Research on QoS Optimization Scheduling Algorithm Based on Kubernetes Scheduler [J]. Software Guide, 2018, 17(11):4.
- [18] Xu Bintai, Zhou Jie, Yu Qiusheng, et al. Differentiated QoS routing strategy for power services based on collaborative intelligence and sub-gradient optimization algorithm [J]. Electrical Measurement and Instrumentation, 2020, 57(10):8.
- [19] Fu Jia, Li Aiping, Duan Liguo, et al. Research on QoS-driven service composition energy optimization in the Internet of Things environment [J]. Small and Microcomputer Systems, 2020, 41(9):6.

- [20] Lei Chaozi. Constructing a new education system serving lifelong learning for the whole people for the development needs of the intelligent era [J]. People's Education, 2020(6):5.
- [21] Ren Pengxiang, Hu Yonggang. Optimization system, method, device and medium for distributed service quality of object storage: CN112822285A[P]. 2021.
- [22] Li Shixuan, Chen Chuan, Zhou Yuren, et al. QoS prediction method and system based on federated learning, client and server: CN112600697A[P]. 2021.
- [23] Yan Zhiqiang, Yang Hanyu, Cheng Guanjie, et al. Comprehensive Evaluation Framework and Algorithm of Service Quality Based on Blockchain [J]. Computer Integrated Manufacturing System, 2021, 27(9):13.
- [24] Zhang Pengcheng, Wei Xinmiao, Jin Huiying. Dynamic QoS Optimization Based on Federated Learning in Mobile Edge Computing [J]. Chinese Journal of Computers, 2021, 44(12):16..