Applying Fuzzy Clustering to Examine Marketing Strategy of Tourism Brand in Mobile Internet Era

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ABSTRACT

Mobile internet technology is the development of modern communication technology and internet technology, which guides the progress of modern communication and the information field. It enables most users to access the internet easily with just a mobile phone through a powerful and convenient mobile network. Compared with the traditional ways of television advertising and television broadcasting, there is a clear advantage to expand the development of tourism by using the mobile internet. Therefore, it is important to study the development of tourism industry in the context of the mobile internet era. Based on the analysis of the characteristics of mobile internet, and its impact on the tourism industry, this article uses the intelligent push algorithm based on fuzzy K-means clustering to construct the similarity matrix. Then, the efficiency is pushed, and reasonable information is sent to users by the calculated degree of interest. In this way, people can realize a more perfect tourism development strategy based on the background of the mobile internet era.

KEYWORDS

Fuzzy K-Means Cluster, Intelligent Push Algorithm, Mobile Internet, Modern Communication Technology

INTRODUCTION

Nowadays, the development of the traditional tourism has entered a very mature stage; this marketing model has been unable to meet the needs of increasing popularity. The space where tourism relies on the market to grow spontaneously is not very big (Tasmania, 2015; Cimiano et al., 2015; Xiao et al., 2016). Tourism brand market is beginning to change from the spontaneous growth to the growth promotion model. In recent years, the rapid development of Internet technology has led people into a new era. According to China’s Internet Center statistics, we can see that the total number of Chinese websites reached 3.57 million and the total number of pages reached 150 billion (Joshi et al., 2015). For us, this is a very big number. It is very difficult, but also very necessary for people to find the content of their needs rapidly and accurately in the endless and fast changing Internet (Shi et al., 2010; Wu et al., 2014). With the arrival of the information age, various industries are faced with the problem how to merge with it, so is the tourism (Shinto et al., 2013). So, a new marketing model emerges---tourism network marketing. The development of the tourism brand network marketing provides a new marketing tool for the development of the tourism industry. This is mainly for tourism enterprises (Bohnel et al., 2006; Uris Huneker et al., 2008; Collina et al., 2012). It puts the Internet as the carrier, using advanced electronic method to establish the image of tourism enterprises, and achieves the two-way communication to meet the needs of tourists, so as to expand the market, increase profit and achieve its goal of market activities (Cheng et al., 2016; Miller, 2015). From the concept of tourism

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network marketing, we can see that it shows and enhances the value of “Network” and “Tourism”. In order to spread the image of tourism destination, promote its tourism products to facilitate and guide (online and offline) trading, and develop the tourism industry even more aggressive, it takes a variety of high-tech means and marketing tools (Schally et al., 1994; Sheen et al., 2008; Yu et al., 2016; Chen et al., 2017). According to the user’s needs, we use information push technology to screen the appropriate information quickly and send it to the user equipment. Information push technology can continuously push information to the user, the request for users is very low and it is applicable to the general public. So, this technology is becoming the main way to collect, disseminate and exchange information, indicating that it has important practical significance. The application of intelligent push technology in the tourism industry, breaking the traditional tourism marketing model, which brings convenience to the user and greatly improve the development of tourism. Tourism network marketing is based on IT technology, which has driven the change of tourism marketing. It sets the media and trading places in a body, uses the Internet to carry out tourism marketing activities, and gives the tourism marketing mix with a new connotation. This paper is based on the analysis of the characteristics of mobile Internet and its impact on the tourism industry, and it uses the intelligent push algorithm based on fuzzy K-means clustering to construct the similarity matrix. Then the efficient and reasonable information is pushed to users by the calculated degree of interest. In this way, people can realize a more perfect tourism development strategy based on the background of the mobile Internet era.

ANALYSIS OF MOBILE INTERNET AND TOURISM BRAND MARKETING STRATEGY

The Development of Mobile Internet

Mobile Internet is the combination of mobile and the Internet, both have the characteristics of mobile and convenient, and has the ability to store information on the Internet. The combination of the Internet and mobile Internet can be upgraded, so that the exchange between people is no longer limited. The perfect integration of mobile Internet using the operator to provide wireless access and the Internet companies proving a wide range of network applications is the main direction of the future development of the information age. In 2010, we began to contact and learn the mobile Internet from the media. In 2012, many of the traditional Internet companies began to shift the focus of development to the mobile Internet area. They developed and studied all kinds of intelligent technology and manufacture mobile clients. According to the 2015 annual report of the global mobile application market, the United States, China, India, Mexico and Indonesia are the highest five density of mobile Internet users. Global smart phone penetration rate for Singapore, South Korea, Japan, the United States and the United Arab Emirates in the top five, all of them are the traditional high national income countries. From high to low arrangement, the growth speed of global mobile Internet rate ranking for India, Brazil, Indonesia, Russia and Vietnam. Mobile traffic growth represents the potential of mobile consumption, and therefore for the sea Internet Companies, in the realization of the layout should pay full attention to South Asia, Southeast Asia and Latin America areas. In 2013, the number of Internet users in China reached 620 million, the number of mobile Internet users reached 500 million, and the growth rate of mobile Internet users was very fast. The number of 3G subscribers in China is 417 million, and the numbers of 3G subscribers of the three operators are over billions, in which mobile users are 19.163 million, China unit com users are 12.26 million and the users of telecommunication are 10.311 million, all of them have various degrees of growth. Smart phone market in recent years in China is also developing rapidly. The shipment of smart phone is 318 million units, and with the increasing number of users, it is expected the shipment of smart phones will continue to grow in the future.
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