Chapter 13

A Study on Tourist Management in China Based on Radio Frequency Identification (RFID) Technology

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ABSTRACT

In recent years, tourism in China developed into a massive industry. According to the statistics from the National Tourism Administration of the People’s Republic of China, the number of travelers has reached 16.1 billion in 2007 alone. On public holidays, most of the popular tourist attractions are filled to capacity, receiving 100% or even reaching 300% capacity. This was reported during the celebration of the May 1 golden week in 2006. Another report said that Beijing’s Forbidden City accommodated more than twice its maximum capacity on May 2, 2006. The Wutai Mountain, Jiuhua Mountain, Pingyao ancient town, Tongli ancient town, Mo Kao Grotto at Dunhuang, the Potala Palace and other famous scenic spots also peaked at 100% full capacity from May 2 to May 5 (Xinjing Newspaper, May 8, 2006). The huge number of tourists resulted to a somewhat negative feedback as their quality of experience and interest had substantially diminished because of overcrowding. In addition, tourist attractions faced a serious challenge in service quality, security and sustainable usage of resources during high tourist season. Faced with these challenges, a prediction system for tourist reception during high season has been adopted by the National Tourism Administration of the People’s Republic of China. The system is helpful for regulating the flow of tourists. However, from the microscopic point of view, it is necessary to conduct management and instruction for travelers before and after their arrival. Recently, RFID (Radio Frequency Identification) technology has been considered by tourist attraction managers. Radio Frequency Identification (RFID) is a non-contact, automatic identification technology. Through its radio frequency signal, RFID offers automatic target recognition and access to relevant and without human
intervention identification of work is made. RFID can work in various environments. It can identify fast moving objects and is capable of identifying multiple tags, in a rapid and convenient operation. Since the 1990s, RFID technology has been widely used in commercial, logistics, property management and other fields, but interest towards potential application to the needs of the tourism industry only began in recent years.

**THE CONNOTATION OF TOURIST MANAGEMENT**

A tourist attraction mainly targets travelers who are its consumers. From the consumers’ point of view, the behavior and needs of tourists should be highly valued by tourist attraction managers. However, there is a feature that renders inseparable the process of tourist production and consumption. Travelers play not only the role of consumers but also the key point of tourist attraction service. Thus, managers of tourist attractions should pay attention on the role of travelers along with bringing travelers’ supervision into scenic spots management.

In countries where a tourism economy is highly developed, traveler management is widely accepted. ‘Traveler management’ mainly refers to trying to meet the needs of travelers on the premise of maintaining the sustainable environment and resource development, which use the manner of technology, education, economy, administration, and law to manage travelers (Zhang Wen and Li Na, 2007).

According to existing research, theories and practices are mainly focused on the following six aspects of traveler management: demand and preference, behavior, capacity, safety, experience and impact.

**The Management of Traveler Demand and Preference**

‘Management of Traveler Demand and Preference’ refers to consumer preferences for particular products and services of different tourists. Understanding and analyzing the needs and preferences of tourists in different aspects will help in the provision of appropriate services to tourists. Consequently, tourist demands and preferences in the scenic area of product management and marketing optimization, as well as tourism planning and tourism industry, were all of great significance (Bill Bramwell, 1998).

Scholars from other countries had conducted in-depth studies of this topic. Um S. (1992) studied the decision process of tourism destination and believes there is a process of change passive to active on tourists perceived needs. Stephen W. Li Win (2001) suggests that there are significant differences in preferences between the first time travelers and returning customers concerning the demand for tourism products. Noam Shoval (2004) analyzed the attraction preference towards travelers from different cities and found out that there is a distinct impact between ‘the length of stay, the times of travel and consumer behavior. Meanwhile, Alison J. McIntosh (2004) categorized tourism product preferences into five types: seek novelty, to understand the local lifestyle, cultural authenticity, communication with locals and exchange pleasure of learning opportunities with locals. All these research results are expected to assist managers understand the law of tourist attractions and behavior patterns of consumption in order to further provide better services and products, thereby enhancing the quality of travel experience.

**The Management of Traveler Behavior**

In tourist behavior management, current major overseas research focuses on describing tourists visiting the scenic spots in order to tap the law of