

Designing Itinerary Maps for Personalized Travel Customization Service

Yufen Chen, Meng Li, Shulei Zheng
Zhengzhou Institute of Surveying and Mapping
Zhengzhou 450052, Henan, PR China
cyfbeijing@163.com

ABSTRACT

A travel itinerary is necessary for a tourist before a trip, and creating an efficient and economic trip planning is often a difficult and time-consuming task for most travelers. In order to solve this problem, the study of personalized travel service is attracting the attention from both travel agencies and GIS researchers. The way of personalized travel service mainly has customization and recommendation. Compared with recommendation, travel customization service needs more detailed travel information provided by tourists according to their preferences, hence the concept model of itinerary is very important. Meanwhile, conventional travel itineraries list travel related information often in tabular form, so visualizing the trip plan on the map is a challenging task.

The goal of this research is to develop a system framework of creating personalized itinerary automatically and visualizing the itinerary on map. In this paper, we introduce a method of designing itinerary map for personalized travel customization service. Firstly, a concept model of trip itinerary is proposed by identifying the needs of tourist from a user survey and analyzing travelogues. The concept model includes travel-related information, which is the parameter of designing itinerary map. Secondly, a trip itinerary database is built from travelogue on the web using text mining technology, and the concept model provides the keywords for Chinese word segmentation. Thirdly, the itineraries in database is searched and matched with itinerary form filled by tourist according to the concept model, and then a new personalized trip planning for a specific user is created. And finally, the designing principles for visualizing trip planning on the itinerary map are presented, and personalized map templates are designed. We evaluated the efficiency of our method with large amounts of travelogues collected from Shenzhen, China.

Keywords: Personalized map design, Itinerary map, Travel customization service, Text mining