A Study on the Building of Tourism Service Model for Customers' Feedbacks on Social Media

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Abstract. It is a very efficient method of identifying real-time consumers' feedbacks to use and appeal to social big data from SNS. Thus, businesses, as a tool for effective management, have recently utilized a system analyzing big data on the social media in order to gather information on customers' feedbacks. The current paper aims to present a model for tourism service that can utilize big data on the social media, and effectively collect and analyze customers' feedbacks. The proposed system is designed as follows. First, in order to secure standardization and generalization on the basis of tourism industry domain networks, a design plan was established to extract common collection sources for each B2C industry and each category of tourism business, and perform a standardized analysis. Also, information on each industry was collected for an analysis of tourists'(consumers') comments and such categories as attraction sites, lodging places and transportation.

Keywords: Social Media, Big Data, Tourism, Service Model, Customer Feedback

1   Introduction

Management of customer relationship is an essential feature of effective management and, thus, big data on the social media is a crucial source of information.
In general, opinions from potential customers are collected by telephone, email and/or surveys, but these conventional methods require much time and cost.

In contrast, collecting data through blogs and SNS takes less time and cost and provides valuable help to identify customers' feedbacks for development of products, since their opinions are voluntarily provided.

Conventional analysis systems are not really adequate for big data that contain much atypical data. Thus, researches have developed analysis systems to analyze such atypical big data. Buzz monitoring is an example that uses SNS to collect a variety of customers' opinions. Analysis of big data requires convenience and on-line realtime system.

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In this paper we propose a system that can effectively collect and analyze big data from social media. Also, we present an empirical application of the system to the real reputations on tourism services.

2   Related Works

Big data usually contains much atypical data and is, thus, difficult to analyze by using traditional analysis systems. At present, collection and analysis of customers' enormous data on their blogs and SNS can be done through Buzz monitoring, which requires real-time and easily usable data as it is a system-based analysis. Buzz monitoring can help businesses develop marketing strategies, since it enables us to identify customers' preference, interests and recognized images of firms by analyzing their comments and opinions placed in SNS channels and websites.

Buzz monitoring can be defined as follows: it collects and accumulates customers' online feedbacks and opinions and analyzes them by a set of keywords and identifies how public opinion is formed of a particular issue and how it is spread.

Businesses generally employ both quantitative and qualitative surveys in order to obtain consumers' feedbacks about their goods and services. However, a crucial drawback of traditional quantitative surveys is that they consist solely of pre-arranged survey questions of multiple choices. In contrast, a qualitative method, though it is not based on a closed framework like a quantitative one, cannot produce an objective numerical result. Moreover, it usually applies to a small group and, as a consequence, its result cannot be generalized to general public. Such limitations of both quantitative and qualitative methods can be overcome by Buzz monitoring.

First of all, it can access and analyze consumers' free and spontaneous dialogues and opinions. The users on SNS do not use stereotyped set phrases and thus their real responses to a product or service can be heard. Also, Buzz monitoring can target a great number of users and its result can be obtained in an objective numerical value. Technology to obtain and analyze data from a set of channels including websites and smart devices has been developed to identify users' real-time behavior, circumstances and emotion.

3   Development of tourism service models

First, in order to develop a tourism service model, we need to secure standardization and generalization using domain networks. To that purpose, the presented model makes a thesaurus design structure semantic relationship between domain components and their terms and extracts information on each industry for analysis of users' comments. Also, a variety of business sectors including attractions, lodgings and transportation are analyzed. As illustrated in Figure 1, a tourism service model can be established as follows. It consists of three components: planning, preparatory survey and information modeling.

① Planning for tourism information modeling: Based on previous analyses, basic planning is conducted for a set of topics: classification of themes, basic direction, establishment of analysis knowledge through interviews with test beds, targeted collection sites and ranges.

② Preparatory survey and analysis: suggestions and managerial implications are extracted from empirical analysis of types of comments, examination of previous analyses, and case studies.

③ Modeling: Mapping of features with users' opinions and emotion leads to classification of themes, definition of analysis systems, and analysis of major keywords(keywords, TPO, synonyms and stop words).
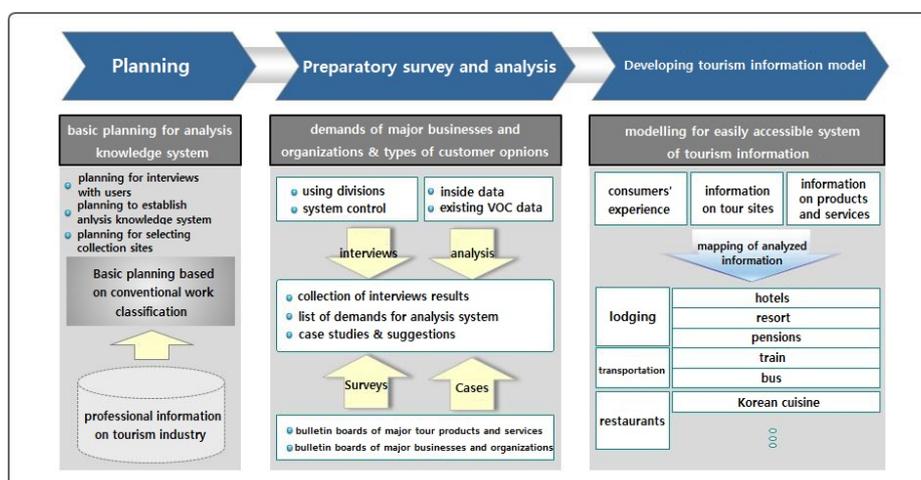

Fig.1 Flow of service model development

Evaluation of tourism service models can be performed as follows. First, ranks of major attraction sites in some evaluation items are calculated. For each quality factor, the exposure, preference and recommendation are analyzed to calculate the ranks.

① Exposure: Exposure to a particular media is analyzed to extract target media. Analysis of changes in exposure by a certain period of time can help identify changing trends. Changes in major keywords, main experiencers and spread of issues are also under analysis.

② Preference: Analysis of preference focuses on whether comments are positive or negative and why.

③ Recommendation: Comparative analysis of attraction sites on the same level can extract a list of ranked sites.

Evaluation criteria for analysis of sightseeing sites are not based on conventional surveys but on consumers' opinions on the social media. The criteria include the number of posting comments and positive/negative responses and classification is based on the keywords in which the organizations are interested.
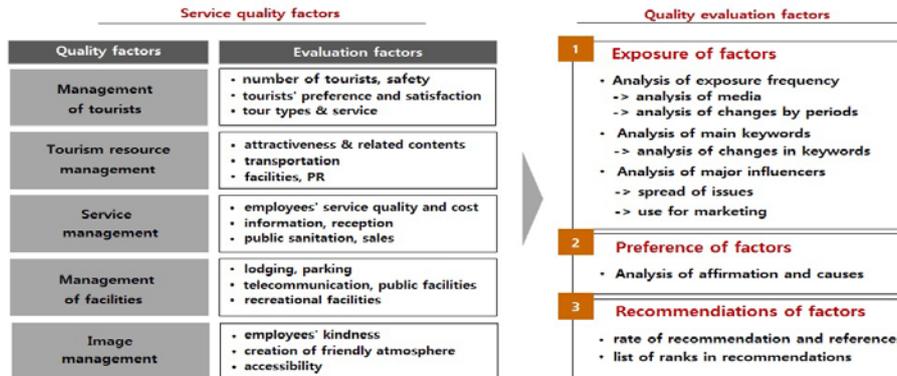
Fig.2 Evaluation of tourism service

4   Conclusions

IT businesses have recently developed a variety of tools to analyze real-time big data pouring out of various social media. Such tools can help firms collect/accumulate customers' opinions online and analyze the contents with a set of keywords, and eventually identify what public opinion is like on a particular issue and how it is spread. Such analysis of big data is often dependent on the technique called Buzz monitoring. The present paper presented a way of establishing a service model for tourism industry that is based on analysis knowledge system to make it possible to effectively and adequately collect and analysis information. Such a model can be established from preliminary steps of careful planning and preparatory examination of all the service elements.

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References

1. Chulwon Kim, "A Model Specification for Measuring Competitiveness of the Tourism Industry", Korea Tourism Research Institute, 2002.
2. Eunjung cho,"A study on tourism information classification system on internet on Internet: Focus on the Major Tour Information Websites in Korea", Ph.D. Dissertation, Sejong University, 2011
3. Kyuhwan Choi, "A Model of Aggregate Destination Service Satisfaction (ADS): Evidence from Chinese and Japanese Tourists to South Korea" , Journal of Tourism Management Research, Vol.58, pp. 319-338, 2014.
4. H.S.Lee ,S.B.Kim,"A Study on the Analysis of Effect in Tour-area to Estimate Model", J. of the Tourism Science Society of Korea Vol.18 No.2 pp.41-50 ,2005.