

Investigating Dynamic Transition Process of Issues Using Unstructured Text Analysis

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Abstract : The amount of real-time data generated through various mass media has been increasing rapidly. In this study, we had performed topic analysis by using the unstructured text data that is distributed through news article. As one of the most prevalent applications of topic analysis, the issue tracking technique investigates the changes of the social issues that identified through topic analysis. Currently, traditional issue tracking is conducted by identifying the main topics of documents that cover an entire period at the same time and analyzing the occurrence of each topic by the period of occurrence. However, this traditional issue tracking approach has limitation that it cannot discover dynamic mutation process of complex social issues. The purpose of this study is to overcome the limitations of the existing issue tracking method. We first derived core issues of each period, and then discover the dynamic mutation process of various issues. In this study, we further analyze the mutation process from the perspective of the issues categories, in order to figure out the pattern of issue flow, including the frequency and reliability of the pattern. In other words, this study allows us to understand the components of the complex issues by tracking the dynamic history of issues. This methodology can facilitate a clearer understanding of complex social phenomena by providing mutation history and related category information of the phenomena.

Keywords : Data Mining, Issue Tracking, Text Mining, topic Analysis, topic Detection, Trend Detection

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