

Assessment of Online News Agencies by Using a Knowledge Visualization Model: Expected Benefits

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Abstract

Internet is an efficient tool that provides unlimited information sources for the humans. This tool also creates a platform for the internet users to access information on the news easily in a real time manner by collecting the online news agencies in a one place. However, the readers usually face with difficulties to find a reliable source of information, especially on the conflicting news because of the huge amount of news agencies on the internet. Evaluating these news sources is essential and important for obtaining reliable information. In this manner, using knowledge visualization techniques is a candidate solution to improve the assessment of the online news agencies. This paper aims to give a brief description of a knowledge visualization model for the assessment of online news agencies and to provide an overview of the expected benefits of this model.

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Keywords: Knowledge Management; Knowledge Visualization Model; News Agencies; Conflicting News; Knowledge Parameters

1. Introduction

From social sciences to the engineering disciplines, representation of knowledge through knowledge visualization has been become a popular subject since the late 2000s. Online based media trace is one of the potential sectors that could benefit from the usage of the knowledge visualization techniques.

In today's internet environment, web technologies and its effect on understanding and expectations on possible readers is essential. To answer their readers, internet based news agencies are forcing their recourses to publish news instantly and as result, readers demand information of these content as soon as with the establishment of the news' incidents.

Increase on fast availability of news has been caused the problems such as the accuracy and reliability of information in the news. For this reason, giving critical information to the readers with keeping the accuracy and reliability is become one the critical component of the quality of the online news agencies. With including the knowledge visualization to the online news agencies selection decision on time critical news, it will support efficiency of news agency selection for the internet readers.

A knowledge visualization model that we have proposed [1] to provide news seekers with the knowledge of right point of reference by evaluating the online news agencies. Our model creates a virtual environment to bring time and place specified for the news, where subject based requirement will be meet by the visualized parameters of the news and possibly the relations between each other, see Fig 1.

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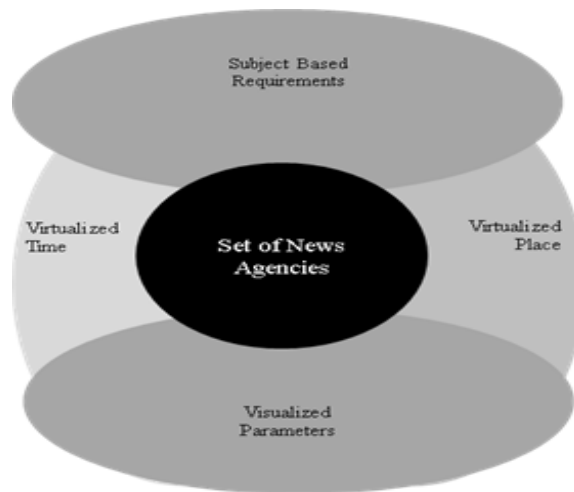


Fig. 1. News Agencies set definers

Rest of the paper organized as follows; Section 2 summarizes the existing studies related with knowledge visualization. The proposed knowledge visualization meta model on Bali Incident case is described briefly in Section 3. Section 4 discusses the expected benefits of the proposed model. Finally, concluding remarks are given in Section 5.

2. Related Work

The knowledge visualization definition is a very misleading concept for the ones who are from outside knowledge management domain. It's evaluations starts with the information level [2] [5][6] [7] and ascent to knowledge level [4]. In this study, with taking into account parametric information to become meta source of the knowledge visualization, reflection of the possible connections are considered to highlight “know-where” accuracy with measurable values in the news.

Not only managerial perspective but also procedural and conceptual inclusion Koskinen and Makinen [6] considered cognitive knowledge of project management with including parallel concept who [3]. Even these studies were opened new possibilities, unfortunately they only stays in conceptual level. To support news agencies requirements, structuring from a conceptual background is needed to classify possible cognitive findings.

The techniques for presentation of the knowledge must be parallel with the parametric information. The formal structure could define organization however, when knowledge itself is taken, mostly, procedural direction itself is not enough. Team work of different stakes is required. As highlighted in the Sloane [7], building different teams with including members from different expertise areas are required to include related tacit knowledge. This synergy will create a common tacit knowledge of the team.

The tools for the knowledge visualization applications are stays mostly in software applications. In literature [5][8] [4], for the different domains possible suggested frameworks were created. Inclusion of data mining tools is one of the static characteristic of them. However, because of explicit knowledge gathering is the main concept for these applications, static data sets were implemented. Dynamic data sets will be required for tacit knowledge visualization of news with the support of self-learning mechanism with the leveraging artificial intelligence.

As so far, there are some related knowledge visualization researches in the literature, however, when it comes to knowledge in news agencies; there was not much specific research concentrated on news agencies' knowledge visualization. Thus, we proposed a knowledge visualization model [1] and a brief description of this model and the expected benefits will be presented in following sections.

3. Knowledge Visualization Meta Model on a Sample Case

A model with three-tier structure as shown in Figure 2 could give a general structure for the meta model for knowledge visualization. This model works in two directions; Top to down and down to top. In each direction, the responsibility and the epistemic meanings are changing. From the perspective of top-down direction, the model's primary aim is to transform knowledge and information to the Meta data. However, the primary perspective for this purpose is the down-top direction. The down-top direction finds its meaning when the visualization of the specific information and knowledge is required.

One of the possible outcomes of this model is the visualization of tacit knowledge base on explicit knowledge of the organizational of other types of structure. Knowledge management problems could be easily reach answers with the concluded knowledge paths.

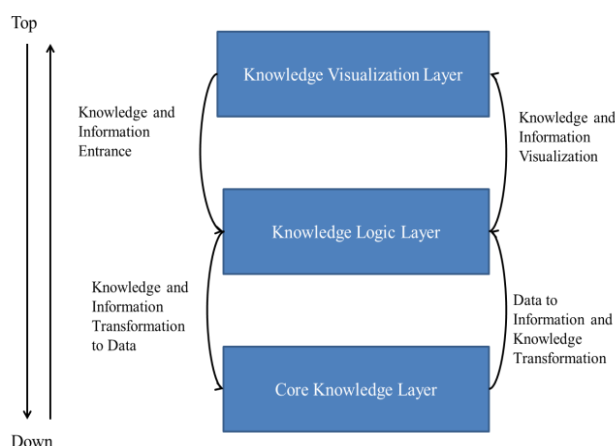


Fig. 2. Three Layer Structure of Knowledge Visualization System

The developed meta model was applied to a sample case. 2002 Bali Bombing incident was selected for the case to apply to the model, since disaster news is mostly open to the manipulation in terms of giving the number of casualties and number of people who died. Moreover, Three different international (The New York Times, Telegraph, United Press International) and one Turkish news agency (Milliyet) web archive were considered and place, number of deaths, number of injured people, date of incident, type of bomb were taken as proper parameters.

The parametric values of the core knowledge layer will define each news membership values in between 0 to 1, not just 0 or 1. Let's say, if one of these parameters are related with the news, like bombing, it could be 1, on the other hand, if it is not it could be taken as 0. However, this classical view of only being a member of something, and being a not member of something logic causes blocking of essential knowledge. In here, for the sake of a proper knowledge visualization model, it is also required to look deep to see the gray parts between 0 and 1. For example, what if this bombing caused by an explosion in a gun factory and it effects the bombs kept in the factory. In this case, bomb is the incident, however, it may not seem as directly related. With looking at past similar incidents, and the data flows from the other agencies' information, a weighted value for each parameter could be calculated by the system. In this case let's say bombing is calculated as 0.8. With considering all these parameters, a virtual representation could be created as in the Fig 3.a.

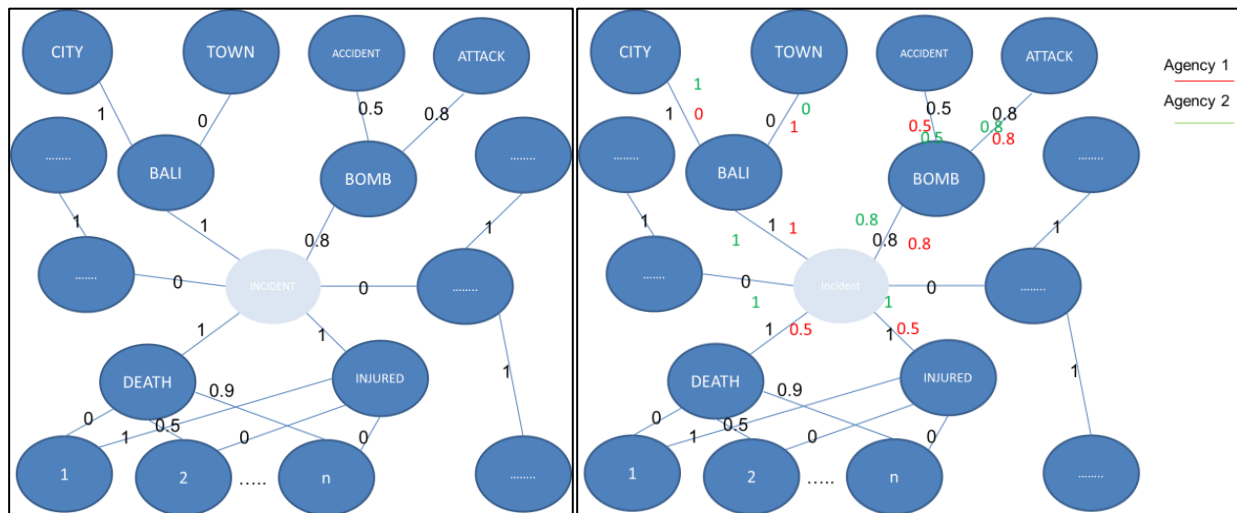


Fig. 3. Incident Parameters' Weights (a) and Weight changes based on agencies (b)

As it is concluded from Fig 3.a, Bali is a town, and this incident mostly carry attack properties, also carry some accidental properties, also there are some parameters they are not directly related with Fig 3.a and without any doubt, there are death and injured casualties in this incident.

The performance of the news agencies are defined how much their parametric weights are closer to the virtual map or maps. In Fig 3.b, two agencies' weight values are given with the calculated weights. As it is shown, Agency 1 values are not similar, in Bali's town or city definition and the casualties properties and not sure the number of death and injured. On the other hand, Agency 2 is closer to the calculated values of the system. For this reason each parameters will also define the news agencies performance, like whether it gives all parameters in the news or not; and how many times it was closed to the system's values, when was the last time the agency gave the accurate values etc. This performance will also define the decision to trust this agencies news when a similar incident faced by the users.

4. Expected Benefits

Proposed visualization model provides benefits for both internet readers and the online news agencies. The benefits for each party are specified in detail in the following sub sections.

4.1. In terms of Internet Readers

With the extensive use of internet, the new agencies have been carried to online platform, so there are several online news agencies that provide news instantly for the internet readers. However, reaching the most reliable news or deciding on news agency that provides the most reliable news is a considerably difficult issue for the internet readers. They want to reach the most reliable news as soon as possible. In this manner, our knowledge visualization model assesses the performance of online news agencies according to previous published news. Therefore, the readers can easily know which agency gives the most reliable news in the desired field. The time and effort spent by the readers to reach the reliable news are minimized.

4.2. In terms of Online News Agencies

Since our proposed visualization model evaluates the performances of online news agencies in terms of reliability, the readers have the information of news agencies that provide reliable news and so these news agencies can be compared easily by the readers. As a result, they prefer usually the agencies that provide the most reliable news. This causes a competition among the news agencies, because their major aim is to reach the high number of readers. Hence, the news agencies which do not provide reliable news, improves themselves for the future news and so the qualities of the news agencies increase.

5. Conclusion

In this paper, a knowledge visualization model which is suitable for media sector especially for online news agencies is introduced to evaluate them on conflicting news. This model identifies success rates of the online news agencies and online newspapers regarding how consistent they are with the concluded actual news content. Consequently, this knowledge visualization model specifies the online news agencies that provide the most reliable news and the online readers get the most

reliable and accurate news easily and faster. Moreover, the expected benefits provided by the usage of this model are specified in terms of both the online readers and the online news agencies.

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