International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056
Volume: 03 Issue: 03 | Mar-2016 www.irjet.net p-ISSN: 2395-0072

A Development Analysis of efficient web usage and domain sever applications

Rajha.M[1], A.Anitha[2],

[1]PG Scholar,Dept. Of IT, Francis Xavier Engineering College,Tirunelveli
[2]Dept. Of IT, Francis Xavier Engineering College,Tirunelveli
rajha1891@gmail.com

Abstract - *All over world internet plays a main role in many applications. People needs sufficient knowledge of working in internet, Hence user friendly website development is challenging task and time consuming process. In this paper we analyzed such kind of problems in internet environments and efficiently provide better Web-page recommendation through semantic-enhancement by integrating the domain server applications. The proposed technique is developed by number of queries raised by the web page user and problem faced by the domain sever. The queries are solved by the recommended results and obtained from an advanced existing Web Usage Mining (WUM) method. It uses one automatically generated semantic network to represent domain terms, Web-pages, and the relations between them. The experimental results are demonstrated by the different data and demonstrate that the proposed method produces significantly higher precision compared with existing methods.*

Key Words: Internet, Domain Server, Web page, Web Usage Mining, User problem

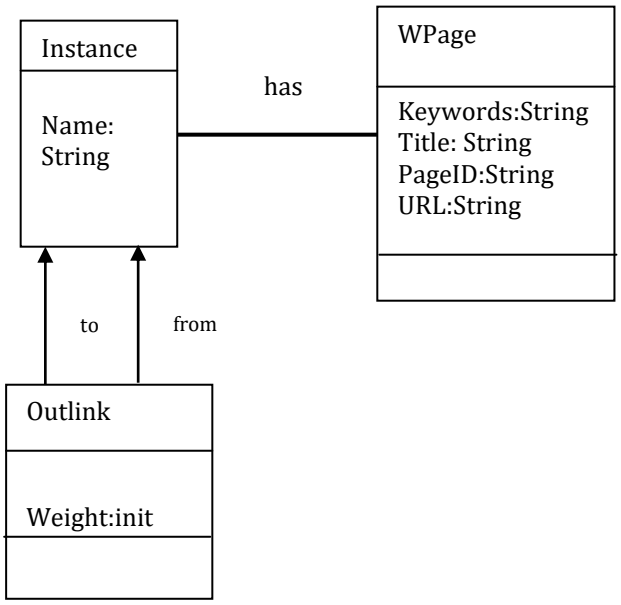

Fig.1 : Schematic of TermNetWP

1.INTRODUCTION

The usage of web page now a day increasingly tremendously and is used in different areas like online shopping, news, stories, related books, or most viewed pages at websites [1]. Whenever user browse in the website based on the design of the corresponding website the domain server distribute the webpage sequentially and the visiting time required webpage are generated [2].In internet applications there are a number of issues in developing an effective Web-page recommender system, such as how to effectively learn from available historical data and discover useful knowledge of the domain and Web-page navigation patterns, how to model and use the discovered knowledge, and how to make effective Web-page recommendations based on the discovered knowledge [3-4].The example schematic of TermNetWP is shown in Figure 1. The properties are Title, PageID, URL and Keywords in the title. The Keywords property is used to store terms in a Web-page title. Classes Instance and WPage are associated through the 'hasWPage' relationship.

2. LITERATURE SURVEY

Irjet Template sample paragraph .Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

A possible way to overcome this problem is to analyze web page usage and solve the queries. A great deal of research has been devoted to resolve these issues over the past decade. The two approaches Tree structures and Probabilistic models are more efficiently proved by many literatures in Web Access Sequences (WAS) in the Web usage data [5]. And moreover the new page opening problems are solved by most popular technique of semantic-enhanced approaches [6-7].

The Web page recommender system is having more advantageous whenever it will use by well known user of domain server [8]. Domain ontology is commonly used to represent the semantics of Web-pages of a website. It has

been shown that integrating domain knowledge with Web usage knowledge enhances the performance of recommender systems using ontology-based Web mining techniques [9]. The achievement of higher performance is always occurred by integrating semantic information with Web usage mining and it gives more efficiency than classic Web usage mining algorithms. Domain ontology is defined as a conceptual model that specifies the terms and relationships between them explicitly and formally, which in turn represent the domain knowledge for a specific domain [10].

The three main components are listed as follows [11]:

1.Domain terms (concepts),

2.Relationships between the terms (concepts), and

3.Features of the terms and relationships.

In Figure 2, mostly the implementation of Ontologies is in a logic-based language, such as OWL/RDF, to become understandable to software agents or software systems. It allows sharing and inter-changing semantic information among Web systems over the Internet. It also used to enable the reuse of the domain knowledge, and reasoning the semantics of Web-pages from the existing facts. Furthermore, ontological representation of discovered knowledge from different sources can be easily integrated to support Web-page recommendation effectively.

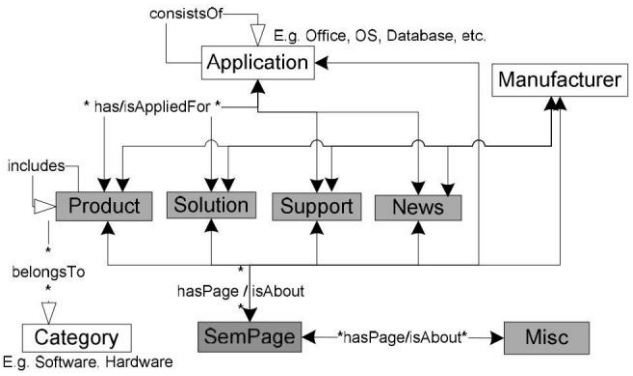

Fig.2 : Domain ontology schema of the MS website

3. PROPOSED SYSTEM

To eliminate the problems in Web page usage and make it is the most convenient user friendly environments here, We consider the new models of knowledge representation, the queries and the recommendation strategies, We design five experimental cases as follows:

Case 1 (R.PLWAP- Pre-Order Linked WAP-Tree Mining). Set the threshold of the traditional Web-page recommendation approach using the best Web usage mining (WUM) algorithm, i.e. PLWAP-Mine. The Web-page recommendations are generated based on the PLWAP-Mine algorithm. We refer to this case as the base case.

Case 2 (R.DO.1st). Test the effectiveness of the semantic-enhanced Web-page recommendation by integrating the domain ontology (DomainOntoWP) with TermNavNet using the first-order CPM. The recommendation strategy (R.DO.1st) is used.

Case 3 (R.DO.2nd). Test the effectiveness of the semantic-enhanced Web-page recommendation by integrating the domain ontology (DomainOntoWP) with TermNavNet using the second-order CPM. The recommendation strategy (R.DO.2nd) is used.

Case 4 (R.TN.1st). Test the effectiveness of the semantic-enhanced Web-page recommendation by integrating the semantic network of Web-pages (TermNetWP) with TermNavNet using the first-order CPM. The recommenda-tion strategy (R.TN.1st) is used.

Case 5 (R.TN.2nd). Test the effectiveness of the semantic-enhanced Web-page recommendation by integrating the semantic network of Web-pages (TermNetWP) with TermNavNet using the second-order CPM. The recommendation strategy (R.TN.2nd) is used.

4. SIMULATION RESULTS

In order to evaluate the effectiveness of the proposed models of knowledge representation and the recommendation strategies along with the queries, we implement these models, algorithms and strategies to test their performance of Web-page recommendation using a public dataset. In this section, we firstly list the measures for the performance evaluation of Web-page recommendation strategies, and then present the design of the experiments, followed by the comparisons of experimental results. All five experimental cases are implemented in Java in conjunction with Protégé based on the new models, algorithms and strategies, and the competing recommendation approach (PLWAP-Mine), and run in a Intel Core i7, Windows 7 machine with 4GB of RAM. In this experiment, we employ an advanced Web usage mining technique, namely PLWAP-Mine, to discover the Web usage knowledge, which is in the form of Frequent Web Access Patterns (FWAP), i.e patterns of frequently visited Web-pages. We integrate FWAP with DomainOntoWP or TermNetWP in order to result in a set of Frequently Viewed Term Patterns (FVTP), as shown in Fig. 3.

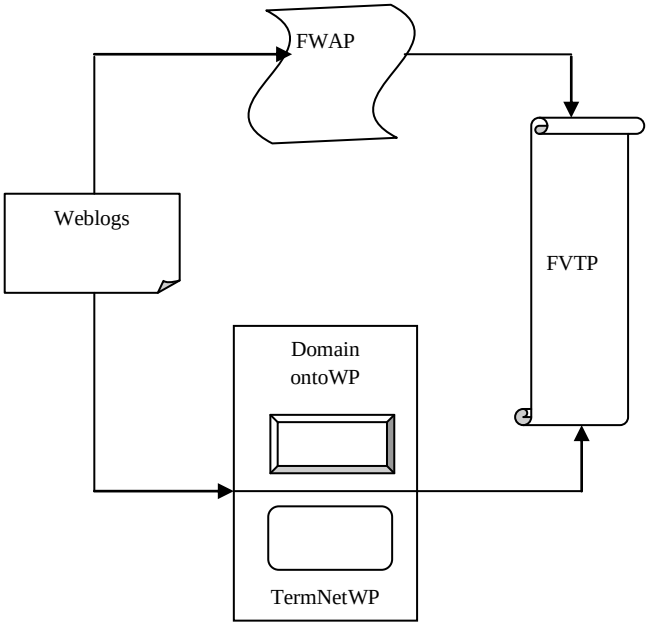

Fig 3. FVTP (Frequently Viewed Term Patterns) Discovery process

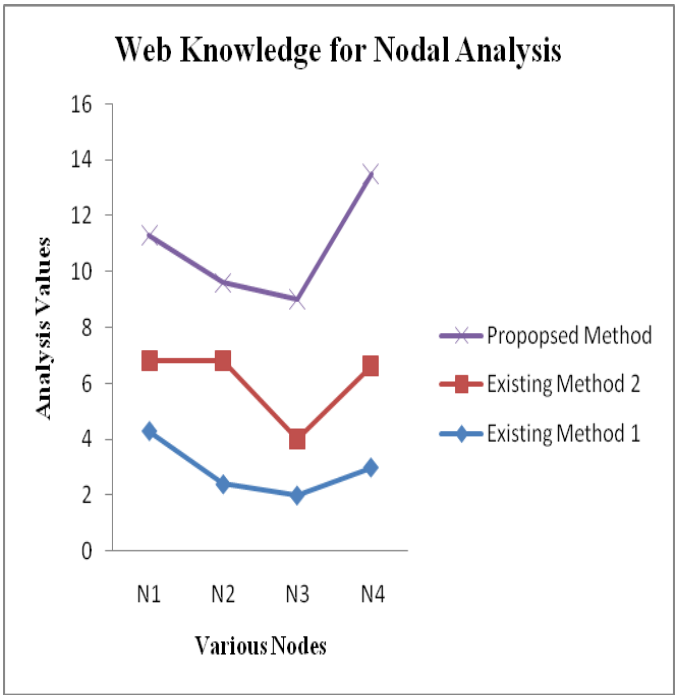

Fig.4. Comparison of different web page analysis

In Fig.4, two important parameters, namely MinSup, this is the threshold of support values for a Web access sequence. It was observed on the used dataset that the size of discovered FWAP (Frequent Web Access Patterns) is too big to run the algorithms when MinSup is lower than 0.5%, and the size of FWAP becomes too small to test the algorithms when MinSup is higher than 2%. Hence, in these experimental cases, we choose a number of MinSup values for each case ranging from 0.5% to 1.3% to control the quantities of FWAP that are discovered from the Web usage mining process, and to guarantee that the amount of generated information is enough to test the pro-posed models. Regarding the recommendation length, we pre-define the recommendation length to make the sys-tem only provide the top-N recommended Web-pages that have higher prediction probabilities. The recommended pages with lower prediction probabilities are ignored to speed the recommendation processes.

5. CONCLUSIONS

This paper has presented with the Web-page recommendations through semantic enhancement. The models are analyzed based on ontology model. The experimental results are clearly indicating the usefulness of the proposed models. In future the proposed model may be expanded to the semantic based approaches also.

REFERENCES

[1]B. Mobasher, "Data mining for web personalization," in The Adaptive Web, vol. 4321, P. Brusilovsky, A. Kobsa, and W. Nejdl, Eds. Berlin, Germany: Springer-Verlag, 2007, pp. 90–135.
[2] H. Dai and B. Mobasher, "Integrating semantic knowledge with web usage mining for personalization," in Web Mining: Applications and Techniques, A. Scime, Ed. Hershey, PA, USA: IGI Global, 2005, pp. 205–232.
[3]Y. Jiang and M. H. Wang, "Image fusion with morphological component analysis," Inf. Fusion, vol. 18, no. 1, pp. 107-118. Jul. 2014.
[4]S. A. Rios and J. D. Velasquez, "Semantic Web usage mining by a concept-based approach for off-line web site enhancements," in Proc. WI-IAT'08, Sydney, NSW, Australia, pp. 234–241.
[5]C. Ezeife and Y. Liu, "Fast incremental mining of Web sequential patterns with PLWAP tree," Data Min. Knowl. Disc., vol. 19, no. 3, pp.376–416, 2009.
[6]L. Wei and S. Lei, "Integrated recommender systems based on ontology and usage mining," in Active Media Technology, vol. 5820,J. Liu, J. Wu, Y. Yao, and T. Nishida, Eds. Berlin, Germany: Springer-Verlag, 2009, pp. 114–125.
[7]S. Boyce and C. Pahl, "Developing domain ontologies for course content," Educ. Technol. Soc., vol. 10, no. 3, pp. 275–288, 2007.
[8]J. M. Gascuena, A. Fernandez-Caballero, and P. Gonzalez, "Domain ontology for personalized e-learning in educational

sys-tems," in Proc. 6th IEEE ICALT, Kerkrade, Netherlands, 2006, pp.456–458.
[9] S. Grimm, A. Abecker, J. Völker, and R. Studer, "Ontologies and the semantic Web," in Handbook of Semantic Web Technologies, J. Domingue, D. Fensel, and J. A. Hendler, Eds. Berlin, Germany: Springer, 2011, pp. 507–580.
[10]Z. Markov and D. T. Larose, "Information retrieval and web search," in Data Mining the Web: Uncovering Patterns in Web Content, Structure, and Usage, Z. Markov and D. T. Larose, Eds. New Britain, CT, USA: Wiley, 2007, ch. 1, pp. 3–46.
[11]M. Eirinaki, D. Mavroeidis, G. Tsatsaronis, and M. Vazirgiannis, "Introducing semantics in Web personalization: The role of ontologies," in Proc. EWMF, Porto, Portugal, 2006, pp. 147–162.