

$$C_m^2 = \frac{m(m-1)}{2} \quad (3)$$

C is the total number of clicked URL pairs (1). CAP is extension of VAP as,

$$CAP = VAP \times (1 - risk)^r \quad (4)$$

CAP selects the AP of the class that user is interested in and takes the risk of wrong classification into account. r is used to adjust the influence of risk on CAP.

5. Result Analysis

System relies on the feedback of user. Feedbacks are then converted into pseudo-documents which represents the keywords from the documents. After that the pseudo documents are clustered using the k-means clustering algorithm. Results are evaluated using Risk, VAP and CAP. Table 1.1 shows the keywords depiction of different queries. Those are nothing but user search goals.

6. Snapshots

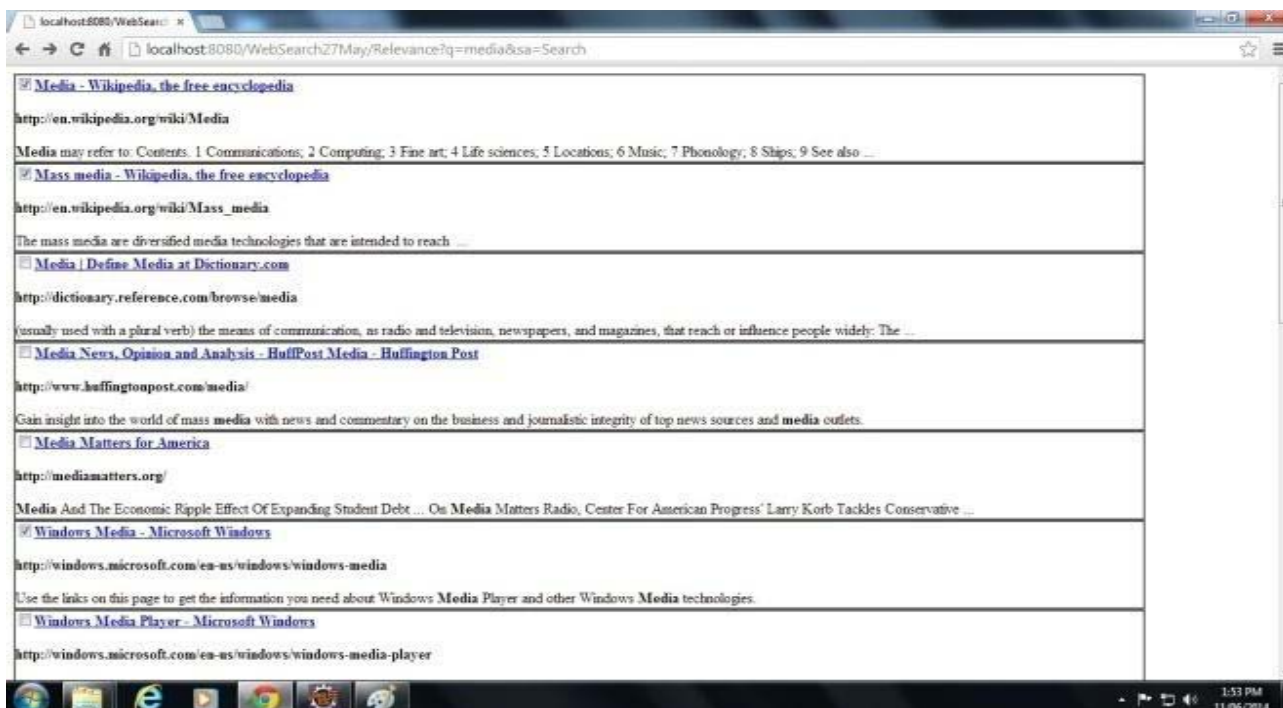


Figure 3: Snapshot of original results

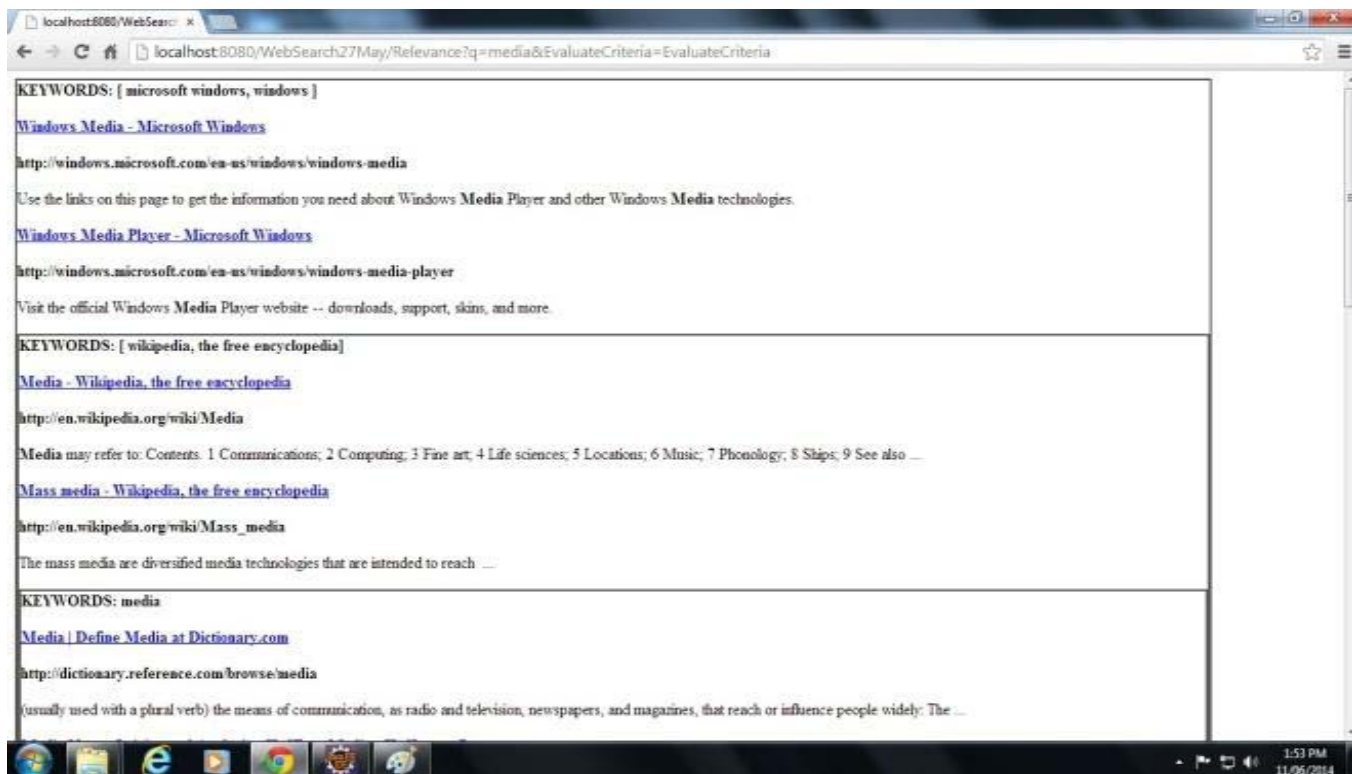


Figure 4: Snapshot of ReOrganised results

Table 2: Keyword Representing Different Queries

Query	Keywords used to represent user search goals
Taj	India
	Mahal
	Hotel
Apple	Apple, Wikipedia
	Operating System
	Official
Numerology	Android apps Google play
	Numerology, Wikipedia
	Astrology
Ginger	hotel
	Software
	Health Benefits

Table 3 shows evaluation of queries such as mean average VAP, risk factor and CAP

Table 3: Query Evaluations

Query	Mean average VAP	Risk	CAP
Apple	0.715	0.6	.612
Numerology	0.333	0.3	0.602
Taj	0.444	0.67	0.549

7. Conclusion

In this paper we studied some problems associated with feedback session record. Feedback session can record limited number of URLs. So that user can analyze few URLs. In this case we have increased the size of feedback session. So that user can analyze more number of URLs. In pseudo documents keywords are present which are clustered according to hierarchical clustering. We used hierarchical clustering for searching topic-subtopic wise. From this method user can easily find out his/her information need within small time. We studied and implemented feedback session and mapping of these feedback session to the pseudo

documents. Finally we also implemented performance method to evaluate search results. This approach is used to improve searching. The proposed system framework is useful and feasible to be used with real world search systems. It will help users to search information more precisely.

References

- [1] Zheng Lu, Hongyuan Zha, Xiaokang Yang, Weiyao Lin, Zhaohui Zheng, "A New Algorithm for Inferring User Search Goals with Feedback Sessions", IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING, VOL. 25, NO. 3, MARCH 2013
- [2] U. Lee, Z. Liu, and J. Cho, "Automatic Identification of User Goals in Web Search" , Proc. 14th Int'l Conf. World Wide Web (WWW '05),pp. 391-400, 2005.
- [3] D. Shen, J. Sun, Q. Yang, and Z. Chen, "Building Bridges for Web Query Classification", Proc. 29th Ann. Int'l ACM SIGIR Conf. Research and Development in Information Retrieval (SIGIR'06), pp. 131-138, 2006.
- [4] X. Wang and C.-X Zhai, "Learn from Web Search Logs to Organize Search Results", Proc. 30th Ann. Int'l ACM SIGIR Conf. Research and Development in Information Retrieval (SIGIR '07), pp. 87-94, 2007.
- [5] H.-J Zeng, Q.-C He, Z. Chen, W.-Y Ma, and J. Ma, "Learning to Cluster Web Search Results" Proc. 27th Ann. Int'l ACM SIGIR Conf. Research and Development in Information Retrieval (SIGIR '04),pp. 210-217, 2004.
- [6] R. Jones and K.L. Klinkner, "Beyond the Session Timeout: Automatic Hierarchical Segmentation of Search Topics in Query Logs" , Proc. 17th ACM Conf. Information and Knowledge Management(CIKM '08), pp. 699-708, 2008.

- [7] S. Beitzel, E. Jensen, A. Chowdhury, and O. Frieder, "Varying Approaches to Topical Web Query Classification," Proc. 30th Ann.Int'l ACM SIGIR Conf. Research and Development (SIGIR '07), pp. 783-784, 2007.
- [8] T. Joachims, "Evaluating Retrieval Performance Using Clickthrough Data," Text Mining, J. Franke, G. Nakhaeizadeh, and I. Renz, eds., pp. 79-96, Physica/Springer Verlag, 2003.
- [9] T. Joachims, "Optimizing Search Engines Using Clickthrough Data," Proc. Eighth ACM SIGKDD Int'l Conf. Knowledge Discovery and Data Mining (SIGKDD '02), pp. 133-142, 2002.
- [10] T. Joachims, L. Granka, B. Pang, H. Hembrooke, and G. Gay, "Accurately Interpreting Clickthrough Data as Implicit Feedback, Proc. 28th Ann. Int'l ACM SIGIR Conf. Research and Development in Information Retrieval (SIGIR '05), pp. 154-161, 2005.

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