Research of applying Topic Map in the Visualization of WebPAC's search results-The case study of Da-Yeh university libra

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ABSTRACT

The usage rate of subject search in WebPAC is high , but the failure rate is high as well. The common problem of subject search is that number of search results are large , so readers need to spend much time browsing by filtering the results in order. In the next place, search results display directly without organization, and readers ’ subject concep-tion can ’t be correspondent easily to the conception of knowledge organization sys-tems(KOS). In view of this, this research proposes improving policies for the subject search of WebPAC , combining topic maps and information visualization ,to build a prototype system about Chinese subject search. It can help retrieve the association with the con-ception of subject and knowledge organization systems and excepts to reduce the num-ber of data items and click through of manipulators ’ browse. This research applies topic maps to unroll the categorized framework of KOS and related collection resources ,organizes the search results of OPAC effectively according to the knowledge hierarchy of Chinese Classification Scheme ,and provides readers the visualized browse interface of exploring contextual knowledge by the aspect of KOS.In addition to locate and bridge domain knowledge through topic maps to present knowledge structure, in terms of reader ’s individual categories of interests ,the system will provide appropriate and commendable results displayed by different colors which can express the resource categories of readers ’ interests. By the recommended categories of interests, I hope to decrease the click steps further. Under the circumstances that library collection gets more ,the Chinese subject search system this research developed can certainly not Only assist readers in subject search but provide effective improving program for betterment of Webpac.

Keywords : WebPAC,topic map,subject search,information visualization

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REFERENCES

卜小蝶，鍾季倫，郭佩宜(2005)，主題式資源指引網站之發展初探，國家圖書館館刊，94(2)，1-25。 中國圖書館分類法編輯委員會(1999)，中國圖書館分類法使用手冊使用手冊(第四版)，北京:北京圖書館出版社。 毛恆祥(2006)，分類架構建構與呈現之應用研究－以農委會

農業知識管理加值系統農產業知識樹為例，世新大學資訊傳播學研究所碩士論文。 李宜容(1995)，人文及社會學科讀者使用線上公用目錄檢索詞彙之研究，淡江大學教育資料科學學系碩士論文。 李宜容(1998)，人文及社會學科讀者使用線上公用目錄檢索詞彙之研究，大學圖書館，2(3)。 李芳菁(1995)，Web介面之線上公用目錄使用研究:以政治大學和清華大學圖書館為例，淡江大學資訊與圖書館學系碩士論文。 林信成，歐陽慧，歐陽崇榮(2004)，以主題地圖建構索引典之語意網路模型，圖書與資訊學刊，48，35-56。 邱名妤(2006)，資料探勘方法應用於圖書館藏推薦，玄奘大學企業管理學系碩士論文。 洪瑞甫(1999)，圖書資訊系統之WebOpac和編目模組，國立中正大學資訊工程研究所碩士論文。 胡述兆(1995)，圖書館學與資訊科學大辭典（初版），臺北市:漢美圖書公司。 陳天民(2004)，實作智慧型OPAC主題檢索系統，國立交通大學電機資訊學院碩士論文。 曾繁絹(1998)，中文標題檢索效益之研究—以國立臺灣大學TULIPS系統為例，大學圖書館，2(1)，100-123。 歐仁德(2005)，結合本體論與通用個人輪廓於個人化推薦之研究，朝陽科技大學資訊管理系碩士論文。 成大圖書館， http://webpac.lib.ncku.edu.tw/。 智慧型OPAC主題檢索系統， http://210.240.175.62:8080/webpac/test.html。 Card, S. K., Mackinlay, J. D., & Shneiderman, B. (1999). Readings in information visualization: Using vision to think. San Francisco: Morgan Kaufmann Publishers. Chaudhry, A. S. & Jiun, T. P. (2005). Enhancing access to digi-talEnhancing access to digital information resources on heri-tage-A case of development of a taxonomy at the Integrated Museum and Archives System in Singapore. Journal of Docu-mentation, 61(6), 751-776. Chen, H., Lally, A. M., Zhu, B., & Chau, M. (2003). HelpfulMed: Intelligent searching for medical information over the internet. Journal of the American Society for Information Science and Technology, 54(7), 683-694. Chowdhury, S., & Chowdhury, G. (2004). Using DDC to create a visual knowledge map as an aid to online information retrieval, the 8th Knowledge organization and the Global Information Society (pp. 13-16), London, UK: United Kingdom. Dix, A., & Ellis, G.(1998). Starting simple: adding value to static visualization through simple interaction, the 4th International Working Conference on Advanced Visual Interfaces (pp. 124-134), L'Aquila, Italy: ACM Press. Hodge, G.(2000). Systems of Knowledge Organization for Digital Libraries: Beyond Traditional Authority Files, Retrieved Feb-ruary 6. Kobsa, A. (2004). User Experiments with Tree Visualization Sys-tems, IEEE Symposium on Information Visualization, Austin. Korfhage, R. (1991). To see or not to see-Is that the query? , the 14th Annual International ACM/SIGIR Conference (pp. 134-141), Chicago. Koshman, S. (2006). Visualization-based information retrieval on the web, Library&Information Science Research, 28(2). Lee, H.-L., & Olson, H. A. (2005). Hierarchical Navigation: An Ex-ploration of Yahoo! Directories, Knowledge Organization, 32(1), 10-24. Plaisant, C., Grosjean, J., & Bederson, B. (2002). SpaceTree: Sup-porting Exploration in Large Node Link Tree, Design Evolu-tion and Empirical Evaluation, IEEE Symposium on Informa-tion Visualization, Boston. Rath, H. H. (2001). Topic Maps and the Business of Knowledge, the XML Europe, Berlin, Germany. Rath, H. H. (2004). Topic Maps are Emerging-Why Should I Care?, the XML Europe, Amsterdam, the Netherlands. Rath, H. H., & Pepper, S. (2002). The User's Perspective on Topic Maps: What Can They Do For Me?, the XML Europe. Renardus EU-project Home, http://www.renardus.org/ Renardus Service (2006, February 28). Public libraries., from http://www.renardus.org/cgi-bin/imageDDCbrowseSQL.pl?node=AABFB&ID=35742&pmat=N&pnavnode=Y&pgraph=matcirc. Sedig, K., & Liang, H. (2006). Interactivity of Visual Mathematical Representations: Factors Affecting Learning and Cognitive Processes, Journal of Interactive Learning Research, 17(2), 179-212. Shiri, A., & Molberg, K. (2005),Interfaces to knowledge organization systems in Canadian digital library collections, Online Infor-mation Review, 29(6), 604-620. Shiri, A., & Revie, C. (2005). Usability and user perceptions of a thesaurus-enhanced search interface, Journal of Documenta-tion, 51(5), 640-656. Shneiderman, & Ben (1998). Designing the User Interface, Third Edition. Addison Wesley. Stuckenschmidt, H., van Harmelen, F., de Waard, A. d., Scerri, T., Bhogal, R., van Buel, J., Crowlesmith, I., Fluit, C., Kampman, A., Broekstra, J., & van Mulligen, E. (2004). Exploring Large Document Repositories with RDF Technology: The DOPE Project, IEEE Intelligent Systems, 19(3), 34-40. Systems of Knowledge Organization for Digital Libraries: Beyond Traditional Authority Files, from http://www.clir.org/pubs/abstract/pub91abst.html, 2005. Tufte, E. R. (1990). Envisioning information. Cheshire: Graphics Press. Wang , Y., Teoh, S. T., & Ma, K. L. (2006). Evaluating the Effec-tiveness of Tree Visualization Systems for Knowledge Discov-ery, IEEE-VGTC Symposium on Visualization. Ware, C. (2000). Information visualization: Perception for design, 1st edition. San Francisco: Morgan Kaufman Publishers. Zeng M. L., & Salaba A. (2005). Toward an international sharing and use of subject authority data, FRBR Workshop, OCLC, http://www.oclc.org/research/vents/frbr-workshop/presentations/zeng/Zeng_Salaba.ppt). Zeng, M. L., & Chan, L. M. (2004). Trends and Issues in Establish-ing Interoperability Among Knowledge Organization Systems, Journal of the American Society for Information Science and Technology, 55(5), 377-395.