Relevance Feedback at INEX 2005

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Relevance feedback in the INEX environment is addressed by several papers in the proceedings of the INEX 2005 Workshop [1]. The most extensive discussion is provided by Schenkel and Theobald [2]. Mihajlovic, *et. al.* [3], and Sauvagnat, *et. al.* [4], describe approaches to relevance feedback in specific sections of papers devoted to discussions of multiple INEX tasks. For detailed descriptions of the systems and methods used and results obtained in each case, see the papers cited.

Schenkel and Theobald [2] describe two approaches to what they refer to as *structural feedback*, which focuses on the incorporation of structural aspects in the feedback process. Their first approach reranks results returned by an initial, keyword-based query using structural features derived from results with known relevance. Their second approach involves expanding traditional keyword queries into content-and-structure queries. Official results, evaluated using the INEX 2005 assessment method based on rank-freezing, show that reranking outperforms the query expansion method on this data.

Mihajlovic, *et. al.* [3], also investigate the potential use of structural information from relevant elements for feedback purposes. The structural information used in this case is twofold: the title of the journal containing the element and the element type. Two experiments are described. One analyzes the effects of assigning different weights to the structural information found in the top 20. The second seeks to determine which of the two types of structural information is more useful in this context. Official results show little gain in either case for 2005 data.

Sauvagnat, *et. al.*[4], describe their experiments in relevance feedback as follows. Their "structure-oriented" approach first seeks to identify the generic structure shared by the largest number of relevant elements and then use this information to modify the query. A second method, termed "content-oriented", utilizes terms from relevant elements for feedback. A third method involves a combination of the two. Official results show improvement in some case but are not consistent across query types.

Interested readers may also find descriptions of relevance feedback experiments in other papers (i.e., papers not focusing on relevance feedback per se) in [1]; those reported here were submitted by their authors as part of the relevance feedback track at INEX 2005. As is noted by many researchers, this is only the second year for relevance feedback research at INEX, and the work is still in the early stages of investigation. We look forward to interesting research in this area as it evolves over time.

References

[1] Norbert Fuhr, Mounia Lalmas, Saadia Malik and Gabriella Kazai (eds): *Advances in XML Information Retrieval and Evaluation: Fourth Workshop of the Initiative for the Evaluation of XML Retrieval (INEX 2005)*, Dagstuhl 28-30 November 2005, Lecture Notes in Computer Science, Vol 3977, Springer-Verlag, 2006.

[2] Schenkel, R., and M. Theobald. Relevance Feedback for Structural Query Expansion, in: Norbert Fuhr, Mounia Lalmas, Saadia Malik and Gabriella Kazai (eds): *Advances in XML Information Retrieval and Evaluation: Fourth Workshop of the Initiative for the Evaluation of XML Retrieval (INEX 2005)*, Dagstuhl 28-30 November 2005, Lecture Notes in Computer Science, Vol 3977, Springer-Verlag, 2006. [to appear]

[3] Mihajlovic, V., Ramirez, G., Westerveld, T., Hiemstra, D., Blok, H., and A. de Vries, TIJAH Scratches INEX 2005: Vague Element Sections, Image Search, Overlap, and Relevance Feedback, in: Norbert Fuhr, Mounia Lalmas, Saadia Malik and Gabriella Kazai (eds): *Advances in XML Information Retrieval and Evaluation: Fourth Workshop of the Initiative for the Evaluation of XML Retrieval (INEX 2005)*, Dagstuhl 28-30 November 2005, Lecture Notes in Computer Science, Vol 3977, Springer-Verlag, 2006. [to appear]

[4] Sauvagnat, K., Hlaoua, L., and M. Boughanem, XFIRM at INEX 2005: Ad-hoc and Relevance Feedback Tracks, in: Norbert Fuhr, Mounia Lalmas, Saadia Malik and Gabriella Kazai (eds): *Advances in XML Information Retrieval and Evaluation: Fourth Workshop of the Initiative for the Evaluation of XML Retrieval (INEX 2005)*, Dagstuhl 28-30 November 2005, Lecture Notes in Computer Science, Vol 3977, Springer-Verlag, 2006. [to appear]