Querium: A Session-Based Collaborative Search System

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Abstract. People's information-seeking can span multiple sessions, and can be collaborative in nature. Existing commercial offerings do not effectively support searchers to share, save, collaborate or revisit their information. In this demo paper we present Querium: a novel session-based collaborative search system that lets users search, share, resume and collaborate with other users. Querium provides a number of novel search features in a collaborative setting, including relevance feedback, query fusion, faceted search, and search histories.

Keywords: Collaborative search, multi-session search, search interface.

1 Description

Collaborative and multi-session exploratory search tasks comprise a significant portion of Web search [1, 5, 6], including tasks like shopping, travel planning and literature reviews. Because the information need is typically not satisfied with a single query, tools that support such exploratory search should manage people's query history to facilitate reflection and sense-making [4]. Existing search tools also fail to support collaboration well [2].

Querium organizes search activities into tasks. Each task has its own collaborators, queries, documents, etc. A document useful to one task may not be useful for another. Querium makes it possible for people to partition their work into logical units and to apply different standards of relevance for documents.

Querium supports collaborative search by facilitating communication among collaborators and by coordinating their information seeking activities. Communication is mediated [8] through the sharing of queries and retrieved documents, through persistent "like" and "dislike" actions on documents, and through chat and commenting facilities. Whereas systems like SearchTogether [7] only support communication, Querium coordinates search activity by indicating which documents have already been found (perhaps by others) and by allowing users to see search results from combinations of queries. Relevance feedback operations allow people to find additional documents without typing complex keyword queries.

By keeping track of which documents were retrieved by which query, Querium supports session-based sense-making by allowing people to reflect on the search process as well as on its results. Thus activity can be filtered to show only the new, the useful, or the seen documents, helping people make sense of incremental results. The histograms tell a searcher at a glance whether a document is new or has been retrieved

previously, and if so, by whom. The summary view allows people to review activities within a search task, and to filter it to show queries, sharing activity or documents.

We have deployed Querium on the web against the CiteSeer [3] corpus, and are collecting usage data to help us understand users' behaviors and ways to improve this tool. We expect that the lessons learned will also be applicable to other collections such as patents.

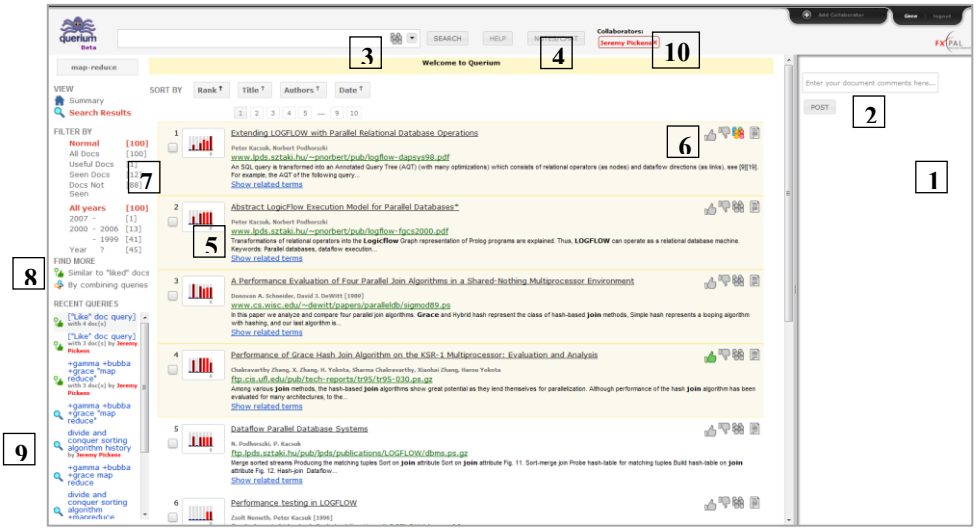

Fig. 1. Querium's search results page. 1) The document preview; 2) searcher comments for the document; 3) autocomplete and share query feature; 4) the notepad button; 5) a search result histogram showing a document's retrieval history; 6) buttons to like, dislike, and share documents; 7) search filters allow the searcher to filter by process and document metadata; 8) relevance feedback allows searchers to find more related documents; 9) recent history of all the queries formulated; 10) add other searchers to the task to collaborate with.

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