

SIGIR 2006 PIM Workshop Position Paper: Interfaces for Combining Personal and General Information

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1. INTERFACES FOR PIM

Much work in Personal Information Access (PIM) has focused on how people acquire, organize, maintain and retrieve information for a wide range of tasks. Many techniques, including folder or task hierarchies and search systems, have been developed to support people in re-finding of personal information (Bruce et al. [1]). The idea of easily and flexibly retrieving personal digital memories was popularized by Vannevar Bush in his seminal paper in 1945 [2]. Today this functionality is being built into the newest generation operating systems (e.g., Apple's Spotlight for OSX and Microsoft's Windows Desktop Search for Vista) as well as standalone desktop search tools (e.g., 80-20, Copernic, dtSearch, Google Desktop Search, X1, Yahoo! Desktop Search).

Personal search tools are valuable in providing quick and unified access to email, file and Web content. In addition to supporting re-finding, the data underlying desktop search tools can be used as a very rich and unstructured representation of a user's long-term and short-term interests. Teevan et al. [4] described how such implicit representations can be used to personalize Web search results. The approach they explored was to re-rank Web results using a relevance feedback framework in which items in the desktop index were assumed to be 'relevant' to the user's interests. Results that matched the user's interests were promoted and those that did not were demoted. The focus of their work was on developing algorithms to improve the ranking of results that matched the user's interests.

Providing high-quality personalized results in only part of the answer to personal information management. There are also a number of design challenges in developing effective interfaces to present personalized results, which we report on in this workshop paper. (See also Rose [3] for a discussion of better matching search interfaces to information-seeking behaviors.)

We developed a browser plug-in, PSearch, to help users finding information relevant to them. The prototype uses extensions of the algorithms developed by Teevan et al. to re-rank Web search results based on the similarity between the result and the desktop search index as well as on previous interactions with results. The PSearch interface (Figure 1) shows the personalized results "inline" with and above the regular search results. In this example, I issued the query *SIGIR* to MSN Search. The top-ranked results are about the Special Inspector General for Iraq Reconstruction; other results relate to the Special Interest Group on Information Retrieval. Given my interests, the results related to information retrieval are more relevant and were moved to a region called "My Search" above the main search results.

The bifurcated list presentation used in PSearch has several advantages compared to other techniques that we considered (e.g., single re-ranked list, tabs, fisheye view, markers to indicate personal salience, slider to blend personal and general). This technique shows both regular and personal results without having to invoke any special functions, and allows the user control over whether to see more (or fewer) personal results. In addition to providing access to the personalized re-ranking of Web results, the PSearch interface also allows the user to find related items in their Web cache or desktop search. We will also discuss user feedback from an internal deployment of PSearch.

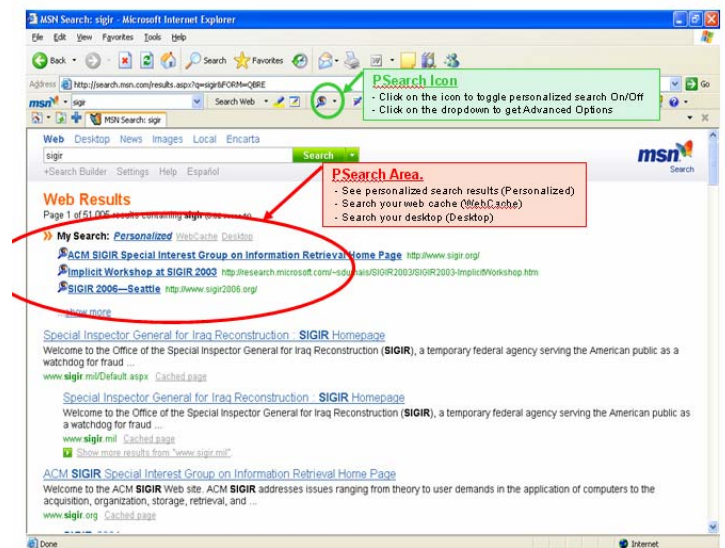


Figure 1. PSearch Interface

2. REFERENCES

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