Metabrowser: A Tool for Collaborative Exploration of the Web

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Abstract. In this paper we present the architecture of the metabrowser, a web application that enables the collective exploration of the web. We discuss some of the issues that are involved in its development and then we present a web site that is based on the metabrowser.

Exploration of web resources (web, intranets and extranets) is an important and recurring activity in today’s business and, in particular, education and research. The goal of exploration processes, simply referred to as sessions in this paper, ranges from very specific (e.g., find information about a given product) to very general (e.g., survey a website that was recommended by a friend). People typically browse one or more websites, directly or with the help of search services [3] to find the information that satisfies their needs, i.e., fullfills the goal of the session. In billions of sessions made daily, it is expectable that people working in a group with common interests (e.g., companies, schools, labs, web communities) navigate the web with the same goals as their partners. Much effort is probably wasted in sessions with similar goals.

Portals and search mechanisms are not an entirely satisfactory answer to these issues. They are too generic and do not take into account the specificity of a group of people and their interests and habits, although they store information about searches and the behavior of the user in response to their results. Despite their usefulness, search engines, such as Google, still fall short of providing support to the kind of specific exploration activity that we are interested in.

One approach to take advantage of the previous sessions are social web sites, such as Flickr (http://flickr.com/). Unlike common portals, that are usually centered in topics, these are user-centered, having users as the main content “producers” by sharing their data, preferences and interests but also as “annotators”, who comment and tag content, instead of simply using hyperlinks to create relations. Although user-provided content and annotations contained in social sites often make it easier to find relevant information, they cannot take advantage of information on the session in which the user collected the information that was shared. They know user preferences and interests, the buzziest topics, but it is not possible to assess the path the users followed to the items.

We propose a metabrowser, a web application to support collaborative exploration and annotation of the web. This is achieved by storing information about the behavior

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of the users of the metabrowser, which can be used to provide guidance for further sessions of the same or different users. It consists of a web site that enables the user to browse the web indirectly.

The client uses his/her own web browser to access the metabrowser site, as any usual web site. The user provides an URL to the application and the latter fetches the contents of that web resource (Figure 1). Before presenting the fetched contents, the metabrowser processes it to ensure that the eventual next resource access is made through the metabrowser. It checks the content type and, if it is an HTML page, the metabrowser changes the references of all the page’s anchors and external resources, with a few exceptions (for example, image and CSS style sheets are not changed). The metabrowser monitors the behavior of users and the information collected can be used to improve the exploration processes of other users.

We are currently testing the metabrowser as part of a popular science portal. Although there are shortcomings to this approach (e.g., not all links can be processed), it has some advantages, when compared to others, which require the installation of specific software, either on the client [1, 3] or server side [2].

References