Studies and Evaluation on Meta Search Engines

ABSTRACT

Meta search engines can solve the low recall disadvantage of individual search engines to a certain degree. Starting with the present situation and classification of search engines, this paper made a brief introduction to the concept of meta search engines, and focused on the basic system structure and key technologies in their individual modules, finally made a short summary.

EXISTING SYSTEM

- According to research report, no single search engine is able to return more than 45% of the references followed by users; in addition, for differences in mechanisms, algorithms and scope among the individual search engines, the repetition of the references for a same query is less than 34%.
- The existing System retrieves search results based on only single search engine, but there are several disadvantages of this traditional method. New data cannot be found only same data are repeated unknowing of other data and at last resulting in bad performance.

PROPOSED SYSTEM

- Meta search engines don't need to traverse the network, download web documents or build up an index.
- They are mainly consisted of member search engine selection, query forwarding, result integration and other algorithms. So, compared to robot based search engines or directory based search engines, meta search engines have much lower technical doorsill and threshold in development and maintenance.
- This forces users to manually submit their queries to multiple search engines one after another until they find the information they need or give up their retrieval desire.

- Varied user interface, grammar rules and retrieval parameters cause much inconvenience to users. Meta search engines receive users' queries through a single user interface, then transparently transform user queries and forward them to multiple individual search engines, finally return the integrated results.
- To a certain degree, they solve the low recall and low precision deficiencies of individual search engines and facilitate users' use. This is also the biggest advantage of meta search engines.
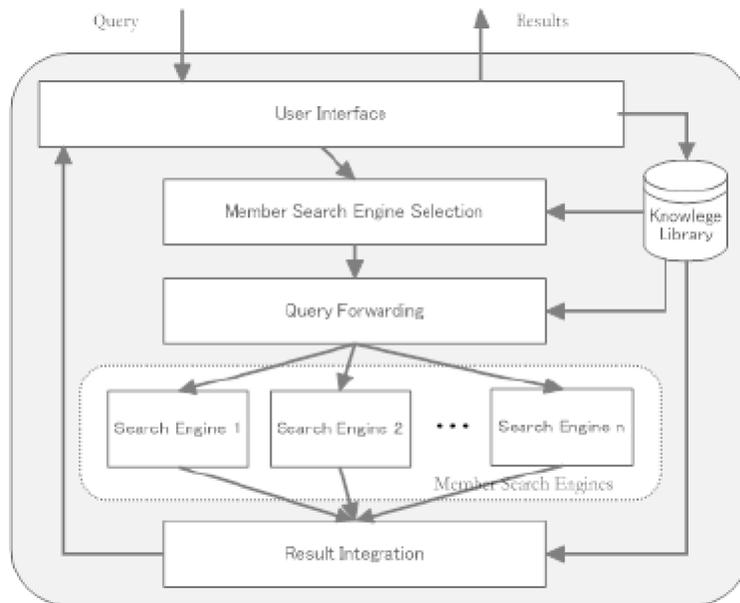

Figure 1.   Basic architecture of meta search engines

HARDWARE REQUIREMENTS

PROCESSOR	:	PENTIUM 4 CPU 2.40GHZ
RAM	:	128 MB
HARD DISK	:	40 GB
KEYBOARD	:	STANDARD
MONITOR	:	15"

SOFTWARE REQUIREMENTS

FRONT END	:	C#.NET

BACK END	:	SQL SERVER 2000
OPERATING SYSTEM	:	WINDOWS XP
DOCUMENTATION	:	MS-OFFICE 2007

MODULES

- User Interface
- Member Search Engine Selection Module
- User Selecting

User Interface

  User interface interacts with users, provides users with visual query input and results output interface. The same to robot based search engines, meta search engines also adopt the "keyword search, browse selectively" man-computer interaction method: users post their query through a form, while search engines feedback to users a list of target entries, then users choose the entries possibly meeting their information needs to browse. User interface should be simple, beautiful, easy to use, allow users to accurately express their information needs, and provides custom settings such as the number of entries displayed per page, the search scope of language, etc to fully meet users' preferences. To adapt the difference with grammar rules and retrieval parameters among member search engines, meta search engines can only provide limited advanced search functions which are common and general to all member search engines.

Member Search Engine Selection Module

  Member search engines can be regarded as the index database of meta search engines. They are of the greatest importance to the quality of results. For the difference with technology implementation and operation strategy, different search engines would perform quite different on the same subject. To obtain better performance, meta search engines should assess their member search engines and choose the ones performing well on a specific subject. Furthermore, member search engine selection is helpful to promoting bandwidth available, reducing the response time and improving user experience. But it is not easy to choose appropriate member search engines for reasons as

follows: inaccessible documents for building index, wide technical differences; frequently-changing index and so on.

User Selecting

The simplest strategy is that let the system provide an optional list of member search engines and users make individual choices. In this strategy, common users are difficult to make reasonable assessment.

REFERENCE

Lin Guoyuan, Tang Jiutao and Wang Chun, "Studies and Evaluation of Meta Search Engines", **IEEE** 3rd International Conference on Computer Research and Development (ICCRD), **2011**.