Evaluating Federated Search Tools

Federated search tools (FSTs) are Meta information retrieval systems, developed mainly to facilitate multiple resources searching through a single search box. They allow searching heterogeneous platforms, which include bibliographic and full text databases, OPACs, web search engines, open access resources...etc, using Meta searching mechanisms. Meta and federated searching tools would facilitate discovering and reaching the deep web through openURLs and search resolver. This study would focus on exploring a framework for evaluating and comparing different federated search tools. The proposed framework consists of three phases: the usability testing, retrievability performance assessment, and overall comparison. Usability testing is usually conducted through users' task or expert testing. Think a loud protocol has been examined for usability testing and FSTs recall and precision have been used to assess the retrievability performance for 20 real user queries. Participants have been directed to give weights for the interface usability and system retrievability importance as indicators for FSTs evaluation. They decided that FSTs retrievability is much more important than interface usability as they can discover the hidden features by training and cannot improve system retrievability without system improvements. They give an average weight of 62 % for the system retrievability and 38 % for interface usability. The think a loud test found no significant difference between the two FSTs while information retrieval (IR) performance measurements found minor differences in terms of recall and precision. The overall evaluations shows that FST which has been developed based on portal technology is better than FST which has been based on library system technology.