

Dynamic WAIS Prototype Announcement
by Mike Schwartz
<schwartz@cs.colorado.edu>
Published in Internet Society News 2(1), Spring 1993

Dynamic WAIS is a system that extends the WAIS (Wide Area Information Service) paradigm to support information from remote search systems, as opposed to the usual collection of static documents. We have a prototype that supports gateways from WAIS to Archie and to Netfind, using the Z39.50 information retrieval protocol to seamlessly integrate the information spaces. Unlike menu-level gateways (such as the current interim telnet interface from the Internet Gopher system to Netfind), Dynamic WAIS uses the Z39.50 information retrieval protocol to seamlessly integrate the information spaces. This approach allows users to access a great deal of diverse information without learning multiple user interfaces.

The key idea behind the Dynamic WAIS gateways lies in the conceptual work of constructing mappings between the WAIS search-and-retrieve operations, and the underlying Archie and Netfind operations. In the case of Netfind, for example, when the Dynamic WAIS user requests a search using the "dynamic-netfind.src" WAIS source, the search is translated to a lookup in the Netfind seed database, to determine potential domains to search. The Netfind domain selection request is then mapped into a WAIS database selection request. Once the user selects one of the domains to search, the WAIS retrieval phase is mapped into an actual domain search in Netfind.

The actual implementation of Dynamic WAIS involves fairly straightforward extensions to the standard WAIS code. Whereas standard WAIS has a search and a retrieval phase, with dynamic WAIS the retrieval phase can trigger a remote search (which could cascade if the retrieval for that search caused another search, although the current prototype only goes one level deep). The problem that arises is that the standard WAIS client does not send the keywords to the server during the retrieval phase. The Dynamic WAIS client sends the keywords in both phases, and also understands how to display the results of Dynamic searches. The Dynamic WAIS server passes these keywords to the remote search services using the above search/retrieval mappings, by invoking clients of those services.

If you would like to learn more about Dynamic WAIS, you can obtain the source to the Dynamic WAIS prototype via anonymous ftp from [ftp.cs.colorado.edu](ftp://ftp.cs.colorado.edu/pub/cs/distrib/dynamicwais) in /pub/cs/distrib/dynamicwais. This directory also contains WAIS ".src" files for the Dynamic WAIS gateways to Archie and Netfind. A paper on Dynamic WAIS is in preparation.

This Dynamic WAIS server was created by Darren Hardy and Michael Schwartz as part of the Networked Resource Discovery Project at the University of Colorado.