INFORMATION ACCESS

Archie±the server's server
McGill University

The Internet is a collection of more than 750,000 computers at universities and research institutions around the world. Many of these sites are information servers that offer mailing list managers, bulletin boards, and even expert systems for technical assistance. More than 1,000 are archive serversÐsites that make ®les available to other users of the Internet. These archives offer software, technical reports, research papers, mailing list archives, and archives of many Usenet news groups. With the Internet growing 100 percent a year, the biggest problem facing its 3 million users is ªwading through the mounds of ®les available to track down what they want,º according to Peter Deutsch, manager of the UNIX Support Group at McGill University in Montreal, Canada.

To simplify locating ®les on the Internet, Deutsch leads a group of volunteers who have developed and manage an archive-server indexing system called Archie, a ªserver serverº that lists, tracks, and updates the 2 million-plus ®les of information at 1,000 anonymous FTP archive sites. These FTP sites offer software, data, and other information that can be copied and used without charge by anyone on the Internet. (Deutsch says Archie currently receives 50,000 inquires per dayÐa 500-fold increase over last year.) Archie lets users search for speci®c program names or strings and ®nd which server contains the program, or list all the software on the server at a particular site.

Archie also permits access to the ªwhatisº description database that includes names and synopses of more than 3,500 public domain software packages, datasets, and informational documents located on the Internet. Deutsch says, in the future, Archie will provide the names and locations of on-line library catalog programs, publicly accessible electronic mailing lists, and a compilation of frequently asked questions.

The Archie server code runs on UNIX workstations, including Sun and IBM RISC 6000 machines. However, NeXT user Scott Stark, a University of Delaware graduate student in chemical engineering, has developed a NeXTSTEP user interface so he and his fellow NeXT computer users can also access Archie.

Says Stark, ªI like the look, feel, and usability of NeXT's object-oriented programming environment. NeXT provides a ready set of interface objects, including windows and scrollers, and it's easy to modify and change the function of objects. It took me only two weeks to create the original version of the Archie interface on the NeXT, and it's easy to continue to upgrade it.º

Stark, who has also created applications in the X-Windows environment, says, ªWhat's different about X-Windows is that you need a lot of expertise with the library before you can create anything. To create an object in X-Windows is a tremendous amount of work. Even though I've used X-Windows quite a bit, I wouldn't feel comfortable creating an object in that environment. But I found it very easy with NeXTSTEP. Also, NeXT's Interface Builder made it simple to construct an interface, so I was able to focus much more attention on the function of the program. With X-Windows, you have to work with text ®les to build the interface, which is very dif®cult.º

Eventually, Deutsch hopes to also use Archie as part of a larger electronic publishing service. He says college faculty have already begun to make their research papers available on the Internet. During the coming year, he plans to create a series of additional archive indexes that he'll segment into a variety of academic disciplines, including history, philosophy, and mathematics. Via this method, an Archie user who wants to obtain information on the War of 1812, for example, could turn to the history archive index. Deutsch also hopes to provide a list of abstracts of all the papers available on Archie.

 Archie is currently offered as a network resource by 13 sites in countries including the United States (Maryland), Finland, Australia, England, New Zealand, Israel, Japan, and Canada, its original home.

To use Archie, NeXT computer users can telnet to quiche.cs.mcgill.ca (132.206.2.3) and log in as archie. Users can also ®nd additional information on the Archie anonymous FTP archive. To access this information, FTP to the host archie.mcgill.ca (132.206.2.3) and log in as anonymous. (Use your e-mail address as a password.)

Among other available items are Stark's NeXTSTEP Archie client (in the subdirectory archie/clients) and a collection of papers describing Archie and how to use it (in the subdirectory archie/pub).

PETER DEUTSCH
MANAGER, UNIX SUPPORT GROUP
MCGILL UNIVERSITY
BURNSIDE HALL, ROOM 200

805 SHERBROOKE ST., WEST
MONTREAL, QUEBEC CANADA H3A 2K6
(514) 398-3709
archie-group@archie.mcgill.ca