Gopher and World Wide Web (WWW) are two useful Internet technologies for the composition and rhetoric classroom. Gopher software makes available a wide variety of text-based information in the Internet. A Gopher at Bowling Green State University offers many types of information. The World Wide Web, using a fairly simple markup language, is also "hypertextual" (meaning that highlighted words within the document connect to other documents or WWW resources), and can also include graphics, sounds, and short videos. Potential applications in the composition and rhetoric classroom include: (1) seeing Gopher searching as an idea-heuristic; (2) recognizing the importance of structure in Gopher-based assignments; and (3) using Gopher and WWW for general departmental and administrative tasks. Gopher's strong points include being easy, fast, and reliable; relatively "academic" and "scholarly" compared to WWW; and widely available. Weak points of Gopher are its lack of an organizational system and the need for systems administrators to be involved. Advantages of WWW include great interfaces; support for multimedia and other Internet functions; ease of self-publishing documents; and hypertext links. Disadvantages include even less organization than Gopher; difficulty of access; and hardware-intensive features. Gopher resources specifically about writing are the RhetNet Gopher Archive, the General Studies Writing Gopher at Bowling Green State University; and the Purdue On-Line Writing Lab. WWW sites specifically about writing include the RhetNet Homepage; the University of Missouri's On-Line Writery; and the IBM Writing Project. (RS)
Gopher Is No Longer Just A Rodent:
Using Gopher and World Wide Web in Composition Studies
Steve Krause
Bowling Green State University

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."
Gopher Is No Longer Just A Rodent:
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(A paper based on a presentation by Steve Krause and John Clark at the Annual Conference of the National Council of Teachers of English, November 19, 1994, Orlando, Florida)

Abstract

This essay, based on a presentation given by the author and John Clark at the 1994 Annual Conference of the National Council of Teachers of English, is a basic introduction to the Internet applications Gopher and World Wide Web. Explanations of how these software packages are operated are provided. Basic lesson plans and applications for composition teachers and administrators are discussed and a list of good Gopher and World Wide Web starting points is provided.

* * *

This essay is an introduction to two extraordinarily useful Internet technologies for the Composition and Rhetoric classroom, Gopher and World Wide Web (WWW). I begin with a brief explanation of what Gopher and WWW are and how they work. Then I examine some of the potential applications of these technologies with particular emphasis on WWW. I close this essay with consideration of the advantages and disadvantages of Gopher and WWW and a brief list of useful Gopher and WWW sites.

Gopher Basics

What is a Gopher? A Gopher is: 1) A furry little rodent that burrows through dirt and connects its world with tunnels—also the mascot of the University of Minnesota; 2) A "flunkie" job made famous by the characters
"Gopher" in both The Muppet Show and The Love Boat, wherein the prime responsibility seems to be to "go 'fer" stuff; 3) an internet software that allows you to find files; 4) all of the above.

Of course, all of these are true, and interestingly enough, all these definitions are related. "Gopher" the software was developed at the University of Minnesota as a means of linking together its own databases. Considering that they are known in the Big Ten as the "Golden Gophers," the choice of names makes a certain amount of sense. It also is a name that makes sense because of how the software package functions: simply put, Gopher uses a menu system to retrieve or "go 'fer" a variety of things--files, directories, indexes, software, etc. Almost everything that can be retrieved with Gopher can be retrieved through other means, but it is a lot easier to use the menu options in Gopher than the various UNIX and VAX commands.

What can be found on Gopher? The short answer is "almost anything on the Internet," but things that might be of interest to people in Composition and Rhetoric include:

- Library Directories
- Bibliographies
- Access to all types of PC and Macintosh Freeware and Shareware
- Abstracts
- Complete volumes of electronic texts
- Unusual magazines, "fanzines," and electronically published journals
- Lists of discussion groups
- Extensive information about other universities and colleges
Job lists
Research data and documents of all kinds
Address lists

How users actually get to Gopher depends on their local systems, so it's probably best to check with local systems administrator for details. Users who are used to simply seeing a % sign or $ sign when they log in may be able to get Gopher by simply typing "gopher" at the prompt. Just about everywhere that has e-mail access has Gopher access, but not everywhere.

The "basic" Gopher menu typically looks like this:

```
Internet Gopher Information Client v2.0.14
Information Center (BGSU Gopher Server)

---
1. Information About the BGSU Gopher Server/
2. BGSU Computer Help Center/
3. Schedules/
4. Northwest Ohio weather
5. BGSU Libraries/
6. Information Organized by Colleges and Departments/
7. Campus Organizations/
8. Making connections off the BGSU campus/
9. Miscellaneous Information/
10. Search for a particular entry in the BG CHIS <?

Press 2 for Help, 3 to Quit Info Center/Gopher
```

This is one of the Gophers operating at Bowling Green State University. The basic features of this menu are:

- Where this Gopher is ("Information Center (BGSU Gopher server)")
- The 10 items to choose from, some of which have a "/" behind them
(which indicates that this item will lead us to more items-- it's a directory) or that don't have anything behind them (which indicate that it's some sort of file)

- The arrow that indicates what choice is available
- The menu at the bottom of the page, in this case a ? and a q command

Navigating through Gopher menus is simply a process of selecting the appropriate item and typing the "Return" key. For example, to look under "Information Organized by Colleges and Departments," users could either type the number six or use the arrow keys to move the selection arrow on the screen, and then type "Return." The result of this search is this:

```
Internet: Gopher Information Client v2.0.14

Information Organized by Colleges and Departments

-> 1. About this directory
   2. Admission Information
   3. American Culture Studies/
   4. BGSU / ICPSR Data Archive (local access only)/
   5. Biology/
   6. Center for Photochemical Sciences/
   7. Chemistry/
   8. College of Business Administration/
   9. Computer Services/
  10. English/
  11. Environmental Health & Safety/
  12. Graduate College (Work in Progress)/
  13. Instructional Media Services/
  14. Mathematics and Statistics/
  15. President's Office/
  16. Sociology/
  17. Telecommunications/
  18. University Bookstore/

Press 2 for Help, 5 to Quit Info Center/Gopher, 4 to go up a menu   Page: 1/2

Here again is the standard Gopher menu: a list of options, a selection arrow, slashes after some of the items, etc. Two differences to note, however. The "u" command is what to use to get back to the previous menu-- if I were
io type "u" (not followed by return) I would go back to the previous screen. Users can keep typing "u" all the way back to the first menu of the search. Also important to note here is the "page 1/2" item. This means that this is a two page menu-- Gopher menus can be many, many pages, and the way to get to get to the next page is to hit the space bar. To go back a page, hit the "minus" key. But what's important to remember is that this only goes up and down within the same menu-- unlike the "u" command, which goes up through previous menus.

If I were to select item 15, "President's Office," and then select the one item that exists in this menu, I would finally get to a text file, which looks like this:

The First Steps Report

The First Steps in Positioning the Administrative and Support Functions at Bowling Green State University for the 21st Century

The Final Report of the Committee for the Study of Non-Academic Functions

Shown D8, press <SPACE> for more, 'q' to quit, or 'h' for help

There's some particular things to notice about the bottom of this screen that are especially important in reading Gopher documents. The bottom darkened
bar says that "0%" is shown at this point. That means that this is probably a long document that goes on for pages and pages. I know this is true because on this particular document, there's a page numbering notation in the upper right hand corner that says "page 56," but that's not a Gopher menu function - that's something that the authors of this document put in. Also important here are the instructions "press <space> for more," which allows users to page through the document by pressing the spacebar.

Besides the "h" for help (always worth checking out sometime), there is also a "q" for quit. Quitting while reading a document doesn't mean that user will quit using Gopher entirely, which is what "q" meant when viewing a menu. Quitting here ends the reading of the document and presents other options. For example, pressing "q" within this particular document leads to this:

The First Steps in Positioning the Administrative and Support Functions at Bowling Green State University for the 21st Century

The Final Report of the Committee for the Study of Non-Academic Functions

Press <RETURN> to continue, <m> to mail, or <s> to save:
The options listed at the bottom of the screen have changed: "Return," "m," or "s." Typing the return key at this point will take users back to the menu, and from there they can type "u" NOT followed by a return back through other menus. Users can also e-mail this document to themselves or anyone else by typing "m", which brings up a screen that looks like this:

```
Report of the Committee for the Study of Non-Academic Functions

Mail current document to:

[Help: ^H] [Cancel: ^G]
```

Users simply enter the e-mail address and press "Return." Once in e-mail, the documents can be downloaded and handled like any other text document.

Now in the nutshell (notice the pun here), that's it: I've outlined how to get into Gopher, how to navigate around the menus, how to read documents, and how to send them to v. e-mail. There are other advanced features that most Gopher users will want to explore either through one of the numerous "how to" books available about the Internet or through Gopher's own "Help" files. Some of these features include "Veronica" searches (which is a key-word search device), and "Bookmarks" (which allow individual users to mark specific Gopher spaces they might find useful.)
World Wide Web

World Wide Web (WWW) has rapidly become the second most popular Internet application being used currently (second only to e-mail). Originally developed in Europe as a means for physicists to exchange scientific essays, WWW has become incredibly popular with the Internet community for four basic reasons. First, it relies on a relatively simple text scripting method called "Hypertext Mark-up Language" which makes it possible for individuals, armed with only the most basic of computer skills and the proper type of computer account, to create documents accessible to anyone on the Internet. Second, WWW is "hypertextual," meaning that highlighted words within the document connect to other documents or WWW resources. Third, WWW has the capacity of supporting multiple Internet medias. While Gopher is essentially a text-based system, WWW can include graphics, sounds, and short videos. In fact, WWW will also support other Internet tools, such as Gopher. Finally, the software packages that have been developed for reading WWW pages have become very popular very quickly-- specifically, I'm thinking of the programs Mosaic and Netscape, which allow users to connect to WWW by doing little more than pointing and clicking.
This is a WWW page that I’ve set up for the class I taught in the Fall 1994 semester, Writing About Films.

Writing About Films

This semester (Fall 1994) I’m teaching English 251, Writing About Films, which is essentially what the title suggests. This course is designed to explore the relationships between writing and film.

Here’s the syllabus and schedule of events for the course.

As the syllabus indicates, there are four essay assignments in the course. Here’s the First Essay Assignment. Here’s the Second Essay Assignment. Here’s the Third Essay Assignment. Here’s the Fourth Essay Assignment.

Neat Internet Stuff

There are a number of resources available on the net about film. Here’s a list (in no particular order) of some of them:

- Cardiff’s Movie Database Browser, an extensive film database.
- CineMedia Homepage, a great link to lots of really good film studies resources.

While I have of course geared this page toward my students, anyone in the world using a program like Mosaic could get access to this page simply by entering in the correct "address" or URL code, which is displayed in the box toward the top of the page (http://www.bgsu.edu/~skrause/WOF.html). The underlined words (which, on a color screen, are highlighted as blue) represent hypertextual links to other documents which the user can point and click on in order to gain access. For example, if users wanted to see a copy of my course syllabus, they could simply click on the underlined word "syllabus" and be taken to that document. These links can also connect to other Internet resources. For example, users who click on the link "Cardiff’s Movie
Database Browser" are taken to a very large database of film information, which is actually housed at Cambridge University in the United Kingdom. This document is also an example of the ease of creating WWW pages-- after I opened an account on the computer that handles WWW pages here BGSU and after I learned a few basic Hypertext Mark-up Language commands, I was able to create this page completely independent of the computer system administrators, something that would not have been the case with Gopher.

There are some software and hardware limitations that can restrict to what extent users can gain access to the various "multimedia" features of WWW (which I discuss below), but generally speaking, WWW is as simple to use as pointing and clicking.

Potential Applications of Gopher and WWW

The uses of the Gopher and WWW for Composition and Rhetoric scholars are numerous and as the list of resources that close this essay suggest, many in the field are currently taking advantage of these technologies. John Clark, my colleague and co-leader of the NCTE presentation that serves as the basis for this essay, has written another ERIC document entitled "Applications of Gopher/The Internet for Composition Classes and Programs." In it, Clark has expanded on our presentation materials about uses of Gopher by the composition teacher and writing program administrator. The highlights of Clark's essay and our presentation include:

- **Seeing Gopher-searching as an idea-heuristic and as a path to procedural knowledge of researching.** The broad categories discussed were "spin the globe" (select any Gopher menu item with personal relevance or
interest), "Gopher as place" (think of a Gopher "hole" or site as not only a chunk or list of text but also as a physical, cultural, and intellectual space), and Gopher as research tool (emphasizing its utility for finding particular information, its heuristic values, and its values for original, unique ideas and information).

- **The importance of structure in Gopher-based assignments.** Some directories available in most bookstores for Internet searching were offered as examples of useful structure for students learning to use Gopher and similar resources/tools, among them the *Internet Yellow Pages* and *The Whole Internet User’s Guide* Catalog. We also suggested that teachers and students develop their own "hot lists" for Gopher-search entry points, as long as those hot lists still allowed students the freedom to structure their own learning and to get involved with the search procedure in a meaningful way. One way to guard against this is to have students build their own lists of favorite Gopher sites as opposed to simply working with the hot lists put together by teachers.

- **General Departmental and Administrative uses of Gopher and WWW.** Clark has established a Gopher site the writing program at BGSU, for the use of both students and instructors. Most of the information in this server is presently focused on the students in our program, and especially aimed at providing some thoughts on areas students typically misunderstand or on which they call for further information. Course information, rationales, procedural explanations, policy guidelines (e.g., plagiarism policy), etc. are provided for students. The General Studies Writing Gopher menu also offers instructors a 200-page+ guide to suggested readings in the teaching of writing, most with extensive abstracts. In the future, we hope to put up sample student essays and even course reading selections consisting
of copyright-released materials.

While our discussion did not directly address the application of WWW in these fashions, it too is an effective tool students can use for research and to explore the Internet, a "place" to write, read, and play, and an excellent means for administrators to distribute information. WWW also has the potential advantage of greater individual autonomy. Typically, computer service administrators need to be involved in the process of setting up Gopher menus, whereas individuals— instructors or even students—potentially have the capability of publishing their own materials accessible via WWW.

There are of course a number of issues any teacher or administrator exploring these uses of Gopher or WWW need to address, including plagiarism, the "quality" of information, and the difficulty of citing sources. But all of these potential problems can also be potential points of learning for students, teachers, and administrators.

Advantages and Disadvantages of Gopher and WWW

While there is great potential with Gopher and WWW for Composition and Rhetoric Studies, there are obviously pitfalls as well. This section of the essay suggests what I think are the major advantages and disadvantages of Gopher and WWW that Composition teachers and administrators should consider.

Gopher's strong points include:

- **It's easy, fast and reliable.** While WWW is also easy, it is frequently not fast or reliable, especially when using graphically intensive web browsers.
- **It's relatively "academic" and "scholarly" (again in comparison to WWW).** There are certainly bits of "fun and games" out there in Gopher space, but it tends to
be more the domain of libraries and other more official databases.

- **It's widely available.** Nearly everyone who has access to e-mail has access to Gopher, and even for those few who don't have Gopher access, there are easy ways to get it by telneting to other sites.

- **More information is available.** Because Gopher is so widely available, there is more data available currently than WWW. Again, "currently" needs to be emphasized; as WWW grows, this will certainly change (if it hasn't actually changed already).

- **It's relatively easy to download text.** A simple e-mail function is all it takes to retrieve information from Gopher spaces. It can also be that easy to add documents to an existing Gopher space. For example, at BGSU, we are able to place documents in Gopher directories through an e-mail function that has been set-up for us by our computer systems administrator.

  It seems to me that there are two significant "weak points" with Gopher:

  - **No organizational system.** Gopher sites are essentially based on the individuals who organized them in the first place (as opposed to a Library of Congress model, for example), which can make finding things frustrating.

  - **Systems Administrators need to be involved.** We are fortunate at BGSU in that our computer services area has given us strong support in our efforts, but if they wanted to, they could easily restrict our access.

  Many of the advantages and disadvantages of WWW are similar to Gopher. Some of the advantages include:

  - **Great Interfaces (such as Mosaic or Netscape).** These are two of several applications available for viewing World Wide Web documents, and both are easy
and fun to use.

- **Supports multimedia.** With the proper hardware and software, WWW documents can include color graphics, sounds, and short "quicktime" movies.

- **Supports other Internet functions.** WWW documents can be connected to Gopher sites, ftp sites, newsgroups, and even e-mail. In other words, a WWW application like Mosaic and NetScape can potentially handle all of your Internet needs from one single window and basically with "pointing and clicking."

- **Relatively easy to self-publish documents.** WWW relies on an ingenious coding method called HyperText Mark-up Language (html) that involves plain, ASCII text with a few codes. Further, there are a number of pieces of software that will convert conventional files into html files with the click of a button. In other words, you don't need to be a computer expert to publish these electronic documents that are available to millions of people all over the world.

- **Hypertextually linked.** Unlike Gopher, which relies on a fairly rigid menu system, WWW documents can be hypertextually linked in any fashion the author wishes. Clicking on a highlighted word can take you to other documents, other Internet applications, pictures, sounds, movies, etc.

Some of the disadvantages of WWW include:

- **Even less organized than Gopher.** Because WWW allows for (even encourages) individual development of WWW pages, the individualistic spirit of chaos is even more pronounced than with Gopher.

- **Can be hard to get access.** This is changing of course, but getting basic access to WWW can still be difficult, especially when compared to Gopher.

- **High-end features are hardware intensive.** To fully take advantage of the features of WWW via an application like Mosaic or NetScape, you need either a
direct-line connection or a ppp connection with a high-speed modem, software that allows for the showing of movies or the playing of sounds, and a high-speed computer to make it all happen in reasonable amount of time. To have all of these things requires a very current computer, the sort that tends to be very expensive and hence out of the reach of many of us.

Some Good Places to Get Started

Let me close this essay with a brief list of Gopher and WWW sites that I think might be useful for composition teachers and administrators. This is by no means an inclusive or the "best" list of sites, but it is a good place to potentially get started. It's also important to note that these sites were all "up and running" in 1994/1995, but since electronic spaces tend to change quite rapidly, they will not necessarily be available indefinitely. To get access to any of the Gopher addresses listed, add the address before the slashes listed to your usual Gopher prompt; for example, to get the RhetNet Gopher Archive, type at the "%", "$", or other prompt: gopher gopher.bgsu.edu, and then select the items listed behind the slashes-- first the "Information Organized by Departments" menu entry and then the "English" menu entry.

Gopher Resources Specifically About Writing

- The RhetNet Gopher Archive (gopher.bgsu.edu/Information Organized by Departments/English). This is the Gopher for the RhetNet listserv/WWW group and it has links to the Composition Program at UC-Irvine, and to the Writing Center Consultation Project at Roanne State Community College and University of Arkansas, Little Rock.
- BGSU's General Studies Writing Gopher (gopher.bgsu.edu/Information
Organized by Departments) This Gopher space offers details about the GSVW program and offers many helpful bibliographic information for composition teachers and administrators.

- **The Purdue On-Line Writing Lab** (owl.trc.purdue.edu) This Gopher contains links to writing centers at Kapi'olani Community College and the University of Wyoming. See also Purdue's WWW OWL page.

**Other Great Gopher Starting Points**

- **The University of Minnesota** (gopher.tc.umn.edu) The mother of all gophers!
- "The English Server" at Carnegie-Mellon University (english server.hss.cmu.edu) A large and interesting database, this a fantastic place to start Gopher research.
- **Veronica.** This is the widely available search device for gopher.
- **Chronicle of Higher Education** (gopher.chronicle.merit.edu) Includes on-line summaries of each week's issues and job listings.
- **The University of California-- Irvine Virtual Reference Desk** (peg.cwis.uci.edu) This is a very useful database of documents and directories about the Internet in general.

**World Wide Web**

Many of these WWW resources offer the same information as the Gopher sites but in a different format. To get to these sites, select "Open URL" on your WWW browser and enter in the complete address. Be sure to double-check your typing because all of the punctuation and capitalization counts.
WWW Resources Specifically About Writing and Rhetoric

- The RhetNet Homepage

- The University of Missouri's On-line Writery
  (http://www.missouri.edu/~wleric/writery.html) One of the first and best on-line Writing Centers in the country.

- Computer Mediated Communication
  (http://www.rpi.edu/~decemj/cmc/mag/current/toc.html) This is an on-line WWW journal about rhetoric, writing, and the 'net.

- Raiders Rhetoric (http://prairie_island.ttu.edu) The homepage of the English Department of Texas Tech University.

- The IBM Writing Project (http://www.ucet.ufl.edu/writing) An interesting database out of the University of Florida that includes an on-line version of the Blair Handbook and links to other interesting writing-type web pages.

- The EdWeb Page (http://198.187.60.80) a project for K-12 teachers and students with some helpful primers on the Internet in general.

- Purdue University's OWL (http://owl.trc.purdue.edu) This includes a connection to Purdue’s gopher menu that has lots of good handouts.

Other Useful WWW Pages

Directories and Indexes

- John December's Educational Resources Guide
  (http://www.rpi.edu/Internet/Guides/decemj/icmc/applications-education.html)

- Scott Yanoff's List (http://alpha2.csd.uwm.edu/Mirror/inet.services.html)
- Yahoo-- A Guide to WWW (http://akebono.stanford.edu/yahoo)
- The Whole Internet Catalog (http://nearnet.gnn.com/wic/newrescat.toc.html)
- The Information Bank (http://www.clark.net)
- The "Other Links" Collection from Stanford (http://www.stanford.edu/otherLinks.html)
- The WWW Virtual Library (http://info.cern.ch/hypertext/DataSources/bySubject/Overview.html)
- The Web Crawler (http://www.biotech.washington.edu) This is a very useful key word search device.

Other WWW Sites of Interest

- The Chronicle of Higher Education (http://chronicle.merit.edu/)
- U.S. Department of Education (http://www.ed.gov/)
- Project Gutenberg (http://med-amsa.bu.edu/Gutenberg/Welcome.html)
- Links to Webbed Elementary, Middle, and Secondary Schools (http://toons.cc.ndsu.nodak.edu/~sackmann/k12.html)
- The ArtsEDGE Information Gallery (http://k12.cnidr.org/janice_k12/artsedge/artsedge.html)
- The English Server (http://english-server.hss.cmu.edu/FrontDoor.html)