A TRALINET GUIDE TO THE INTERNET

BY

ED BURGESS

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A TRALINET GUIDE TO THE INTERNET

Second Edition

prepared by

ED BURGESS

Fort Monroe, VA

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Published by the TRADOC Library and Information Network (TRALINET) for use by TRADOC action officers.

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The first edition of this guide was originally prepared for the specific needs of the TRALINET librarians, a rather limited target. However, many of the concepts and approaches described here may be more widely applicable. The authors hope so, anyway. The Internet changes quickly, and anything that looks like an error surely must be something that changed after we wrote this, so readers are advised to proceed at their own risk. Permission is granted to reproduce any part of this document, and to quote from it, so long as appropriate credit is included.

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READ THIS FIRST

This workbook was put together for the benefit of TRALINET toilers. It addresses some specific problems that TRADOC action officers and staffers will face in accessing Internet resources. Some assumptions:

- Most TRADOC personnel will go through Profs.
- Most use an IBM 4381 or 3086 running the VM operating system.
- Some (more at the TRADOC installations than at Fort Monroe) dial into Profs using a modem and communications software.

In some cases, this workbook will talk about commands and practices which are in use at Fort Monroe. Readers should be aware that those practices are not universal. The reader is strongly advised to speak with his or her local system administrators.

Anyone wishing to actually do work on the Internet is advised to bring along an extra helping of patience. Partly because of the hosts that TRADOC uses, and partly because the reality of the software you will be interacting with is far removed from the promotional literature, Internet surfers often get stuck. The Internet is new, evolving, constantly changing, designed by computer systems people rather than information retrieval people. Things don't always go as well as one would hope.
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INTRODUCTION

Everyone seems to be talking about the Internet now. It's the hot topic at conferences, it's in all the journals. But talk to the Army community and, and you will find a very small number of them are actually using the Internet in any meaningful way.

There's a reason for that, in fact many reasons. The first is that the Internet is not so easy to use. It requires access, which not all have. It is very diffuse—many resources, scattered over thousands of computers, and there are no directories. Even worse, if you actually manage to overcome the access problem and find information you want, the computer sneers at you in language you haven't heard before, and your keyboard doesn't work right.

This manual will help you overcome some of those problems. We've identified a few sample resources that may actually be of some assistance to your work. We've identified some techniques that will make it a little easier to connect up to certain computers. We've tried to relate the Internet to TRADOC, and TRADOC host computers. We've tried to give some sense of the widening horizons that the Internet can give us, and the unmanageable masses of data we can access.

TRADOC libraries exemplify the trends in this area. Twenty years ago TRADOC librarians essentially managed the collections within their walls. Maybe they did a little interlibrary loan, but it was tedious and slow to even find out about books and periodicals elsewhere. Ten years ago TRADOC libraries began using the various commercial online services, and their horizons broadened considerably, especially in books and magazine articles. Now, TRADOC librarians can access a thousand kinds of resources, all over the world, with the tools they have on their desks. Few of them actually are, yet, but the techniques are spreading. It's going to require new skills, and it's not going to be easy.

But what we (not just librarians, all of us) really need to do is get the customers the answers they want. The author is trained as a librarian, so this guide is written from the standpoint of retrieving information for customers. The customers may be General Officers, DA staff offices, college students, or civilians, and they are starting to want things that are tough. Probably you will only need to use a few of the possible sources on the Internet, but it's very likely you will use some. This is a start.

Acknowledgements: This is the second edition of the Guide. The first edition was written by Ed Burgess and Leroy Ball, a talented intern who has since left Federal service. The current edition builds on that work. Others who have contributed include Jean Thacker, Fort Monroe DOLM; Russell Rafferty, TRALINET; Jeanne Herrman, HQ TRADOC DCSIM; Leslie Williams, TRALINET; and FRAN Doyle, TRALINET.
QUESTIONS AND ANSWERS

Why should I use the Internet? I've been getting along just fine without it so far.

Darned good question, actually. The answer comes in two parts, one concrete and the other rather spacey. First, you are using it now whenever you send email. It just happens that there are other tools available via Internet connections which no one ever told you about before. Second, the world is getting smaller, and what's left of it seems to be more tightly connected and more volatile. We're going to need fast, decentralized ways of interacting with all the various people we communicate with. It looks like a huge number of people are going to be using the set of resources we call the Internet, and we'd better be sure we're not losing ground.

I followed your instructions and they don't seem to work. What now?

Because you are in TRADOC, you probably access the Internet through Prof's. This means that you are a user on a host computer somewhere, usually at your installation. You have to get familiar with the DOIM staff. They must assist you, and they can. True, levels of support vary. Some are more knowledgeable than others, some are more interested than others. But all the DOIMs can help you, and every TRADOC office can get connected to the Internet in some way. This is a burgeoning area of interest, and the DOIMs are often learning along with their customers.

I haven't got time to play around with this. I have a job to do and I'm overworked already.

You're busy, sure. If you aren't, your job is probably at risk. This is an additional area of service that is glamorous, timely, and potentially productive. It's also the biggest step forward in access to information since we gave computers to librarians. It's free, which may interest some people. It's something employers are going to be asking about.

I dial up Prof's using ProComm. It's slow and cumbersome.

That's a problem. It's better to be connected to your host via a controller or a LAN. Dialing in is a pain. We can't solve that, though. You have to. Get with your systems people and talk to them about improved access. If you have a demonstrated mission that requires better connectivity, you may get farther with your arguments. Yes, I know, that's easy for me to say, but no one ever listens to you and your ISO is an E-4 and your budget was just cut for the fourth time since February. Isn't management challenging?

Someone told me I'm in the Internet already. What did they mean?

You are. The network that the military runs is called the Defense Data Network (DDN). MILNET is the unclassified portion of the DDN. MILNET is one of the parts of the Internet. If you have a Prof's userid you can send email to anyone in the world who has an email system connected to the Internet. Theoretically you can access resources on the Internet. You may need some help from your system administrator, though.

I logged into this library catalog in Germany, just like the guide I read told me, and my keyboard froze up. What'd I do?

I don't know. Sometimes we just can't connect. If their system won't interface with ours, or if our keyboards don't generate the codes they expect, odd things will happen. The books suggest that IBM mainframes, which TRADOC has, often have trouble talking with the UNIX-based machines that are so prevalent elsewhere. Reboot and try someplace else.
Someone sent me a note from a civilian company, which I got, but I can't seem to send one back to him. What's wrong?

Call your system administrator. Each host computer has a list of approved "addresses"—actually host names—with which it can communicate. These lists are quite long, and are updated frequently. For convenience, local sysads don't always keep civilian addresses in their lists, and instead just load the military ones or the ones most used. Your sysad will most likely be glad to add another address. Fort Monroe and the installations where battle labs are located recently installed some marvellous software—don't ask how it works—which resolves most addresses without your noticing. Mention that to your sysad.

I keep hearing about these discussion groups on the Internet. Are they worth while?

We can't say if you'll get much from any one of them. Discussion groups essentially allow you to post a note on a bulletin board. Mechanics differ, but in many a user sends an email note to the computer hosting the group, and the computer then resend that note to all the members. This process can generate a lot of mail, and only some of it is interesting. (We once got 23 messages arguing about whether to use "disk" or "disc"). But we also got some useful things, too. Try a few. If you don't like them, drop out.

I tried to give someone the email address people in TRADOC use, and she said it wouldn't work.

We are accustomed to seeing addresses written in this form: MON1(BURGESSE). That's because TRADOC has provided that as a kind of shorthand, good only within the TRADOC communication network, for the standard form of email address, which is like this: burgesse@monroe-emh1.army.mil. Other people's computers expect the longer form.

I already give people my DSN and commercial numbers and my Profs address and my mail address. Now you want me to have yet another email address?

Well, yes. This isn't going to go away. You're going to be getting notes and files from friends, colleagues, vendors, librarians, managers, who knows what. TRALINET librarians are already transferring acquisitions and cataloging data via Profs; resource managers have been moving spreadsheet data via Profs for some time. That kind of data exchange can go on with virtually anyone in the world, and it's growing rapidly. The military is in danger of being left behind in the technological races. That would be bad for service, bad for our careers, and bad for our profession.

Is this Internet thing actually useful, or just another overhyped toy for the technologically addicted?

Yes to both. This is an emerging area. Some people are deeply involved, others are not. You can retrieve a lot of data from a lot of places, not all of it meaningful. You can send electronic mail to a lot of people, not all of whom you wish to speak to. You are already using one of the Internet capabilities to send and receive mail within TRADOC; the functions described below simply expand on that capability. Every functional area in the Army is taking advantage of some Internet resource. Librarians are already getting questions daily about Internet-accessible resources; providing information for their customers is about to get far more complex for libraries than it ever has been before. Other service providers such as action officers, XOs, managers, commanders, etc. in the same boat. Internet enthusiasts tend to be evangelistic to the point of exhaustion, but that doesn't mean that we can dismiss their exhortations. We believe that if you want to retain your credibility, you need to get familiar with the evolving worldwide net.
1. SCOPE

This guide will give you some basic skills and direct you to a very small portion of the electronic files which are available over the Internet. It uses language and examples which TRADOC users can follow, and lists samples of references and documents that will be useful to them and their customers. We hope this guide can be used as a reference tool to which TRADOC users can refer when searching for specific resources.

2. HOW TO GET STARTED

2.1. Get acquainted with your system administrator. Engaging in telecommunication with remote computers is not always a straightforward business. You cannot do it without assistance from the people who run your computer. Talk to them. Show them this guidebook. Get them interested. They are supporting these functions now; there is nothing in this workbook that can't be done in every TRADOC office.

2.2. Working on the Internet requires time. No one has any, of course, but it is necessary to experiment, to think, to fail, to succeed.

2.3. Read. The bibliography contains books cited frequently, books we have used successfully, and titles that looked promising.

2.4. TRADOC users accessing the Internet through their Post mainframe may have trouble connecting to a particular address because the address may not be in the mainframe's host table (a list of legal addresses that the installation mainframe maintains). Contact your system administrator to get the address registered if you have this problem. For many TRADOC installations (currently the ones with Battle Labs) this problem has recently been ameliorated, because their DOIMS have loaded some software which checks out addresses and figures out how to get hold of other mainframes without human intervention. It's not perfect, but it seems to have taken care of about 95% of the addressing problems.

2.5. It may work better if you use the IP address (e.g., 192.126.8.4). Before trying out Telnet and FTP you will need the Telnet executable file resident on your A disk (see glossary). Contact your system administrator to get it.

2.6. You may need to get a Terminal Access Card (TAC), an authorization which allows you to use a TAC node. At Fort Monroe, we use the TAC node at Langley AFB, but there are others around the country. TAC can give you access without having to go through Profs. For some applications, this may be necessary. Or, even better, there may be a UNIX host on post that you can use. Depends on your needs; ask around. Some Internet buffs may be best served by going to a commercial access supplier and subscribing.

2.7. Remember this: much of the difficulty of using the Internet is that everybody has a specialized language, and nobody explains what the new words mean. For instance, computer specialists will use several different names for the same concept: mainframe, TISI, server, host. We never do this, of course.

2.8 As a convention we have enclosed keyboard entries inside a pair of arrows, like this: <telnet> This means you should not type the arrows or the period, just the six letters. When we're showing what the computer screen will say, it's in this typeface.
3. WHAT IS THE INTERNET?

3.1 The Internet is not an easy place. The main reason it doesn't seem well organized for us is that it's not well organized at all, for anyone.

3.2 The Internet is a very loose conglomeration of computers and computer networks all over the world which can exchange data in standardized ways. In more technical terms, it's a set of host computers and networks which agree to use the Transmission Control Protocol/Internet Protocol (TCP/IP). The Department of Defense runs a very large network called MILNET, which is unclassified and is a part of the Internet.

If you're interested (most readers shouldn't be, especially if they have any worries about their own mental stability) a detailed if poorly reproduced report on the MILNET does exist. The DDN New User Guide was actually prepared by the DDN Network Information Center and published by the Defense Technical Information Center (DTIC) in 1993. (DTIC is a clearinghouse for DOD-generated reports and studies.) It is most conveniently available by asking your servicing library for ADA262860.

Twelve years ago, there were about 200 computers hooked up to the network that eventually became the Internet. Now there are approximately one million. The number of users is widely considered to be uncountable, but certainly in the tens of millions.

3.3 There are three basic services available on the Internet:
- Electronic Mail (Email)
- Remote login (TELNET)
- File Transfer (FTP).

There are other services that are variants of these three:
- Electronic journals
- Computer conferences
- USENET newsgroups

3.4 EMAIL allows you to communicate with other people on other networks around the world, providing their address is registered with your post mainframe. With email you have the capacity to send and receive files and messages from other users of computer systems. This is very like Profs, although Profs contains some other functions as well. Profs can send email to any Internet address. Since TRADOC personnel have been using email for some time, and since Profs manuals and assistance are widely available, this workbook will not concentrate on email. One thing, though—by do need to understand how to use CMSNAMES nicknames.

3.5 TELNET is a command that allows you to login to another computer at a distant location. (Note that this is quite different from Telenet, which is the old name for a communications network now known as Sprintnet.) This command allows you to connect with a foreign computer and interact with it like any local user would. You might use telnet to search a distant library's catalog or log into a specialized database.

3.6 FTP (File Transfer Protocol) is a command that allows you to transfer files from a distant computer to your own host computer. Sometimes called "anonymous FTP." Many sites maintain quite extensive collections of files that one may copy. Some sites allow remote users to put files onto their host. This has become an important adjunct to academic and scientific publishing in the universities because new research material can be distributed quickly. The host must set up a special area that remote users can reach into, you can't just dial up Fort Benning and play with their system at will.

3.7 Using TELNET.
3.7.1 You will encounter problems when logging into other computer systems. Screen displays may be
garbled or incomprehensibly displayed. The information you retrieve may not be in a usable format.
These problems are due to the incompatibility of your local system and the foreign host. The IBM systems
that TRADOC installations use often have problems displaying the information that is sent to them,
particularly when telneting to a UNIX host or certain online commercial databases.

3.7.2 Having said that, there a number of nifty resources out there that you can access. A recent study
identified 337 library catalogs that surfers on the net can enter. Several sites provide free access to a
variety of computerized resources—periodical indexes, community information, how-to information, even
some entertainment. See the Exercises chapter for some.

3.7.3 At Fort Monroe the command for telnet is TN, but once again, ask your local sysad. You must
have a special exec file attached to your Profs. Local customs differ, so check with your system folks.

3.7.4 Typically, what you'll do is:

<TN pac.carl.org><enter>

After which, the Fort Monroe host says.

Valid user and password required on foreign DDN host

Then another screen will say:

VM TCP/IP Telnet V2R2
Connecting to pac.carl.org 192.54.81.128, Port Telnet (23)

Using Line Mode...

Notes on using Telnet when in Line Mode:
- To hide Password, Hit PF2 or PF15
- To enter Telnet Command, Hit PF4-12, or PF16-24

Then, after a suitable wait (bring coffee), you will connect to the distant host. The host in this example
makes you go through a lot of steps which establish that you have a VT100 terminal (you do), that you are
not a member of the Colorado Alliance of Research Libraries (you aren't) that you do not have a profile
established (you don't). Then you will be faced with cascading menus of things to access—over fifty
library catalogs, electronic encyclopedias, commercial databases, other great things. Don't get
overexcited. Several of them aren't open to strangers, a couple have charges that they warn you of. But
most are open and free.

3.7.5 If you get stuck or confused, and neither is a disgrace, being all too easy, press <F4> on your
keyboard. This will allow you to enter a local (meaning Fort Monroe) command. <QUIT> is the most
useful.

3.7.6 Whether you break out, or whether you use the remote site's menus/commands, when you quit the
Fort Monroe host will say:

Press <Enter> to return to CMS.

Do so, and find yourself back at home.

3.7.7 Lots of telnet sites don't care who you are; lots more do care but freely let you enter into selected
parts of their systems. Other sites expect you to be a legitimate registered user or to beat it, and swiftly.
(Guess which category most MILNET sites fall into.) Remember that all telnet-accessible hosts are accessible because their organization needs the host, and you are basically a charity case. Be humble.

3.8 Using FTP

3.8.1 FTP is sometimes called "anonymous FTP" because one of the conventions is that you log in to the remote host as an "anonymous" user. Except of course you aren't really anonymous—the other computer always knows who you are and where you live. Internet was designed by computer engineers, not linguists. Live with it.

3.8.2 At Fort Monroe the command for this is <FT>; but check with your local system folks.

1. FT [domain or IP address]
2. Login as <ANONYMOUS> [This means type the word "anonymous"]
3. Password <GUEST or your email address> [try both, but usually requires your DDN address, as, userid@monroe-emhl.army.mil]

3.8.3. There are four basic commands you need to keep in mind when you are in a FTP session (there are others, but these are basic).

DIR - this tells the computer to list the files in the current directory. Works very like the DOS command.

CD - tells the computer to change from the current directory to another directory. Works very like the DOS command.
CD /dirname moves down the tree
CD .. moves you back one level

GET <filename> - this command tells the computer to download or transfer the current files requested into your local system.

QUIT - this command tells the system that you want to end the session. It will probably throw you back to your own host.

3.8.4. It's a good practice to transfer README or INDEX files first so you can get information about the files or the directory you are in. Sometimes there are instructions or descriptions about various files, instructions about unzipping compressed files, and information about where other files are located.

3.8.5. Four things to remember:

3.8.5.1. File names are case sensitive so type them in exactly as they are displayed in the directory. Email addresses, on the other hand, are not as a rule case sensitive. Software designers do this sort of thing so that they will be worshipped as demigods.

3.8.5.2 Most of the systems that you will be connecting to will be different from your IBM mainframe, and will have the file names set up in different ways. IBM has filenames that look like this:

smithjones [in some circumstances a dot separates the two parts]

UNIX might have a filename like this

lincoln-inaugural second.text.wash
You cannot transfer that file to our mainframes using that name. The solution is to change the filename to a format that your local IBM system understands, like this:

GET lincoln INAUGURAL.second.text.wash LINCOLN.S.INAUGURAL (your local system will recognize this format—note that it's form is 8char.8char—that is, a filename of up to eight characters and a filetype of up to eight characters, separated by a dot.)

Just for comparison, remember that DOS uses filenames that look like this:

filename.ext

This will become important (and can be pretty confusing) when you start to move files from a remote host to your desktop PC. Keep a cool head. Filenames and directory displays are fearfully confusing, one of the worst examples of ergonomic design I know.

3.8.5.3 Remember that FTP transfers files from a remote computer to your mainframe computer, and stores them in that little corner of the mainframe you call your own. In Prof's, that is called your A disk. You will have to do a separate step to bring the file down from the mainframe to your PC. Since there are a number of ways of doing that at the various TRADOC installations, this workbook cannot address that part of the puzzle, but your local systems people can. Speak to them.

3.8.5.4 Eventually, you're going to get stuck. When you do, try pressing <F4> (may be <PF4> on some machines). This should allow you to enter a host command, like <QUIT>, to break out of the remote computer and return home. If that doesn't work, try rebooting. This works when telnetting, too.

3.8.6 If you are going to get very seriously into FTP, this manual will not be sufficient. Get one of the books in the bibliography and study some. Simple FTP is not very complex but you can get wrapped around the axle.

3.9. COMPUTER CONFERENCES

3.9.1. The increasing availability of email services and interconnections between computer systems has spawned a new kind of communication. This phenomenon is often described as discussion groups or computer conferences.

3.9.2. Discussion groups come in a lot of shades, but most work this way. A monitor sets up an email site which is dedicated to a certain subject. Interested people join, and send messages to the monitor which they believe others would be interested in reading—opinions, technical questions, gossip, answers to others' questions. Usually the monitor edits and screens the mail, but his main function is to resend all those messages to everyone. Thus if I send a note asking why the sky is blue, my query will be read by all the registrants, and a fair percentage of them will probably send in their opinions on my question. All of those answers will be forwarded to every participant, and so on. Since each discussion group is usually quite focussed on a particular subject, the registrants all tend to understand each other and to stick to the general area of interest.

3.9.3. You can get a list of lists. It's huge. Leslie Williams, the reference librarian at Fort Monroe, printed it out by leaving her printer running all night. It made a stack about four inches tall, and not much white space. FTP to ftp.anon.sri.com, in the netinfo/interest-groups directory. Or, you can email to mail-server@nisc.sri.com; in the subject line put: <send netinfo/interest-groups>.

3.9.4 This is a good place to mention that any printed list of Internet resources (like mine) is out of date well before it gets to the Printing Plant. Internet hosts are all run by independent bodies. They have no special responsibilities to one another other than to use compatible software. They come on line and drop out of the net unpredictably, and files held in them change with the rising of the moon. There are a
number of online resource guides, and heir number increases monthly, which are updated on a regular schedule. Appendix B is a sample of such a guide which is updated biweekly by Scott Yaroff.

3.9.5 TRADOC maintains at least one discussion group, the Historian Bulletin Board. The Center for Military History is the overall proponent, but the Office of the Command Historian at HQ TRADOC is acting as overall system administrator. The discussion group is in the form of a bulletin board on Profs at Fort Leavenworth. This one does not send email to members; members post notes in the bulletin board and others must log into it to read them. If you wish to participate in the bulletin board, send an official request containing your name, position title, and current security clearance level to HQ TRADOC, ATTN: ATMH (Dr. Stensvaag), Fort Monroe, VA 23651-5026. HQ TRADOC will pass on your validated request to the Fort Leavenworth DOIM, who will issue a userid.

3.9.6. I'm most familiar with the library-oriented lists, but some of my friends follow comics, fly fishing, music, etc. There's something for everybody. Naturally I'm not advocating using government resources or time to support your hobby.

Here's how to subscribe to PACS-L, a library-oriented computer conference, via PROFS. You'll need to know how to use CMSNAMES, remember.

1. At the PROFS main menu, go to PF3 (Send a Note).
2. In SEND TO: field, enter: CMSNAMES(XXXXXXX)
3. Leave the SUBJECT: field blank.
4. Tab down to the message area, and type:
   Subscribe <List Name> <first name> <last name>
   Example: Subscribe PACS-L Jane Smith
5. Tab down then type: .nl
6. PF7 to send
7. [Then a screen comes up for ADDRESS ENTRY]
   At USERID type: <whatever is LEFT of the @>
   Example: PACS-L
   AT SYSTEM (or Node) type: <whatever is RIGHT of the @>
   Example: UHUPVM1.UH.EDU
   remember you don't type the @ sign
8. Press <ENTER> to send

Specific conferences may have different procedures, but the majority work this way. If you hear of a conference, follow whatever instructions are provided.

3.9.7. The following list contains a few of the dozens of discussion groups for various brands of librarians. You can subscribe to any of them by simply sending an e-mail message. Details may differ, so you may need to experiment. Pick one or more and try them for a while. It may interest, bore, or startle, but one thing it is sure to do: increase your email traffic. I was in PACS-L for a while and averaged about 10-20 Profs notes a day, PACS-L probably generates more traffic than most.

Here are some representative library conferences:

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<tbody>
<tr>
<td><a href="mailto:AFAS-L@KENTVM.KENT.EDU">AFAS-L@KENTVM.KENT.EDU</a></td>
<td>African American Studies and Librarianship</td>
</tr>
<tr>
<td><a href="mailto:BUSLIB-L@IDBSU.IDBSU.EDU">BUSLIB-L@IDBSU.IDBSU.EDU</a></td>
<td>Business Librarians</td>
</tr>
<tr>
<td><a href="mailto:CDROMLAN@IDBSU.IDBSU.EDU">CDROMLAN@IDBSU.IDBSU.EDU</a></td>
<td>CD-ROM LANS</td>
</tr>
<tr>
<td><a href="mailto:LIBADMIN@UMAB.UMD.EDU">LIBADMIN@UMAB.UMD.EDU</a></td>
<td>Library Administration and Management</td>
</tr>
<tr>
<td><a href="mailto:LIBREF-L@KENTVM.KENT.EDU">LIBREF-L@KENTVM.KENT.EDU</a></td>
<td>Library Reference Issues</td>
</tr>
<tr>
<td><a href="mailto:MEDI-L@UBVM.CC.BUFFALO.EDU">MEDI-L@UBVM.CC.BUFFALO.EDU</a></td>
<td>Medical and Health Sciences</td>
</tr>
<tr>
<td><a href="mailto:PACS-L@UHUPVM1.UH.EDU">PACS-L@UHUPVM1.UH.EDU</a></td>
<td>Public Access Computer Services Forum</td>
</tr>
</tbody>
</table>

OK, not everyone's a librarian. I am. Find your own list.
3.9.7. Note: Discussion groups are often advertised with the BITNET address. Since TRALINET librarians are not in BITNET (it's a commercial network, another part of the Internet), you must use the Internet address and not the BITNET Address.

EXAMPLE: ADVANC-L@IDBSU is the BITNET Address
LISTSERV@IDBSU.IDBSU.EDU is the Internet Address.

BITNET is accessible thru the Internet; in fact it's part of the immense collection of computers and phone lines which comprises the Internet. We gather that there is a different protocol used for BITNET; many international hosts (in Europe, for example) use this protocol.

Since it is different, there are actually hosts (mostly .edu hosts) which act as a "translator" of sorts. These hosts take Internet mail and format it into BITNET mail and vice versa. Our sysad at Fort Monroe says that WAIS at the DDN NIC is a way to lookup these host names and various userids. I haven't had occasion to use this facility much since we don't send much mail to foreign country hosts (mostly to military hosts in foreign countries).

One of the more common "translator" hosts is CUNYVM.CUNY.EDU. To get a BITNET address of ADVANC-L@IDBSU to flow, you can address the note as follows:
ADVANC-L%IDBSU@CUNYVM.CUNY.EDU

3.10. Electronic Periodicals. The electronic periodical is a new form of publishing that has recently become practical. Because a fairly large number of people can access computers, and retrieve files from anywhere in the world, it is now possible to publish a periodical without putting it on paper. Issues, or even individual articles, can be stored as files on a host, and interested readers can FTP them.

This is a wonderfully economic idea: the publisher no longer needs to maintain a printing press, purchase ink or paper, spend his capital on postage. The readers select themselves and gladly accept the burden of getting the material. They even print it themselves. The only cost is storage room on an Internet-accessible computer.

The technique is applicable to certain low-volume magazines, especially academic ones. Articles may be refereed or not. A recent survey by OCLC identified 26 electronic journals, 72 electronic newsletters, and 16 electronic digests. As the field matures, electronically published periodicals are getting progressively more professional and more numerous. You will see them advertised in discussion groups and mentioned in professional literature. Unless you find one whose subject matter interests you or your customers, they are little more than curiosities today, but look for this publishing niche to expand rapidly over the next decade. Reflect on the issues involved in bibliographic control: the computer guys are trying to horn in on a part of librarianship no one else ever wanted, that is, storage of back issues of magazines.

For now, these things work, if clumsily. If you sign up for any of the discussion groups, you will soon receive invitations to receive electronic periodicals also. Find some, try them out.

3.11. USENET Newsgroups. USENET is not available at Fort Monroe, nor, as far as I know, anywhere in TRADOC. Think of it as a huge UPI wire service into which anyone can put articles and from which anyone can search and retrieve. "Anyone" meaning a person with access to a USENET server. Not having had personal experience with USENET, we can't say much about it. If you're interested, see lengthy descriptions in The Internet for Dummies, Navigating the Internet, etc. To see USENET you'll have to subscribe to a commercial Internet access service.

3.12. Each host computer on the Internet has two names, one mnemonic and one numerical. Both names (think of them as both names and addresses) are unique throughout the Internet. Fort Monroe is known by it's mnemonic name (monroe-emh1.army.mil) and it's Internet Protocol, or IP, name
(192.111.52.10). For telnet and ftp you may use the two names interchangeably, but email requires the mnemonic name. You really don't want to know why this situation exists; just accept that it does.

3.12.1. The host's local table is a list of other hosts which the host knows how to get in contact with. It's normally a file which is retrieved from the DDN NIC periodically by the host administrator. The list is limited to those hosts who are registered at the NIC. Primarily government hosts are registered. We have been told that approximately 1% of the hosts accessible thru the Internet are actually listed and advertised at the DDN NIC ... that means that 99% of the available hosts are not contained in the table.

3.12.2. Unfortunately, there is no other easy source (that I'm aware of) to extract a list of hosts for inclusion in your host's table. So until recently at Fort Monroe, and still at some posts, the only other way the system administrator can find out about a host is through users attempting to send mail and being rejected, or occasionally from addresses published in trade journals and magazines. Sad, but true.

3.12.3. To make things even more unreliable, the NIC relies on the individual host administrators to keep information in the database current and up to date. Some administrators are very conscientious and others are not.

3.12.4. Other host administrators may handle things differently, but for the most part the hosts are not available simply due to lack of information. If you tell your administrator about a host you tried to get but could not, he can add it, probably overnight.

3.12.5. DDN NIC and InterNIC. These are the best tools we have for looking up information about various Internet hosts. The DDN Network Information Center (NIC) is best for DOD hosts. The InterNIC is non-DOD hosts. At Fort Monroe, the command DDNNIC typed at the arrow prompt on the Profs main menu screen will connect you to the DDN Network Information Center. We highly recommend trying this a few times. If your installation does not have the DDNNIC command available, you can always use their local telnet command and telnet to NIC.DDN.MIL (IP address 192.112.36.5) or telnet to RS.INTERNIC.NET (IP address 198.41.0.5) — that is essentially what the DDNNIC exec does.
4. TOOLS

4.1. Disclaimer: The Internet is advertised as a place where one can get the answer to any question. True—if one is unconcerned about the provenance of the answer, and one is in no hurry. There are professionally trained people who can answer a lot of reference and research-type questions for you. They may know how to use the net, or they may have other sources. If you have an urgent need for accurate, timely, data, you may well be best served by the nearest TRADOC library. TRADOC librarians can supply answers to most of the questions you’re likely to try to answer on the Internet. They do the work, you don’t have to learn the telnet version of the <copy> command. Librarians answer questions for a living. Try them out.

4.2. The vast number of host computers on the Internet—in excess of 100,000 in this country alone—and the huge amount of data stored in each one, can make searching for specific information an insuperably confusing business. Fortunately, there are tools developed to help users locate resources on the Internet. Among them are Archie, Gopher, HYTELNET, and WAIS. It’s worth mentioning that these are, by my standards, primitive and awkward directory tools. However, with each passing week the tools get better, there are more of them, and more materials are made visible.

4.2. ARCHIE is a database that helps users search for documents and software that are available at different FTP archive sites. An Archie server lives on a host mainframe and collects filenames from many sites, then creates a database which can be searched. This is a relatively easy tool to use when you know the exact file you want, by name. Until you get fairly experienced you probably won’t, though. Archie is a lousy subject-searching tool. If you want to find information on a particular subject, go somewhere you know they maintain such information, or call your librarian. When you search an Archie database, it gives you FTP site locations (addresses), the directory in which the file is located, number of bites in the file and the file name.

Some Internet Archie Servers:

<table>
<thead>
<tr>
<th>Name</th>
<th>IP Address</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>archie.ans.net</td>
<td>147.225.1.2</td>
<td>ANS Archie Server</td>
</tr>
<tr>
<td>archic.rutgers.edu</td>
<td>128.6.18.15</td>
<td>Rutgers University</td>
</tr>
<tr>
<td>archic.unl.edu</td>
<td>129.93.1.14</td>
<td>Univ. Nebraska</td>
</tr>
<tr>
<td>archic.sura.edu</td>
<td>28.167.254.179</td>
<td>SURANET Archie Server</td>
</tr>
<tr>
<td>archie.au</td>
<td>139.130.4.6</td>
<td>Australian Server</td>
</tr>
<tr>
<td>archie.funeLfi</td>
<td>128.214.6.100</td>
<td>European Server</td>
</tr>
<tr>
<td>archie.doc.ic.ac.uk</td>
<td>146.169.11.3</td>
<td>UK/England Server</td>
</tr>
<tr>
<td>archi.kuis.kyoto-u.ac.jp</td>
<td>130.54.20.1</td>
<td>Japanese Server</td>
</tr>
</tbody>
</table>

Each of these Archies will collect and "index" filenames from the many hosts it communicates with each night. To connect to an Archie server:

1. TN archie.ans.net
   or
   TN 147.225.1.2
2. login: <archie>
3. type: <prog keyword> <enter>
   Example: prog military
4. <Quit> to end session.

This procedure will generate a list of filenames. Each filename will be shown with the host computer it is stored on. Archie searches strings, so instead of entering <prog military> one might enter <prog militit> or even <prog ilitar>
At this writing, Archie only searches one term at a time. Boolean searching does not work. Searching one term at a time can generate a very long list of matching filenames, which you can't interrupt. Despite it's being the best equivalent of an indexing tool we've seen, Archie can be genuinely frustrating. And of course, your next step must be to log into the various hosts cited and FTP the files. Remember that clever software engineers are constantly improving—or at least changing—things on the Internet, so by next year it might be quite different.

Note that Archie only indexes filenames. If someone named the file containing a recipe for chocolate-covered mice crash burn, Archie won't be much help because you would probably have entered something like `<prog mice>`.

4.3. GOPHER is a menu driven tool that allows you to search for resources on the Internet. This tool helps you access information by searching, retrieving and displaying information from remote sites. A computer running Gopher interacts with hundreds of computers all over the world to search for the information you need. With Gopher you don't have to bother with telneting to a particular address; it does it for you. Like any menu-driven system, it makes life much more orderly, but also limits your choices somewhat.

4.3.1 At this writing, there is a significant problem for everyone who gets to the Internet through Profs: Gopher does not work very well for us. Software is on order which everyone hopes will make it possible for our IBM mainframe to talk coherently to other people's Gophers. It should be installed at Fort Monroe in the first half of 1994. If interest warrants, it will be mounted at other installations. Until then, Gophers are something that we will hear a lot about but can't use very well. By the time you read this, the situation may have changed, but don't blame me, I'm writing as fast as I can.

4.3.2 If you are coming through Profs, you will get the menus in a very confusing screen display, although they can be read—barely—if you take tranquilizers frequently. You'll get weird screens full of scrambled menus interspersed with random passages of Hindu mythology written in Coptic, but was it supposed to be easy? These Gopher sites will lead you through a maze of resources, some of which may be useful as reference tools. Once you get used to them, they can be time-savers. This is an area where a TAC card might be useful, since using Gophers via Profs is irritating.

4.3.4 There are reportedly over 1200 Gopher sites now, and host administrators are bringing more online steadily. See Chapter 9 for some selected sites to try out. As you read and surf more on the Internet you will find additional Gopher sites. Some organizations are bringing Gophers into being for a particular narrow subject area; others are opening up Gophers which access a wide range of diverse interests.

4.4. VERONICA is an acronym for Very Easy Rodent-Oriented Net-Wide Index to Computerized Archives. This is a new application which came into use in November 1992. Veronica indexes resources the Gopher software locates in somewhat the same way that Archie indexes FTP sites. It provides a keyword search of the menu titles from a large number of gophers, can create a personalized menu system just for you, and can directly link you to that title in the appropriate Gopher. Boolean capability is available. You will probably see this as one of the menu picks in Gopher.

4.5. HYTELNET is a Hypertext program that allows the user to connect to Internet-accessible databases and other information resources. We expect that TRADOC users will have a great deal of trouble trying to use this in a Profs environment, but you need to know the name.

4.6. WAIS. Wide Area Information Servers. WAIS (pronounced way-us) is supposed to actually search through the text of files at the hosts it is programmed to examine. It may search one or several hosts. As you can imagine, this is much slower than Archie and can give you a huge list of files that meet your search criteria. WAIS does rank its retrieved documents (files) to give you some idea of how likely it is to be useful.
4.6.1 The author tried out some WAIS sites and got confused and upset. One, for example, is available through the DDN Network Information Center (DDNNIC). Parts of the DDNNIC are excellent, but we had problems with WAIS. Like HYTELNET and Gopher, you will see the name repeatedly in the literature, and like them, it might work better if you can access the Internet via some other path than Profs.

4.7 At Fort Monroe, and many other installations, Profs is not the only method of reaching the Internet. At many places UNIX computers, AT&T 3B2 minis, certain LAN/WAN configurations, and many other setups exist which allow users to do things that the IBM/VM setup we've been discussing won't do, or won't do easily. If you feel you absolutely need to try out some of these functions, do so: speak to your ISO and DOIM. Get access to someone's special-purpose mini. Learn a few UNIX commands. You'll gain a lot—Gophers are more likely to work. Archie and Veronica will work. WAIS may not spoil your day, as it does mine.

On the other hand, Profs has its virtues. Easy to use, easy to teach. Widely used on the installation. You probably can't operate effectively without it, and how badly do you really want to learn yet another set of arbitrary and confusing computer commands?

4.8 At this writing, a controversy is going on about an action that the Defense Information Agency (DISA) wants to take. This manual takes no position on the merits of the argument, but the argument itself may be illuminating. You can skip this part with no penalty. It's not on the test.

Briefly, DISA proposes to route all communication between the MILNET and the rest of the Internet through one gateway. The gatekeeper would be DISA (surprise) and would restrict services thusly:

- Email would be unrestricted. Everyone in DOD and the rest of the world would be able to exchange notes. However, to outsiders, every MILNET address would change, so that
  username@monroe-emh1.army.mil
  would become
  username%anmonroe-emh1.army.mil@disa.gate
- FTP would be one-way only. We could get files from Internet hosts, but non-MILNET users could not FTP files from us.
- Telnet would be one-way. We could log into other people's computers, but they won't be able to log into ours.

DISA's main argument is security. Clearly, we can't have every sweaty-palmed undergraduate west of Annapolis logging into Defense computers and endangering the American Way of Life. Also, MILNET is a command and control net, not a vehicle for casual chat or even to support staffwork.

Information professionals and some far-sighted command figures will argue in return that it makes no sense to try to choke off the development of a valuable and evolving technological resource. Plenty of legitimate contractors need—or will soon need—access to our computers. They argue that it's foolish to restrict such a valuable resource.

The argument is in part technological, in part philosophical. It pits the admittedly chaotic and aggressively egalitarian forces who built—and are building—the Internet against the cautious bureaucrats who express perfectly legitimate reservations based on military requirements to standardize, control, restrict, codify, regulate. The same kind of conflict is going on all over the Internet, everywhere the wires reach. Information should be free! Universal access! Knowledge is power! There ain't no free lunch! Who's paying for this, anyhow? Control is necessary for efficiency!

NSA is reportedly trying to find ways to build greater security into individual hosts by eliminating "flaws" in the operating systems, for example quirks that allow strangers to log themselves in as users. There
probably is no final answer, more likely a series of compromises that do a fair job, irritate the users, keep out most if not all of the hackers, etc., etc. It'll be a while before these things get sorted out.


5.1 About security: all we can advise is be careful. No one who reads this will need to be reminded about putting classified information into an unclassified system. Nevertheless, we do remind the reader that the connected networks that make up the Internet are open, run over commercial lines, are not encrypted, and are accessible to just about everyone in the world. Clearly both operational security and security classification consciousness are appropriate. For more specific guidance please see your organization's security manager.

5.2 Unfortunately there is another issue, that of the physical security of your system. When you FTP files from another computer, you may bring an unwanted visitor along. Always check every file you retrieve with anti-virus software. At Fort Monroe virtually everyone has either McAfee Viruscan or Microsoft Anti-virus. Use them liberally. If you bring home a virus that destroys your hard disk or infects your local area network, NO ONE will show the slightest sympathy. NO ONE!

5.3 We're not saying you shouldn't go out and play, just use some common sense. Your ISO or DOIM can expand on this warning, and probably will do so.

6. WHY DO WE KEEP TALKING ABOUT UNIX? You can skip this part unless you want to be a hit at the kind of parties where ADPE historians hang out.

6.1 Seems like everything you read about the Internet implies intimacy with UNIX.

6.2 The reasons for that are rooted in the early history of the Internet. Back in the late sixties the Defense Department created ARPANET, a network of a few very large computers on university campuses which allowed academics doing research for DOD to exchange scientific data. ARPANET introduced some techie things like dynamic rerouting, which was originally designed to prevent the net from collapsing due to enemy attack. (see below for more on dynamic rerouting)

6.3 It all turned out to be such an attractive idea that lots more colleges wanted in, and eventually for administrative reasons (don't ask) ARPANET was divided into MILNET and the now smaller ARPANET. Obviously, MILNET got the military sites; ARPANET got the academic ones.

6.4 As things turned out, most academic computing began moving away from central time-sharing mainframes to smaller, decentralized workstations. Pretty soon any self-respecting university had, not one, but hundreds of computers, all of which needed to talk to each other. UNIX, an operating system developed at the University of California at Berkeley specifically for networking, fit the bill. The operating system of choice soon became UNIX. Now, the huge majority of university computers use UNIX. And guess where you find a lot of smart guys with time on their hands who have to publish or perish?

6.5 As time went by, all the best books about the Internet got written by academic people. Naturally, a whole lot of software got written by and for them. Now, it's fair to say that a huge part of the Internet runs on UNIX. That's neither bad nor good, but it has implications for TRADOC.

6.6 TRADOC's computing architecture is based on one huge IBM mainframe running the VM operating system at each installation. (Yes, we know that's oversimplified, but bear with us.)
6.7 The software that allows our IBM mainframes to support Profs also makes it a bit complicated for us to connect to some of the other computers on the Internet. Obviously, we'd have little trouble connecting to, say, the University of Alabama, which has IBM and uses Profs, but that's an exception. Most of the academic, commercial and private sites out there are likely to be using UNIX. Many military minis and mainframes run UNIX too, so we'll have a little trouble there, too.

6.8 Among the problems—UNIX file names can be long and have many parts; VM file names are eight characters with an eight character extension. Imagine the problems in transferring files from them to us. Or another situation—control characters in UNIX screen displays don't work on our terminals. Result: a menu that socially retarded undergraduates use easily looks like it was written in pigeon Farsi to us.

7. ETIQUETTE ON THE NET

7.1 It's just as well to remember a few common-sense rules of behaviour while communicating with the entire world. Remember that what you send to a discussion group may be read by thousands of people you've never met. If it's particularly interesting it will be copied and forwarded widely. And if one of the things you said was that your supervisor had just #$@/%*!/#$ and that he has a $@#/%% in his $@#/%% you may discover that your supervisor listens to the same discussion groups you do.

7.2 Also, most of the host systems you will access have no organizational or contractual connection to you, or to TRADOC, or to the U.S. Government. Don't mess them up, blacken their or your name, unreasonably tax other people's resources, etc. etc. Since most Internet hosts have nothing to do with you, and are allowing you to use their toys out of what amounts to altruism, it is at least discourteous to whine at or about them. Think about what you do.
6. EXERCISES:

The following are a list of telnet sessions that you might want to try to become familiar with remote login. Remember, <TN> works at Fort Monroe. You may need to use <telnet> or something else. Several of these sources will guide you to files you can obtain via FTP. I have not tested all of these, and even if I had, they do change frequently. Explore freely.

8.1. The Military History Institute makes over 3,100 working bibliographies, which the MHI researchers and librarians have been creating over the years, available via the Internet. MHI calls this service "Refbibs On-line". TRADOC users may access them through PROFS. These bibliographies represent only materials held by MHI, but they are a rich and surprising resource. Also one of the easiest to access. Once you have identified a specific item from a bibliography that you need, your servicing library can request it from MHI. Again, you have to know how to use CMSNAMES nicknames

1. Invoke the "send a note" option in PROFS.
2. Send the PROFS note to the following address:
   INFO@CARLISLE-EMH2.ARMY.MIL
3. In the "Subject" field, enter the filename for the desired refbib. Be sure to include the extension ".asc" after the filename. The name is case sensitive, as in this example: BradleyO.asc
4. Leave the text portion of the note blank and send the message. You must send a separate PROFS note for each refbib you wish to transfer to your local computer.

When the message is received at Carlisle Barracks, the automatic response feature will locate the requested refbib and send it back to you as a PROFS note. You may then forward the refbib as a PROFS note, or convert it into your local word processing package and edit it as desired.

If the refbib is too long to fit inside a PROFS note (many are), you will receive it as a file. Ask your ISO, IMO, or DOIM how to handle such files and how to transfer the information contained in such files, and in PROFS notes, to your PC.

There are "help" and index files that will assist you in deciding which refbib(s) you want to transfer to your computer. MHI recommends that you transfer and read the USAMHI file first since it provides useful information on refbibs, what help files are available, and how to locate the electronic filename for transferring refbibs. The USAMHI file does not require the ".asc" extension. All refbibs do require the ".asc" extension.

8.2 LOCIS.

The Library of Congress Information System (LOCIS) is now available over the Internet. It's free and works well. (Note—the Library of Congress also has a Gopher system running, named MARVEL. This isn't it.)

20
LOCIS includes 15 million MARC records and 10 million records for other types of information: legislation, copyright, Braille and audio, organizations, and selected foreign legal materials. The National Referral Center Master File is a directory of more than 12,000 organizations qualified and willing to answer questions and provide information on many topics in science, technology and the social sciences.

Searching hours are M-F 0630-2130, Sat 0800-1700, Sun 1300-1700. Printed manuals are supposed to be available for sale and via FTP.

<FTP seq1.loc.gov>; after logging on then <cd /pub/LC Online>. There should be a LOCIS Quick Search Guide and a LOCIS Reference Manual. LOCIS appears to include SCORPIO, the old LC automated catalog. Some basic commands:

- **sign on files**: BEGIN (BGNS)
- **Sign off files**: ENDS (END, *)

**Search files & create sets**
- BROWSE (BRWS, B) FINS (FIND, F) SCAN
- Retrieve (RETR, R) EXECUTE (EXEC, C) SAVE
- SELECT (SLCT, SEL, S)

**Display set contents**
- DISPLAY (DSPL, D) NEXT (NXT, N)
- Display list of sets HISTORY (HIST, H)

**Modify sets**
- LIMIT (LMT, L) KEEP RELEASE (RLSE)
- COMBINE (COMB, C) DROP

**Help & explanations**
- HELP SHOW SET

To get HELP on commands: HELP and command name (e.g. HELP COMBINE)

Next Page, press ENTER
Return to search, type 9
Command menu, type 11
LOCIS menu, type 12

8.3 FedWorld: A National Technical Information Service (NTIS) system which provides access to more than 100 U.S. government computer bulletin boards, many of them previously accessible only by modem. (FedWorld is also accessible by modem and may actually be easier for TRADOC users to approach that way: dial (703)321-8020 with the modem settings at 2400-N-8-1.) This is a bulletin board which connects the user to other bulletin boards and as a result, dialing one number can reach an astonishing amount of information, including full text of selected U.S. government publications, statistical files, federal job announcements, and more. However, as with any menu system with hundreds of picks, patience and diligence are required. Below is a recent download of government sources that can be reached through FedWorld. (The list will probably have changed by the time you read this.)

Telnet to: fedworld.gov or 192.239.92.201

2 ALF (USDA) National Agricultural Library BBS
3 ALD (Lib of Congress) Automated Library Information Exchange
4 BOM-BBN(Dept of Interior) Bureau of Mines-Bulletin Board Network
<table>
<thead>
<tr>
<th>No.</th>
<th>Service/Program</th>
<th>Description/Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>ISM-SIS (IRS)</td>
<td>ISM Support Info System</td>
</tr>
<tr>
<td>6</td>
<td>CIC-BBS (GSA)</td>
<td>Consumer Information Center</td>
</tr>
<tr>
<td>7</td>
<td>CLU-IN (EPA)</td>
<td>Superfund Data and Information</td>
</tr>
<tr>
<td>8</td>
<td>CIP-O-BBS (Census)</td>
<td>Lists open jobs at the Census Dept</td>
</tr>
<tr>
<td>9</td>
<td>CRS-BBS (Dept of Justice)</td>
<td>Amer. With Disabilities Act Info</td>
</tr>
<tr>
<td>10</td>
<td>Computer Security (NIST)</td>
<td>Computer Sys Lab Computer Security BBS</td>
</tr>
<tr>
<td>11</td>
<td>DCBBS (DC Govt)</td>
<td>DC Government Information</td>
</tr>
<tr>
<td>12</td>
<td>DMIE (NIST/CSL)</td>
<td>NIST/CSL Data Management Information</td>
</tr>
<tr>
<td>13</td>
<td>EBB (Dept of Commerce)</td>
<td>Economic data and information</td>
</tr>
<tr>
<td>14</td>
<td>ELISA System (DoD)</td>
<td>DoD Export License Tracking System</td>
</tr>
<tr>
<td>15</td>
<td>GSA/IRM BBS (GSA)</td>
<td>Information Resources Management Issues</td>
</tr>
<tr>
<td>16</td>
<td>EPA (Dept of Energy)</td>
<td>Energy information and data</td>
</tr>
<tr>
<td>17</td>
<td>FDA/BBS (FDA)</td>
<td>FDA info and policies</td>
</tr>
<tr>
<td>18</td>
<td>FDEA/BBS (FDA)</td>
<td>Fed Energy Regulatory Commission</td>
</tr>
<tr>
<td>19</td>
<td>FEBBS (Fed Highway Ad)</td>
<td>FHWA information and data</td>
</tr>
<tr>
<td>20</td>
<td>FEBBS (NIST)</td>
<td>FRBBS - Info on Fire Research</td>
</tr>
<tr>
<td>21</td>
<td>FEDERAL BBS (GPO)</td>
<td>GPO and Govt Data (Fee Based)</td>
</tr>
<tr>
<td>22</td>
<td>ISB-BBS (GSA)</td>
<td>GSA On-line Schedules System</td>
</tr>
<tr>
<td>23</td>
<td>ZE-BBS (EPA)</td>
<td>Export/Import Bank data and info</td>
</tr>
<tr>
<td>24</td>
<td>NAVY (US Navy)</td>
<td>Navy Judge Advocate General</td>
</tr>
<tr>
<td>25</td>
<td>NAVTASC (US Navy)</td>
<td>Dept of Labor information and files</td>
</tr>
<tr>
<td>26</td>
<td>Megawatt (DoE)</td>
<td>Information on energy and DoE</td>
</tr>
<tr>
<td>27</td>
<td>NADAP (US Navy)</td>
<td>Navy Drug and Alcohol Abuse Prevention</td>
</tr>
<tr>
<td>28</td>
<td>NAM (Office of Prisoner Services)</td>
<td>US Bureau of Prisons employees</td>
</tr>
<tr>
<td>29</td>
<td>NASA/BB (NASA)</td>
<td>NASA Small Business Innovation Research</td>
</tr>
<tr>
<td>30</td>
<td>NASA/BB (NASA)</td>
<td>Wastewater Treatment Info Exchange</td>
</tr>
<tr>
<td>31</td>
<td>NDB-BBS (Dept of Agrical)</td>
<td>Quick Epicenter Demand and EQ data</td>
</tr>
<tr>
<td>32</td>
<td>NDSOCWASAD/Geodiv</td>
<td>The NASA NODIS Locater System</td>
</tr>
<tr>
<td>33</td>
<td>OE-BBS (EPA)</td>
<td>Electronic Tax Filing Information</td>
</tr>
<tr>
<td>34</td>
<td>OE-BBS (EPA)</td>
<td>Surety Bond Branch, Circular $70</td>
</tr>
<tr>
<td>35</td>
<td>OIIS (Office of Privacy)</td>
<td>US Bureau of Prisons employees</td>
</tr>
<tr>
<td>36</td>
<td>SBIR-BBS (NASA)</td>
<td>NASA Small Business Innovation Research</td>
</tr>
<tr>
<td>37</td>
<td>WIB-BBS (EPA)</td>
<td>Small Bus. Admin internal BBS</td>
</tr>
<tr>
<td>38</td>
<td>QED-BBS (USGS)</td>
<td>Sample Weather Data (NWS)</td>
</tr>
<tr>
<td>39</td>
<td>SALEM-DOUG-BBS (FEMA)</td>
<td>Sample data from Fed Based System</td>
</tr>
<tr>
<td>40</td>
<td>SBA On Line (SBA)</td>
<td>Sample data from Fed Based System</td>
</tr>
<tr>
<td>41</td>
<td>SBA On Line (SBA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>42</td>
<td>SBAJ-BBS (SBA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>43</td>
<td>U.S. Air Force (Air Force)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>44</td>
<td>U.S. Army (Army)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>45</td>
<td>U.S. Navy (Navy)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>46</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>47</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>48</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>49</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>50</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>51</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>52</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>53</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>54</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>55</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>56</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>57</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>58</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>59</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>60</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>61</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
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<tr>
<td>62</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>63</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
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<tr>
<td>64</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>65</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>66</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>67</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>68</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>69</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>70</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>71</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>72</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>73</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>74</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>75</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>76</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
<tr>
<td>77</td>
<td>USGS-BGS-BBS (GSA)</td>
<td>OPM - Job Info, Personal Guidance</td>
</tr>
</tbody>
</table>
8.4. Folio is a large information handling system which contains the catalog of the libraries of Stanford University, and several other bibliographic files. One of several interesting menu picks is the Martin Luther King, Jr. Bibliography, which lists over 2,700 bibliographic references to works that deal with the life and work of Dr. King and the Civil Rights Movement. There are a number of commercial services listed in Folio which are unavailable to users who are not affiliated with Stanford, the system will tantalize you with them but will not let you use them. This is becoming a common phenomenon; vendors of specific information products often license their use to customers based on the prospective number of users. Obviously they would be destroying their own markets if anyone in the country could log in.

1. <TN FROSLEYTHEN.STANFORD.EDU> or <TN 36.54.0.12>
2. At the Account? prompt type: <SOCRATES>
3. At the ok to proceed? type: <yes>
4. At the type of terminal prompt type: <vt100>
5. Follow the on-screen instructions
6. Type <Exit> to leave

8.5. Choice Book Reviews at CARL. Choice is a magazine that provides evaluative book reviews of nonfiction books for libraries. It’s aimed at academic libraries. If you want serious book reviews, try this,
but also speak to your local librarian. There are many other sources for reviews, and Choice only covers a
tightly-defined slice of the publishing market.

This is actually a part of the Colorado Alliance of Research Libraries (CARL) system. CARL is a great
place to poke around. You can log into about a hundred online library catalogs, if you like that sort of
thing.

1. <TN PAC.CARL.ORG> or <TN 192.54.81.128>
2. No Password Required
3. Choose option 3 Information Databases
4. Choose option 60 Choice Book Reviews

I also recommend the UnCover database (select "Current Article Indexes"). UnCover allows you to search
keywords in titles and abstracts found in the tables of contents of some 14,000 periodicals. It's clumsy and
 crude by professional librarian standards, but interesting. Although your librarian can do a much faster
and more comprehensive job finding journal articles if you're really doing research, this database can help
you get started at your desk. Note that there's no charge for UnCover, but you can order the articles
delivered to you by Fax or mail for a fee.

You'll have to look closely at the screen displays because you'll have the same problems I described for
Gophers—control characters don't read right and the menus are sometimes messy. Worth a look.

8.6. Dante Poetry. Project Dante at the Dartmouth College Online System contains material pertaining
to Dante's Divine Comedy. I can't for the life of me figure out how this will benefit TRADOC, but it's out
there.

1. <TN LIBRARY.DARTMOUTH.EDU> or <TN 129.170.16.11>
2. No Password Required
3. Login: <Connect Dante>

8.7. The Electronic Freedom Foundation makes available information on the current presidential
administration and other documents related to government and issues relating to intellectual freedom in
electronic and computer communication.

1. <FT FTP.EFIF.ORG> or <FT 192.88.144.4>
2. At the name prompt, enter: <Anonymous>
3. At the password prompt, enter your E-Mail Address in DDN format
4. At the Command Prompt, enter: <cd pub/academic/civics>
5. Request the file(s) by entering: <get filename>
6. After transfer, enter: <quit>

Some of the files are:

Addresses to write the President, Vice-President and cabinet members
filename: administration.address

Phone and Fax numbers of the 103rd Congress
filename: congress.phones

Information on Affirmative Action
8.8. 1992 Presidential Campaign Resources

1. <FT info.umd.edu> or <FT 128.8.10.29>
2. At the name Prompt, enter: <Anonymous>
3. At the password prompt, enter: <your e-mail address>
4. At the command prompt, enter: <cd info/Government/US>
5. You can enter <dir> to look at the files and directories
   or retrieve the one you want with the <get> command.
6. After transfer, enter <quit>.

8.9. Text of historical documents. Good source for materials your librarian doesn't keep in your library,
or if you want a machine-readable version to put in your word processor.

1. <FT NPTN.ORG> or <FT 192.190.49.8>
2. At the Name prompt, enter: <Anonymous>
3. At the Password prompt, enter: <your email address>
4. At the Command prompt, enter: <cd pub/e.texts/freedom.shrine>
5. Request file(s) by entering: get <filename(s)>
6. After transfer, enter: <quit>

Some of the many files this directory contains:

<table>
<thead>
<tr>
<th>DOCUMENT</th>
<th>FILENAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magna Carta</td>
<td>magna</td>
</tr>
<tr>
<td>The Constitution of the Iroquois Nations</td>
<td>iroquois</td>
</tr>
<tr>
<td>The Mayflower Compact</td>
<td>mayflo</td>
</tr>
<tr>
<td>The Fundamental Orders of 1639</td>
<td>orders</td>
</tr>
<tr>
<td>First Thanksgiving Proclamation</td>
<td>thanks</td>
</tr>
<tr>
<td>Declaration and Resolves of the 1st Continental Congress</td>
<td>resolves</td>
</tr>
<tr>
<td>The Paris Peace Treaty</td>
<td>paris</td>
</tr>
<tr>
<td>The Annapolis Convention</td>
<td>anap</td>
</tr>
<tr>
<td>The Constitutional Transmittal Letter</td>
<td>xmittal</td>
</tr>
<tr>
<td>The Constitution of the United States</td>
<td>constit</td>
</tr>
<tr>
<td>The Bill of Rights</td>
<td>rights</td>
</tr>
<tr>
<td>1971 All amendments</td>
<td>amend</td>
</tr>
</tbody>
</table>
The Northwest Ordinance
Lincoln's Second Inaugural Address
German Surrender Documents
Japanese Surrender Documents
M. L. King's: I have a dream Speech

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8.10. Soviet Archives at the Library of Congress. Full-text documents about the Soviet System, Chernobyl, Cuban Missile Crisis etc. A sampling of the many documents are below.

1. FT to SEQ1.LOC.GOV or 140.147.3.12
2. At the name prompt, enter: <Anonymous>
3. At the password prompt, enter <your Email Address>
4. At the Command prompt, enter: <cd pub/sovietarchive/text/english>
5. Enter <dir> to look at the files or retrieve the one you want with the <GET> command.
6. After transfer, enter <QUIT>

SUBJECT FILENAME

Internal Workings of the Soviet Union a0intro.bkg
Repression and Terror: Stalin in Control a1stalin.bkg a2trykov.doc
Repression & Terror: Kirov Murder & Purges b1kirov.bkg b2bukhnaro.doc b3centcm.doc
Secret Police c1police.bkg c2unpress.doc
Chernobyl n1chernb.bkg n2constr.doc
Cold War: Soviet Perspectives w1sovper.bkg w2compar.doc
Cold War: Cuban Missile Crisis x1cuba.bkg x2jfk.doc

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8.11 Environmental Protection Agency Online Library System: Provides access to the online catalogs of EPA libraries; separate databases with citations for sources about environmental financing, chemicals, hazardous waste and lake management; and a directory of sources of environmental information. Includes news alerts from EPA. This is an IBM system running VM—easy to read screens even if you don't always understand the logic of the system. Tab to get the cursor beside a selection you want to work with; we haven't figured out how to use the command line. It also appears to work with the pesky problem of a userid or password, despite what the first screen implies.
Telnet to: epaimb.rpn.epa.gov or 134.67.180.1 /public/ols

---------------------------------------------------------------

8.12 Food and Drug Administration Bulletin Board System: Full text of FDA news releases, enforcement reports, import alerts, drug and product approval lists, Federal Register summaries, informational publications, articles from FDA Consumer, etc.
Telnet to: fdabbs.fda.gov or 150.148.8.48
login: bbs
8.13 General Accounting Office Reports: Full text of GAO high risk, technical, transition and other reports. (also available via gopher, at wiretap.spies.com/government docs)
Telnet to: ftp ftp.ca.nih.gov / user:anonymous / password:guest / cd gao-reports

8.14 National Space Science Data Center: NASA database provides access to space science data held by research centers worldwide.
Telnet to: nssdca.gsfc.nasa.gov or 128.183.36.23
username: nodis

8.15 PENpages: Pennsylvania State University system provides the full text of thousands of documents about agriculture, food and nutrition, family issues and more.
Telnet to: psupen.psu.edu or 128.118.36.4
username: penpages

8.16 Spacelink: National Aeronautics and Space Administration system provides access to NASA news releases, shuttle status reports, mission summaries, NASA congressional testimony and speeches and many other files with current and historical information about NASA aeronautics and space research. Even allows users to ask NASA scientists questions.
Telnet to: spacelink.msfc.nasa.gov or 192.149.89.61
username: newuser / password: newuser

8.17 Statistics Canada Daily Reports: Full text of daily statistical releases, lists of publications and more from Statistics Canada, the Canadian government's primary compiler of statistics.
Telnet to: info.carleton.ca / terminal type: decvt100 / statistics canada daily reports

8.18 Project Gutenberg is trying to get all the English literature in the world in full text electronic format. These are complete books, often in compressed format. There are several Gutenberg sites you can try, and at least one competing project. These are BIG files, usually compressed, and may take a loooong time to download. Plus, then you end up with The Last of the Mohicans on your hard disk, which who would want?

1. <ftp urmnext.cso.uiuc.edu> or <FTP 128.174.201.12>
2. At the name prompt, enter <Anonymous>
3. At the password prompt, enter <GUEST>
4. At the Command prompt, enter: <cd etext/etext (91,92,93)> depending on the year you want.
5. Example: <cd etext/etext93>
6. Enter <dir> to look at the filenames or retrieve the one you want with the <get> command.
7. After transfer, enter <quit>

Note: Look at the size of the files before you transfer them. Practice on the smaller ones. FTP can take time. Some of the thousands of texts available.
cd etext/etext91

<table>
<thead>
<tr>
<th>TEXT NAME</th>
<th>FILENAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 CIA World Factbook</td>
<td>world12x.xxx</td>
</tr>
<tr>
<td>Aesop's Fables</td>
<td>aesop11x.xxx</td>
</tr>
<tr>
<td>Alice in Wonderland</td>
<td>alice29x.xxx</td>
</tr>
<tr>
<td>Book of Mormon</td>
<td>mormon13.xxx</td>
</tr>
<tr>
<td>Federalist Papers</td>
<td>feder12x.xxx</td>
</tr>
<tr>
<td>Hunting of the Snark</td>
<td>snark12x.xxx</td>
</tr>
<tr>
<td>Moby Dick</td>
<td>moby1xxxx.xxx</td>
</tr>
<tr>
<td>Paradise Lost</td>
<td>plboss11.xxx</td>
</tr>
<tr>
<td>Peter Pan</td>
<td>peter14a.xxx</td>
</tr>
<tr>
<td>Roget's Thesaurus</td>
<td>roget11x.xxx</td>
</tr>
<tr>
<td>Song of Hiawatha</td>
<td>hisong11.xxx</td>
</tr>
<tr>
<td>Through the Looking Glass</td>
<td>lglass16.xxx</td>
</tr>
</tbody>
</table>

cd etext/etext92

<table>
<thead>
<tr>
<th>TEXT NAME</th>
<th>FILENAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991 CIA World Factbook</td>
<td>world91a.xxx</td>
</tr>
<tr>
<td>Aesop's Fables (Advantage)</td>
<td>aesopa10.xxx</td>
</tr>
<tr>
<td>Data From the 1990 Census</td>
<td>uscen901.xxx</td>
</tr>
<tr>
<td>Far From the Madding Crowd</td>
<td>crowd13x.xxx</td>
</tr>
<tr>
<td>Frederick Douglass</td>
<td>douglas10.xxx</td>
</tr>
<tr>
<td>Herland (for Mother's Day)</td>
<td>hrland10x.xxx</td>
</tr>
<tr>
<td>New Etext of Bible (KJV)</td>
<td>bible10x.xxx</td>
</tr>
<tr>
<td>O Pioneers! Willa Cather</td>
<td>option10x.xxx</td>
</tr>
<tr>
<td>Paradise Lost (Raben)</td>
<td>plrab11.xxx</td>
</tr>
<tr>
<td>Scarlet Letter</td>
<td>slhart10x.xxx</td>
</tr>
<tr>
<td>Sophocles' Oedipus Trilogy</td>
<td>oedip10x.xxx</td>
</tr>
<tr>
<td>Time Machine-HG Wells</td>
<td>timew10x.xxx</td>
</tr>
<tr>
<td>War of the Worlds-HG Wells</td>
<td>warw10xxx.xxx</td>
</tr>
<tr>
<td>Zen &amp; the Art of the Internet</td>
<td>zen10x.xxx</td>
</tr>
</tbody>
</table>

NOTE: the filenames are case sensitive.

8.19 Archie is a system for locating files that are publicly available by anonymous FTP (File Transfer Protocol). Archie only locates, it does not transfer. There are many Archie "servers" (that is, programs) and the one at Rutgers is typical. Archies are often heavily used, and Rutgers often blocks non-university users out during peak hours.

TN archie.rutgers.edu or TN 128.6.18.15

Login: <archie>

Archie> prog clinton

Host ftp.concert.net (192.101.21.1)
Last updated 08:28 4 Jun 1993

Location: /concert/doc/newsletter/winter1993
File -rw-r-- 3823 bytes 11:16 3 Jan 1993 clinton.article

28
To access the file, clinton.article, the user must login to the host computer ftp.concert.net; the numeric address is 192.101.21.1.

`ftp 192.101.21.1>` (Anonymous login to the remote host)

Then follow the file location information like a map:

1. `<cd concert>` (This changes the directory to the concert subdirectory)

2. `<cd doc>` (This changes to the concert/doc subdirectory)

3. `<cd newsletter>` (This changes to the concert/doc/newsletter subdirectory)

4. `<cd winter1993>` (This changes to the concert/doc/newsletter/winter1993 subdirectory)

5. `<get clinton.article>` (this will transfer the file from their host computer to your Profs A disk)

6. `<quit>` This ends the FTP session and returns you to your own installation host.

7. Now, use whatever local procedure you have to download clinton.article from your installation host to your PC.
9. NOW SOME GOPHER SOURCES

9.1 Gophers are the hot issue right now on the Internet. Half the host administrators on the planet seem to be setting them up. Many are highly specialized, others cover broad spectra.

9.2 True, at this writing these aren't easily available through Profs, but those readers who have other connections to the Internet may be interested. And, fairly soon, Fort Monroe should be able to facilitate entry into gophers (note my use of the conditional). These are not telnet addresses—you will probably have to go through the gopher client software resident on your host (that's technobabble for "It'll work when it works. Be patient and wait for the oracles from the high priests of the mainframe."). Please note that I have not tested these.

9.3 Here are some of the earlier sites which popularized the software. It reduces the overall load on the Internet communications lines to use the ones closer to you, but you can reach any of them. All of these have very heavy loads of users, however, and may be quite crowded during normal business hours.
Which, since we can reach clear around the globe, is now 24 hours/day.

<table>
<thead>
<tr>
<th>Host Name</th>
<th>IP</th>
<th>Login</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>consultant.micro.umn.edu</td>
<td>134.84.132.4</td>
<td>gopher</td>
<td>North America</td>
</tr>
<tr>
<td>scilibx.ucsc.edu</td>
<td>128.114.143.4</td>
<td>gopher</td>
<td>North America</td>
</tr>
<tr>
<td>gopher.uiuc.edu</td>
<td>128.174.33.160</td>
<td>gopher</td>
<td>North America</td>
</tr>
<tr>
<td>panda.uiowa.edu</td>
<td>128.255.40.201</td>
<td>panda</td>
<td>North America</td>
</tr>
<tr>
<td>gopher.sunset.se</td>
<td>192.36.125.2</td>
<td>gopher</td>
<td>Europe</td>
</tr>
<tr>
<td>info.anu.edu.au</td>
<td>150.203.84.20</td>
<td>info</td>
<td>Australia</td>
</tr>
<tr>
<td>gopher.chalmers.se</td>
<td>129.16.221.40</td>
<td>gopher</td>
<td>Sweden</td>
</tr>
<tr>
<td>tollen.puc.cl</td>
<td>146.155.1.16</td>
<td>gopher</td>
<td>South America</td>
</tr>
<tr>
<td>ecnet.ec</td>
<td>157.100.45.2</td>
<td>gopher</td>
<td>Ecuador</td>
</tr>
<tr>
<td>gopher.ora.com</td>
<td>140.186.66.1</td>
<td>gopher</td>
<td>commercial host</td>
</tr>
</tbody>
</table>

9.4 Steve Herro, Head of Reference and Information Services at St. Norbert College Todd Wehr Library, recently compiled a list of "well constructed gophers." It's reasonable to assume that they would be good places to practice gophering.

- North Carolina State University—Gopher to dewey.lib.ncsu.edu:70
- Gopher Jewels at University of Southern California—Gopher to cwis.usc.edu
- InfoSlug at University of California Santa Cruz—Gopher to scilibx.ucsc.edu:70.
- Wisclnfo at University of Wisconsin Madison—gopher to gopher.adp.wisc.edu or telnet to wiscinfo.wisc.edu.
- Legal Information System at Washburn Law School—telnet acc.wuacc.edu, login <law> or <washlaw>.
- University of Durham (UK)—gopher to delphi.dur.ac.uk 70.
- MountainNet's AMI Gopher—gopher to gopher.mountain.net
- University of California Irvine—gopher to peg.cwis.uci.edu
- Dept. of Education—gopher to gopher.ed.gov
- Kent State University—gopher to refmac.kent.edu 70

9.5 One commonly cited gopher concerns itself with governmental affairs. This will give an idea of the broad scope provided by gophers. While this is useful, and can do some things that may be very helpful to TRADOC action officers, don't forget to speak to your friendly neighborhood librarians. They can help you find information in much greater detail than this, and can direct you to unexpected sources. For the following sources, gopher to wiretap.spies.com and then search out the right part of the menu system.
- General Accounting Office Reports: Full text of certain GAO reports. You can reach these reports through FTP, although in that case you must figure out a host of subdirectories and filenames. (Or, try ftp to ftp.cu.nih.gov / user: anonymous / password: guest / cd gao-reports.)
- Canadian Documents: Full text of the Canadian Constitution Act, Meech Lake Accord, Charlottetown Constitutional Agreement and other historic Canadian government documents.
- Fair Credit Reporting Act: Full text of the act, as taken from the U.S. Code.
- Historical Documents. Full text of dozens of historic U.S. government documents from the time of independence to the present day.
- North American Free Trade Agreement: Full text of NAFTA.
- Political Platforms: Full text of the platform statements of the major parties in the 1992 presidential election, along with other major platform statements.
- President Clinton's Economic Plan: Full text of A Vision of Change for America, a summary of the President's economic plan presented to a joint session of Congress in February.
- Presidential Documents from the Federal Register: Full text of presidential determinations, proclamations, executive orders and other documents published in the Federal Register.
- Speeches and Addresses: Full text of historic U.S. speeches.
- World Constitutions: Full text of constitutions of select countries worldwide. Other constitutions can be accessed by conducting a Gopher veronica search, using "constitution" as the keyword.
- World Factbook (1990-1992): Full text of the Central Intelligence Agency-produced World Factbook, which provides information about the geography, people, government, economy, communications and defense of countries around the world.
- AIDS Related Information: National Institutes of Health database provides AIDS statistics, daily summaries of articles on AIDS in major newspapers, full text of AIDS Treatment News, reports from the National Commission on AIDS, pamphlets about AIDS and more.
- Americans With Disabilities Act Documents: Collection of documents about the ADA, including the Department of Justice technical manual.

 onwards

9.6 For the following sources, gopher to sunsite.unc.edu and then search for the right part of the menu system.

- Budget of the United States Government: Full text for FY93 and FY94; FY94 can be searched by keyword.
- National Performance Review (Reinventing Government): From Red Tape to Results: Creating a Government that Works Better and Costs Less, the 180-page report of Vice President Al Gore's task force on reinventing government.
- White House Information: Full text of major policy statements, daily press briefings, speeches, proclamations, the president's daily schedule and more.

9.7 The Library of Congress recently opened MARVEL, a gopher, in addition to their LOCIS system. TRADOC users can use LOCIS easily, unfortunately there does not seem to be much overlap between the
two systems. MARVEL has Congressional information, Census data, White House documents, crime statistics, State Department reports, etc. If your Internet service includes a local gopher client, type <gopher marvel.loc.gov 70> to reach LC MARVEL's main menu. If you have telnet but no gopher client, you get to the main menu by typing <telnet marvel.loc.gov> and then logging in as marvel. No password is required.

- Catalog of Federal Domestic Assistance: Information about hundreds of government assistance programs, administered by more than 50 federal agencies. Can be searched by keyword.
- Congressional Directories: Library of Congress system provides access to a variety of Congressional directories; some can be searched by keyword.
- National Archives and Records Administration: Provides access to detailed information about audiovisual and electronic records held by the National Archives.
- NavNews: Full text of the Navy News Service, distributed weekly to Navy operations worldwide, providing official news and information about fleet operations and exercises, Navy policy, budget actions and more.
- Navy Policy Book: Full text of the Navy policy manual, which provides official statements on the Navy mission, objectives and policy, for use by Navy personnel.
- Back issues of the Navy News Service, including a full-text search capability.

Many gopher systems lead you to other gophers at remote locations. This is often referred to as "tunneling through gopherspace." This server provides one stop access to more than a dozen U.S. government gopher systems.

To access: gopher sis.nsf.gov / other U.S. government gopher servers

AskERIC: Archive of education information compiled by AskERIC, an Internet question-answering service for teachers and educators at Syracuse University.

To access: gopher ericir.syr.edu

Campaign '92 and Election Results: Full text of key position papers, speeches, press releases and other documents from major candidates in the 1992 presidential election. Other White House information, such as full text of major policy statements, daily press briefings, speeches, proclamations, the president's daily schedule and more.

To access: gopher tamuts.tamu.edu / browse information by subject / political science

CancerNet: Full text of National Cancer Institute fact sheets, publications about cancer, patient diagnosis statements, Genetic Sequence Data Bank: National Library of Medicine database of nucleotide sequences, as well as relevant bibliographic and biological annotation.

To access: gopher helix.nih.gov / molecular biology databases


To access: gopher bigcat.missouri.edu / reference center
9.13 Chemical Substance Fact Sheets: Full text of Environmental Protection Agency fact sheets about hundreds of chemicals; can be browsed or searched by keyword.
To access: gopher ecosys.drdr.virginia.edu / education / environmental fact sheets

9.14 Another gopher with a broad range of interests, particularly including legislative affairs.
- Code of Federal Regulations: Experimental system provided by a commercial vendor allows users to browse the code or search it by keyword. Access to the complete CFR is not yet available. The system places limits on the amount of information non-subscribers can retrieve.
- Congressional Committee Assignments: Provides current Congressional committee rosters; can be browsed or searched by keyword.
- Congressional Information: Provides access to Congressional directories, committee rosters, North American Free Trade Agreement documents, Americans with Disabilities Act, the U.S. budget and more.
- Executive Branch Resources: Provides access to U.S. executive branch directories, White House information, NAFTA documents, full text of the U.S. budget and more.
- Gross State Product Tables: U.S. Bureau of Economic Analysis tables estimating the value of goods and services for 61 industries in 50 states.

9.15 Congressional Information: Provides access to Congressional and agency directories, biographies, lists of Congressional firsts, information about women in Congress and more. Congressional firsts: List of firsts for the 103rd Congress. Full text of Supreme Court decisions issued since 1989. Brief biographies of Court justices. Full text of the U.S. constitution, amendments and articles.
To access: gopher info.umd.edu

9.16 Cooperative Extension System: U.S. Department of Agriculture system provides access to extension service directories, fact sheets, calendars, nutritional data, information on national initiatives related to agriculture, flood information and more.
To access: gopher cyfer.esusa.gov

To access: gopher uacsc2 alb. y.edu / united nations justice network / u.n. criminal justice country profiles

To access: gopher scilibx.ucsc.edu / the researcher / science and engineering / earth and marine sciences

9.19 State Department Travel Advisories: An archive of State Department travel information and advisories. Arranged by country, files include current conditions, country descriptions, entry requirements, embassy and consulate locations, information about registration, medical facilities, drug penalties, crime and more. Frequently updated data about recent earthquakes worldwide.
To access: gopher gopher.stolaf.edu /internet resources
9.20 Educational Resources Information Center (ERIC): Provides keyword access to bibliographic information and abstracts for a variety of articles and publications about education and related disciplines. To access: gopher cwis.syr.edu / library, suinfo and data archives / eric

9.21 Federal Information Exchange: Provides information about federal education and research programs, scholarships, fellowships, grants, minority education and research programs, procurement opportunities and more. To access: gopher fedix.fie.com

9.22 Federal Jobs: Lists thousands of federal government job openings, taken from a variety of Office of Personnel Management computer bulletin boards. To access: gopher dartcms1.dartmouth.edu

9.23 Food Labeling Information: FDA database provides access to documents about new food labeling regulations and activities related to the Nutrition Labeling and Education Act. To access: gopher zeus.esusda.gov / other usda and government information / food labeling information

9.24 Great Lakes Information Network: Provides information on environmental and economic development issues concerning the eight states that are members of the Great Lakes Commission. To access: gopher gopher.cic.net

9.25 Health Security Act of 1993: Full text of President Clinton's health plan and related documents, including his speech to a joint session of Congress in September in which he outlined the details of the plan. Full text of the National Information Infrastructure Agenda, a Clinton administration report describing the role of government in promoting the development of the telecommunications and information infrastructure by the private sector. To access: gopher ace.esusda.gov / americans communicating electronically

9.26 Material Safety Data Sheets: Though not technically government information, material safety data sheets are produced by chemical manufacturers to comply with a variety of government regulations. They provide safety data on hundreds of chemicals. To access: gopher isumvs.iastate.edu / isu research information / msds

9.27 Merit Network Information Center: Michigan consortium provides information about the Internet, NSFNET and MichNet, including General Accounting Office and Office of Management and Budget reports, National Research and Education Network (NREN) activity, conference proceedings, newsletters, statistical reports, policy statements, user's guides and more. To access: gopher nic.merit.edu


9.29 National Environmental Data Referral Service: National Oceanic and Atmospheric Administration (NOAA) catrilog provides keyword access to sources of environmental information nationwide.
To access: gopher scilibx.usc.edu / the researcher / science and engineering / environmental science / noaa national environmental referral service

9.30 National Institute of Allergy and Infectious Disease: Full text of NIAID press releases, AIDS information publications, institute directories and more.
To access: gopher gopher.niaid.nih.gov

9.31 National Institute of Standards and Technology: Provides access to a variety of NIST files.
To access: gopher gopher-server.nist.gov

9.32 National Institutes of Health: Provides access to a broad range of NIH resources, including institute phone books and calendars, library catalogs, molecular biology databases, full text of the NIH Guide for Grants and Contracts, files containing AIDS and cancer information and more.
To access: gopher gopher.nih.gov

To access: gopher el-gopher.med.utah.edu / health sciences resources on the internet

9.34 National Science Foundation: Provides access to grant information, NSF directories and phone books, press releases, full text of select NSF publications and more.
To access: gopher stis.nsf.gov

9.35 National Weather Service Forecasts: Provides weather forecasts, current weather conditions, information on earthquakes, tropical storms and auroral activity for the 50 states and Canada.
To access: gopher ashpool.micro.umn.edu / weather

9.36 Senate Bibliographies: Bibliographies of Senate hearings, prints and publications for the 99th through the current Congresses.
To access: gopher dewey.lib.ncsu.edu

To access: gopher nywork1.undp.org

9.38 U.S. Geological Survey: USGS Gopher system provides information about the agency, its publications and data as well as miscellaneous information about geology, hydrology, cartography and geographic information systems.
To access: gopher info.er.usgs.gov

To access: gopher somalia.earth.nwu.edu / seismology resources
9.40 University of Illinois Weather Machine: Provides current conditions, National Weather Service forecasts, severe storm warnings, flood summaries, earthquake bulletins, upper air conditions, satellite images and more for the 50 states, Canada, Mexico and the Caribbean.
To access: gopher wx.atmos.uiuc.edu

9.41 World Health Organization: Provides access to world health statistics, WHO press releases, full text of selected WHO publications and more.
To access: gopher gopher.who.ch

9.42 Zip Codes: Database of U.S. zip codes, searchable by keyword.
To access: gopher gopher.uoregon.edu / desktop reference/geographic and travel information

Enough. I hope that by the time you get this you can reach Gophers, and submerge yourself in nice warm data
GLOSSARY

A disk.
The "A disk" is the private section of Profs where your files reside. It is a virtual disk drive, meaning that it doesn't really exist, but you can act like it does. The place to which FTP files will come. The place to which you upload files from your PC. The place from which you send files to others on Profs.

Anonymous FTP.
see FTP. A method of transferring files in which the initiator may enter a distant computer without having to be a registered user of it. Not really anonymous, of course, since the remote computer must know your email address in order to send files to it.

Archie.
Software which automatically checks a large number of FTP sites, collects filenames, and indexes them for easier retrieval.

Computer conference.
see discussion group. Software which accepts and redistributes electronic mail among members. Usually mediated by a system administrator. Usually confined to a discrete topic, but sometimes free-ranging. A method of communication among physically separated parties who have Internet access.

Discussion group.
see computer conference.

DDN.
Defense Data Network. The electronic network which the Defense Department maintains. If you are reading this you are a part of DDN.

Defense Data Network Network Information Center.
The DDNNIC is an excellent source of information about DOD hosts. It can also locate some (not many) email addresses for individuals. Currently, DDNNIC has a link to the InterNIC, a source of information about non-DOD Internet hosts.

Domain.
The part of an Internet address that tells the system or location, and what type of organization it is. The trailing domain is usually one of the following:

- .com Company or other commercial institution
- .edu Educational institution
- .gov Civilian governmental site
- .mil Military site
- .net Gateways and other administrative hosts for a network
- .org private organizations that don't fit the other domains

Email.
Method of communication in which written notes are exchanged between specialized computer systems.

FTP.

Gopher.
Software following a simple protocol for tunneling through a TCP/IP Internet. A menu interface to carry out many common Internet tasks, including connection to many hosts.
Host.
A large computer. Also called mainframe. Each TRADOC installation has a host, an IBM which runs the VM operating system; sometimes called a TISI. Can also refer to a minicomputer hooked up to the net. Under some circumstances (which you probably don't want to know) can even refer to a desktop micro.

IP address.
The numeric form of an Internet address, for instance 134.84.132.4, when the mnemonic address is consultant.micro.umn.edu. Frequently more identifiable to your mainframe, so always good to get this when you can.

TAC.
Terminal Access Card. Authorization to dial into one of a number of DOD hosts. Allows different kinds of access to the network. Because not using VM, TAC sites can allow for different kinds of screen displays and different keyboard mapping. Useful if you go through Profs and access a menu system which shows up on your system as a screen full of hieroglyphs. Sites listed in DDNNIC. Discuss with your sysad.

TCP/IP.

Telnet.
A program, widely used, which allows a user of one computer to log into a distant computer and perform work as if he was registered on it.

Veronica.
Very Easy Rodent-Oriented Net-Wide Index to Computerized Archives. New application which came into use in November 1992. veronica indexes resources that Gopher software locates in somewhat the same way that Archie indexes FTP sites. Provides keyword search of menu titles from a large number of gophers, and can create your own personal menu system for specific subjects. Boolean capability. Menu pick in Gopher.

WAIS.
Wide Area Information Server. Another form of index to Internet resources. Searches the text of files in remote hosts to find keywords you enter.

World Wide Web.
Complex and extremely sophisticated system run by CERN in Switzerland. Instead of treating all knowledge as a hierarchical series of menu choices, as does Gopher, it treats information as hypertext and allows the user to dive from one document to another via hypertext links.
BIBLIOGRAPHY

These are titles that I see over and over in other people's bibliographies, or that I have used. Each has its virtues. The list is oriented toward beginners on the Internet.


Internet World (formerly Research & Education Networking). Monthly periodical from Meckler, c. 16pp. Newsletter, features, user tips, interviews, conferences, calendars, some technical material. ISSN 1064-3923. Priced at $97 institutional, $59 personal.

Kehoe, Brendan P. Zen and the Art of the Internet: A Beginners Guide to the Internet. 2nd Ed. Prentice Hall, 1993. ISBN: 0130107783 $22.00 An absolute must for anyone getting into this mess. The first edition was never published commercially but was made available as a file that anyone could FTP—sort of high-tech samizdat publishing. The Prentice-Hall edition is the one to get now, though.


## APPENDIX A

Hosts in the TRADOC network

<table>
<thead>
<tr>
<th>Nodeid</th>
<th>DDN Host Name</th>
<th>DDN IP Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEN1</td>
<td>BENNING-EMH1.ARMY.MIL</td>
<td>192.153.150.2</td>
</tr>
<tr>
<td>BL11</td>
<td>FTBLISS-EMH1.ARMY.MIL</td>
<td>192.101.141.2</td>
</tr>
<tr>
<td>BRA2</td>
<td>BRAGG-EMH2.ARMY.MIL</td>
<td>192.153.148.2</td>
</tr>
<tr>
<td>DDX1</td>
<td>DIX-EMH1.ARMY.MIL</td>
<td>192.108.178.2</td>
</tr>
<tr>
<td>EUS1</td>
<td>EUSTIS-EMH1.ARMY.MIL</td>
<td>155.217.1.2</td>
</tr>
<tr>
<td>FOR3083</td>
<td>PENTAGON-HQDADSS.ARMY.MIL</td>
<td>134.11.6.1</td>
</tr>
<tr>
<td>GOR1</td>
<td>GORDON-PROFS.ARMY.MIL</td>
<td>147.51.100.1</td>
</tr>
<tr>
<td>HAR1</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>HOD1</td>
<td>HOOD-EMH1.ARMY.MIL</td>
<td>150.113.1.2</td>
</tr>
<tr>
<td>HUA1</td>
<td>HUACHUCA-EMH1.ARMY.MIL</td>
<td>138.27.100.4</td>
</tr>
<tr>
<td>HUA2</td>
<td>HUACHUCA-HUAF.EMH1.ARMY.MIL</td>
<td>138.27.200.3</td>
</tr>
<tr>
<td>JAC1</td>
<td>JACKSON-EMH1.ARMY.MIL</td>
<td>192.172.16.2</td>
</tr>
<tr>
<td>KNO1</td>
<td>KNOX-EMH1.ARMY.MIL</td>
<td>147.238.100.2</td>
</tr>
<tr>
<td>LEA1</td>
<td>LEAV-EMH1.ARMY.MIL</td>
<td>192.33.5.5</td>
</tr>
<tr>
<td>LEE1</td>
<td>LEE-EMH2.ARMY.MIL</td>
<td>132.159.60.21</td>
</tr>
<tr>
<td>MCC1</td>
<td>MCCLELLAN-EMH1.ARMY.MIL</td>
<td>192.172.11.2</td>
</tr>
<tr>
<td>MON1</td>
<td>MONROE-EMH1.ARMY.MIL</td>
<td>192.111.52.10</td>
</tr>
<tr>
<td>RUC1</td>
<td>RUCKER-EMH3.ARMY.MIL</td>
<td>192.129.64.3</td>
</tr>
<tr>
<td>SIL1</td>
<td>SILL-EMH1.ARMY.MIL</td>
<td>192.132.84.2</td>
</tr>
<tr>
<td>WOO1</td>
<td>WOOD-EMH1.ARMY.MIL</td>
<td>192.172.17.2</td>
</tr>
</tbody>
</table>
Appendix B

Yanoff List of Internet Connections

This list is updated every two weeks. You may find versions of it available as FTP files on many hosts. You'll see the command <finger> a number of times on the Yanoff list, but it does not work for us.

- **Amiga User Area**
  - gopher gopher.unomaha.edu (Select UNO Student Org...) offers: Lots of useful information for Amiga owners.

- **Macintosh Users Group**
  - telnet andaline.edu.univ.lis1.cs.uc or 160.78.5.55 offers: Information on Mac groups.

- **Consumer Access Serv.**
  - telnet columbus.11c.com or 166.45.17.221 (Login: casl) offers: Search for/Buy CDs, books, software, and video tapes online.

- **Dartmouth Library**
  - telnet library.dartmouth.edu or 129.170.15.11 offers: Library listings and reviews.

- **ECH0**
  - telnet echo.lu.org or telnet 168.64.1.16 offers: European Commission on the Internet, free databases (Login: echo)

- **ECONOMICS/BUSINESS**
  - telnet netsec.mcs.anu.edu.au (Login: netsec)

- **Electronic BBS**
  - telnet infoshop.ucsd.edu or gopher infochip.ucsd.edu Choose: News & Services | Economic Bulletin Board (Login: infoshop)

- **Stock Market Reports**
  - telnet dsl.rabih.net or telnet 192.164.13.3 offers: Select others, "Menu: Current Info." then "Market Report" (Login: guest)

- **EDUCATION/TEACHING/LEARNING**
  - Distance Ed. Database telnet scvax.open.ac.uk or telnet 137.100.49.36 (Username: ICCL Access Code: USA Password: saa)

- **Education Gophers**
  - gopher ernst.ccs.carleton.ca 619 (Canada's Schoolnet) gopher gopher.ed.gov (U.S. Dept. of Education) gopher chronicle.merit.edu (Merit Computer Network)

- **Empire Schoolhouse**
  - telnet iynernet.org or telnet 192.77.17.12 (Login: empire) offers: Provides K-12 resources, discussion groups, etc.

- **EDUCATION/MODS/MEDIA**
  - telnet fedix.fim.com or telnet 192.111.228.33 offers: info. on scholarships, minority assistance, etc.

- **IIE**
  - telnet iaeac.engr.washington.edu or 128.95.32.61 offers: IBM Infor. for Education User Discussion Forums. (Login: register)

- **MidLink Gopher**
  - telnet kids.ecit.du.gov or telnet 165.199.8.35 offers: Telecomm. project aimed at 18-19 year olds. (Login: gopher)

- **Learning Link**
  - telnet sierra.lvu.edu or telnet 166.49.173.3 offers: Electronic info. a communication service (Login/password: newcomer)

- **MicroHOUSE**
  - telnet michael.al.mit.edu or telnet 164.63.8.177 offers: Educational Multi-User Simulated Environments. (Login: guest)

- **Net1 Education BBS**
  - telnet scvax.open.ac.uk or telnet 128.95.32.61 offers: A limited-access system for NET1 educators. (Login: new)
FTP via Telenet: telnet grund.isc.iu.edu or telnet 128.255.200.3
offers: Access IUvms's huge FTP site via telnet

Games/Recreational/Fun/Chat:

Backgammon Servers: telnet fragas165.montuclather.es 4321 (Login: guest)
mail 1db-help@midnight.wpi.edu w/ subject *help*

Bridge Server: telnet 140.117.11.33 (Login: akbridge)

Bolo Tracker: telnet gwixirc.gwu.edu 1234 or 128.166.140.17 1234
offers: Location of current bolo games.

Chat Clients:
ftp ftp.santa.edu
(UC Chat Service: /pub/510/40)
ftp csed.csd.uwo.ca
(UCB Chat Service: cd pub/tips)
ftp b.udec.ac.uw
(IRC Chat Service: cd irc/clients)

Get chat program from ftp sites, compile program (make) and execute.
telnet sci.indiana.edu 1
or 146.38.16.3 1
sh
telnet rush.cc.edu 3
sh

NER The above gets AND compiles automatically an IRC client for UNIX.

Chat Servers - IRC
telnet sci.indiana.edu 6677 or telnet 120.18.16.4 6677
telnet auoumax.ouc.umnorn.edu 6677 or 128.15.20.11
telnet irc.tuavo.uk 6668 or telnet 132.168.157.3 6668
telnet irc.ayywy.edu.edu (Password: irc)

TRY compiling one client rather than using these. (See above) (Login: irc)

Chat Services:
telnet 128.113.6.12 1240
Somewhere
telnet 128.118.41.9 2010
FortMills
telnet marble.cs.edu 2010 or telnet 128.197.16.75 2010
The Coffee House
telnet 128.198.1.116 2555
Globot's BBS
telnet morra.etudelft.nl 3293
Dale
telnet 128.6.11.206 2000
Starship
Mansion II
telnet 161.206.97.4 4068
telnet 128.250.20.3 4057

Electric Night Club
telnet 128.215.162.64 4001 (Evenings Only)
Leaky House
telnet upsw.up.edu 4000 or telnet 192.162.10.63 4000
CyberCafe
telnet rivendel.slip.umd.edu 4000 or 128.6.11.206 4000
Virtual Campus
telnet indigo.lut.ac.uk 5555 or 185.125.183.5 5555

Devour Beach
telnet 20.7.80/116 7777
Tele-Chat
telnet speedway.net 7777

Chess Server
telnet rafael.muti.ucb.edu 5500 or 128.111.266.2 5500
Chinese Chess
telnet coolidge.harvard.edu 5555 or 128.103.20.35 5555
telnet hippoclyte.ud-clarmiers.ac.fr 5555 or 128.15.79.198

Cookie Server
telnet astro.temple.edu 12345 or telnet 128.32.13.100

Crossword Server
telnet next7.cas.msu.edu 8888 or 134.14.14.117 8888
offers: Internet server devoted to crossword games such as Scrabble.

Cyber-Please Report finger hotlist or adamstv.com (Also: gopher stv.com)
offers: Daily reports on entertainers and such.

Diplomacy: mail judging@coriolan.lov.org or judge@pva.udo.gov
mail judging@brake.woldac.ac.de or judge@judging.washington.edu

Post: Play the Avalon Hill game Diplomacy via email. Body of letter; help
Notes: No new games are forming on the U.Washington Judge, but substitute players are still needed.

Fingers for Fun: finger info or graphthrink.cah.rit.edu

FTP Sites/Archives:
ftp ucf.berkeley.edu or ftp 128.32.184.350
offers: cd/uca/library for great lib. of docs, bible, lyrics, etc.
ftp uucparchive.unc.edu or ftp uucparchive.unc.edu
offers: GIFs, Lights, & Sounds; ftp sounds.edu.gov for the sounds archive
ftp ftp.uc.edu or ftp ref.mit.edu
offers: You name it, it's here! Archives, FAQs, how-to's, etc.
ftp archive.uncc.edu or unnc-saim.stanford.edu
offers: Software for MS-Dos computers Mac, Amiga, Apple2, Apollo...
ftp archive.thesorcerer.com or ftp ftp4a.com
offers: A huge software archive for PCs and UNIX.
ftp ftp4a.com (/pub/nc) or ftp quarts.rutgers.edu
offers: How-to's about Internet (email, ftp, telnet, etc.)
ftp quirs.rutgers.edu or ftp caphouse.org
offers: All the text/humor files you'd want (tv, sex, ..) cd pub/humor
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<td>Offers: Status of drink and candy machines tor fun. finger franklin.wag.cs.dal.ca offers: Random Star Trek/TNG quotes, and Almanac Information. finger <a href="mailto:cyndiwm@c.com">cyndiwm@c.com</a> or cyndi89@242.59.4 offers: Weekly Trivia - Gopher Server</td>
<td>telnet castor.tat.phyelk.uni-tuebingen.de offers: Teotis, Moria, Methboth, MDOA, Test Adventures, etc. (Login: GAMES) - GO Server</td>
<td>telnet bellepark.wartoon.upenn.edu 6596 - Other/Severe/</td>
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| - Geophysical/Geographical/Geologic - Earthquake Info. | Finger quake@geophysics.washington.edu or 128.95.14.50 telnet geophysics.washington.edu (Login/password: geophysics) telnet bison.cs.c阜fo.net (Login: INDEX 6 Bib. Server) offers: Recent quake info (location, time, magnitude, etc.) - Geographic Server | telnet martini.unc.edu:3000 or 141.212.59.9 3000 offers: Info by city or area code (Population, Lat./Long., Elevation, etc.) - Global Land Info Sys telnet glis.cr.usgs.gov or telnet 152.61.192.84 offers: Land use data maps of U.S. graphs of geological info (Login: guest). | - Gopher | telnet gopherconsultant.micro.edu or telnet 134.26.128.2 telnet eayouor.md.gov or telnet 128.8.10.46 telnet gopher.mcu.edu or telnet 35.8.261 telnet twooocks.cse.mcu.edu or telnet 152.8.48.31 telnet cdb.onlink.edu or telnet 130.198.128.105 | telnet ENVIROLOGIN.cum.edu (Password: envirologin) telnet www.it.cse.ucsd.edu / 136.121.3.40 (Login: userinfo) telnet telnet.miscinfo.wisc.edu (Login: miscinfo) telnet infoxog.ucsc.edu or 128.114.160.25 (INFOLOGIN) telnet infopath.ucsd.edu (Login: infopath telnet sunalta.uc.edu or telnet 152.8.23.81 telnet ust.cs.uvic.edu or telnet 128.174.3.59 telnet pando.uio.edu or telnet 128.35.48.201 telnet inform.ucd.edu or telnet 128.8.16.29 telnet gis.novus.com or telnet 131.144.2.206 telnet gopher.virginia.edu / 128.163.22.36 (Login: guest) telnet access.drd.virginia.edu or 128.145.233 telnet gopher.OMA.com or telnet 140.106.45.35 telnet nicol.jvc.net or 120.80.50.2 (Login: NICOL) telnet info.fu-erz-gra.ac.at or 129.227.6.4 (Login: info) telnet info.anu.edu.au or 150.203.84.20 (Login: info) telnet telten.pcc.cl or telnet 166.155.1.16 (Chile) telnet gopher.denet.dk or telnet 129.165.1.66 (Denmark) telnet gopher.th-darmstadt.de or telnet 130.4.55.75 telnet ecnet.ac or telnet 157.100.45.2 (Ecuador) telnet gopher.th-darmstadt.de or telnet 130.4.55.75 telnet ecm.git or telnet 155.253.1.60 (Italy) telnet gopher.mur.ru or telnet 158.75.2.5 (Poland) telnet gopher.te.net or telnet 129.136.125.10 (Sweden) telnet gopher.chalmers.se or 129.16.221.60 (Sweden) telnet gopher.univ.gw.university.or 143.55.2.5 (Login: info) offers: Access to other services, gophers, documents, etc. (Login: gopher) - Gopher | gopher englsih-server.hws.cmu.edu offers: Most comprehensive gopher I've seen so far, it gets its own entry! | telnet gophermail@nce.go.jp or gophermail@calvin.edu offers: Email access to gopher for those with mail-only access to Internet. - Ham Radio Callbooks telnet calbiggs.cs.buffalo.edu 2000 / 126 205.32.2 2000 telnet na.risc.net or 158.312.2.2 (Login: hamradio) offers: National ham radio call-sign callbook. (Also: Amateur Radio above) - History Databases telnet whanain.csw.unm.edu or telnet 129.237.1.30 offers: History databases (Login: history) and Cita info (Login: ea-user ftp byrd.mv.wnet.net / ftp 129.71.32.125/lib/pub/history telnet cluial.unc.edu or telnet 192.12.72.66 offers: Docs, archives, comprehensive history server>Login/Password: tbr-uhr) - HP Calculator BBS telnet hpcvbbs.cr.bp.com or telnet 15.255.72.16 offers: BBS for HP Calc. users, with chat mode. (Login: now) - Hpcwire telnet hpcwire.an.net or telnet 147.255.1.51 offers: Excellent menu-driven information searches. (Login: hpcwire) - Hytelnet Server telnet access.wash.ca or telnet 128.233.2.1 telnet info.cit Loveralsma.edu or 128.126.76.201 telnet legnum.epcc.edu or 129.94.26.2 (Login: Library) telnet info.anu.edu.au or 150.203.86.20 (Login:Library) telnet library.adealade.edu.au (Login: access) telnet mctuccs.edu.tn or 149.41.111.10 (TAIWM) telnet info.macc.ac.uk or telnet 158.88.200.15 telnet rel.on.ac.uk or telnet 128.67.34.31 offers: univ. & library catalogues around the world. (Login: hytelnet) - IEEE SP A system telnet stdbbb.ieee.org or telnet 149.9.1.11 offers: Standards Process Automation System. (Login: guest) - Internet Guide/Docs gopher un.bh.lib.unich.edu (Select: inetrdir) - InterNIC telnet re.interinic.net or telnet 198.41.9.5 offers: Gopher, NAIR, Whois, Whois, YOM of Internet info. Book orders, etc - IP Address Resolver mail resolvers.widener.edu mail mailresolvers.widener.edu (body of letter: help) usage: in body-of-letter; site address here - Mail you IP address of site. - LAW/Law Access telnet access.wbc.hawaii.edu or telnet 128.171.7.167 offers: Legislative Info. Service, Hawaii State Legislature. - Gopher LAW Servers telnet fatty.LAW.cornell.edu or telnet 132.216.168.9 telnet gopher.LAW.cornell.edu or telnet 137.148.22.51 telnet acc.wvcc.edu or 193.194.1.32 (Login: washlaw) offers: Law info. via gopher. (Login: gopher) - Law Library telnet library.wv.wvu.edu or telnet 137.111.18.35 ftp pulah.law.wvu.edu (cd /pub/law) offers: Law libraries and legal research. (Login: lawlib) Offers copies of laws for each state/computer laws, and more. - LawNet telnet lawnet.law.columbia.edu or telnet 128.59.176.83 offers: Law/Judicial info and catalogues access. (Login: lawnet) - Supreme Court rulings ftp ftp.court.edu offers: ASCII files of Supreme Court rulings in directory /harrrn - WU Law Servers telnet www.LAW.indiana.edu or telnet 129.79.131.170 telnet fatty.LAW.cornell.edu or telnet 132.216.59.9 offers: Hypertext access to legal documents (Login: www)