

Introduction: The Winsock Client Listing

Winsock: a Windows Internet standard ("Windows Sockets"). The Winsock standard essentially defines an interface between Windows applications and a network such as the Internet.

This is a detailed listing of Winsock based Freeware and Shareware packages used in connecting to the Internet, either through a modem or a direct network connection. I have indicated if there is a prime or preferred location where the latest version of each package is usually available. Alternatively, with the file names and associated data supplied, most of these packages can also be readily found elsewhere on the Internet with search and retrieval tools like Archie, FTP, Gopher and WAIS.

At the present time the better of these are at least equivalent to and even superior to the corresponding modules in commercial packages that you can buy, although there is not really a lot in the marketplace to begin with. This situation will dramatically change over the next year or two, but for now, and in particular for the home based user, Freeware/Shareware is usually the best choice. You can try out different packages until you find the ones with the features you want, and that you are comfortable with. Where registration is required the fees are usually quite reasonable and can bring additional benefits in additional documentation, technical support and upgrades with additional or uncrippled features.

Using these packages with a modem requires at a minimum:

1. **Windows 3.1.**
2. **A "SLIP" or "PPP" account with an Internet provider.** Some providers charge extra for this feature. If this is not available or too expensive from your service provider, the innovative programs TIA (The Internet Adapter) and TwinSock provide an alternate option.
3. A special communications package or a combination of *compatible* packages installed on your PC which can provide the following:
 - a. Modem **dialing capability**
 - b. Support for a **SLIP or PPP** connection.
 - c. Support for the Winsock standard (i.e. a **winsock.dll** file included).

Unfortunately most of the regular commercial and Shareware communications software commonly used to access other on-line services do not currently have these features and therefore cannot be used for a Windows connection to the Internet. This is quite surprising considering how popular the Internet has become and reflects poorly on these commercial software providers. The best communications package currently available which does work is Peter Tattam's Shareware package **Trumpet Winsock**. It has both manual and automated dialing, supports both SLIP and PPP (in the latest versions) and includes a winsock.dll file to enable Winsock compatible programs to function. The automated dialing does require you to create a suitable and rather archaic login "script", or alternatively to use a better separate stand alone dial program. See the Index for the section providing additional information on the very popular and widely used Trumpet Winsock.

I have tried to keep the terminology as simple as possible, but, as Einstein discovered, everything is relative. At the end of this listing I have included a series of chapters containing references to some supplemental reading material. For a better understanding of the Internet terms "Winsock" and "SLIP", a follow up on the suggested reading material is a beginning.

Why Windows ?

Typically when you sign up for an Internet account from a service provider you receive a UNIX shell account. This account on your provider's server gives you access to a mail program, Usenet news, Archie, File Transfer Protocol, Gopher, etc. In fact everything you will ever need is usually available to you through your shell account. Why then Windows?

1. Reduction in some connection charges. A shell account is an on-line account - you must be logged on to use it. Some Windows programs enable activities to be done offline. For example, while you read and compose your mail on a shell account you are paying connection charges for the time taken. Windows mail programs allow you to read and compose mail offline, connecting only long enough for uploading and downloading.

2. Windows may be a familiar environment. If you are comfortable working with Windows with other applications in the past then Windows provides a friendlier environment than UNIX based programs with their archaic keyboard commands and unfriendly and clunky interfaces.

3. Freedom of choice. There is an increasingly wide variety of Winsock software available. With this freedom of choice, if one program doesn't have the features or performance you want you can look for another to install.

4. Multimedia capabilities. Sound. Graphics. Video.

5. Multitasking. You can download a file with FTP from a remote site, download your mail and be sending replies, and be browsing through newsgroup postings all at the same time with Windows software. The ability to perform multiple operations with different Winsock programs simultaneously over the same single modem connection is one of the key features of the Winsock standard. Of course if a single problem develops with just one of the programs then there is the risk that your whole system might crash. The more applications you try and run the greater this risk. This major flaw in the current Windows 3.1 operating system will be considerably improved with **Windows95** when it becomes available later this year. Alternatively another solution is available now in the high end operating system **Windows NT**.

The downside to all these advantages of Windows packages is the sometimes considerable setup and configuration time which may be required for each individual one. Most of the above advantages are of course equally applicable to other graphical based platforms such as Mac and OS2/Warp. The Winsock software described in this listing is only usable with Windows, or with OS2/Warp through its Windows interface, although not all Winsock programs will work with Warp.

One final note. The Winsock standard is currently set at version 1.1. This version number

refers to the documented industry standard only. Individual software programs which comply with this standard have their own separate version numbers. For example Trumpet Winsock is available in an older version 1.0 (SLIP only) and in a newer version 2.0 (SLIP/PPP). Both of these *comply with* the Winsock 1.1 standard. The version number of any individual Winsock communications program is more a reflection of its other features and capabilities and does not change the fact that it complies with the 1.1 standard. There is often confusion between the version number of the Winsock standard and the version numbers of programs which are designed to use that standard.

-----Some

-----Details About This Listing

Standard disclaimer applies - as with everything you use these out at your own risk. Caveat emptor ("the cavity is empty"). Many of these packages are still being developed by their authors. Bugs are unfortunately common, and updates to both fix these and add new features are frequent.

Feedback on this listing is always appreciated. I am constantly looking for ways to improve it and welcome suggestions as well as information on items which I may have missed and which deserve to be included.

B*U*G*S. Bugs are almost inevitable in any kind of software under development as many of these are. Please give the author a chance. If you have carefully followed the instructions and are sure that there is a problem with a particular program which is not already mentioned in the documentation, contact the author first, AND give him some reasonable time to respond. If you don't tell him about it he can't fix it! It's rather a bit impolite and counterproductive to flame the author and his program publicly in a newsgroup for something he's not even aware of. Ultimately it may even turn out not to be his problem. Most authors include their email addresses in the program documentation for this reason and also to encourage suggestions for improvement.

Looking for something? I realize that this listing is getting a bit large, and if you are looking for something in particular try using the Edit/Find menu item in MS Word or the Find command in Windows Write. Other word processors usually have something similar available.

Recommended: I have added this comment to some items. This is based upon both my personal opinion and comments from others. Criteria I primarily look for are:

1. One of the leaders in its category in operation, functionality and features. This does not imply perfection.
2. Reasonable cost compared to other comparable programs. This does not mean that it's free or even cheap.
3. Supported by its authors and under continued development. This should mean that it has a future.

This does not mean that other programs don't have better features or won't work better in your particular situation. All I am doing is suggesting that if these appear to fit your needs, they should be looked at first. They shouldn't necessarily be the only thing you look at. Current recommendations are:

Trumpet Winsock - dialer, SLIP/PPP, Winsock
Chameleon Sampler - starter package including dialer, SLIP/PPP, Winsock.
WSIRC - Internet Relay Chat client
WSARCHIE - Archie file search client
WS_FTP - File transfer client
WSGopher - Gopher client
Eudora - email
Pegasus - email
Free Agent_(tm) - news reader
Trumpet news Reader - news reader
WinVN - news reader
Netscape - WWW browser
NetDial - telephone dialer
ACDSee - image viewer
LView Pro - image viewer
WFXCOMM.DRV - Windows serial port replacement driver

Win 32s, Windows95, and Windows NT. With the movement towards 32 bit computing and with increased availability of Winsock applications for **Windows NT** I am including more 32 bit applications in this listing. Some of these can only be run on **Windows NT** (and possibly **Windows95**), but a few of these are in fact usable on Windows 3.1 with the Microsoft's **Win32s** extension installed. The **Win32s** extension gives Windows 3.1 a **limited** 32 bit capability enabling it to run 32 bit programs written for this extension. The most popular and best known such program is NCSA Mosaic, the World Wide Web (WWW) browser. More information on **Win32s** and Mosaic are included in various sections in this listing. Throughout the listing I have hi-lited references to these 32 bit operating systems in **green** (in the Word document).

NEW. New items added this month are hi-lited in **blue** (in the Word version). I continue to experiment with colors in this listing. New or updated comments or general information sections are not identified.

Updates of this listing under file name winterXX.zip (where XX is the version) are available from the prime locations:

By FTP: oak.oakland.edu: /SimTel/win3/winsock
ftp.cica.indiana.edu: /pub/pc/win3/winsock
mrcnext.cso.uiuc.edu: /pub/win3/winsock (CICA mirror)

By WWW: ftp://ftp.cica.indiana.edu/pub/pc/win3/winsock/winterXX.zip
ftp://mrcnext.cso.uiuc.edu/pub/win3/winsock/winterXX.zip (CICA mirror)

These locations also carry many of the programs referenced in this listing. The CICA site is difficult to access. Mrcnext is a CICA mirror whose files are updated daily from CICA. Unfortunately it does not mirror at least two of the CICA directories I reference and that is /sounds and /graphics. For other mirror sites see the chapter appropriately titled Other Information.

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WINSOCK CLIENTS

1. CHAMELEON

The widespread popularity of these packages from NetManage merits their own section. One is an Internet beginner's package, available for free, which includes all the basic necessities for getting started on the Internet. The other is a full professional networking package, loaded with advanced features, but considerably more complicated, and not free.

1.1	<u>Chameleon Demo</u>
PRIME PURPOSE.....	Full featured professional network demo package [DEMO - Function or time crippled]
FILE NAME.....	5 files: readme.txt, chameln1.exe, chameln2.exe, chameln3.exe, chameln4.exe.
FILE SIZE.....	Total approximately 5,003,764 bytes.
LATEST VERSION.....	January 1995
AVAILABLE FROM.....	ftp.netmanage.com: /pub/demos/chameleon
STATUS.....	Demo.
DOCUMENTATION....	N/A
FEATURES.....	This is the full featured professional package with all the clients,

FTP, Telnet, Gopher, Ping, Mail, News etc. and network features like ethernet and NFS support.

COMMENTS..... This full demonstration version is time crippled - it will expire sometime in December. NetManage can be expected to replace it with a new copy on their server with a new expire date by then. The readme file contains the password needed for installation. Because of the size of this package and the time required to get it running and the effort required to get familiar with all its features within the time limitation, this package should only be looked at by those who are really seriously prepared to buy the uncrippled version if they like what they see (I believe it starts at a couple hundred dollars and up depending on features). This commercial version is fairly complex and is more suited to a network installation rather than the individual user. For others the Chameleon Sampler (listed below) may be a better choice. Although it only has some basic clients, it is free, not crippled and will run forever. These are both intended for operation under Windows 3.1 and Windows 3.11, but not **Windows NT**.

NOTE: A demo version of Internet Chameleon 4.11.2 which includes the new WebSurfer WWW browser (and other new features) is available from the same location in directory /pub/demos/inet_cham. There are several files (disk1, disk2 etc.) to retrieve totalling just under 4 meg. A telephone dial up access is required to activate the program. You have the choice of either purchasing the program or obtaining a free 30 day demo activation. I had several problems with this, beginning with that fact that the registration program deactivated my mouse cursor making it impossible to complete the registration screens. As well, the registration requires credit card information even if you only want the 30 day no charge demo as I did. Although I would have liked to have tried this out, I make a point of not giving out my credit card info unless there is good reason to do so and I saw none here.

1.2

Chameleon Sampler

PRIME PURPOSE..... Commercial sampler package with built in Slip, Winsock and basic clients.

FILE NAME..... sampler.exe

FILE SIZE..... 754,372 bytes

LATEST VERSION..... January 1995

AVAILABLE FROM..... ftp.netmanage.com: /pub/demos/sampler

This same package can also be found on the disk included with several Internet books currently at bookstores.

STATUS..... Freeware.

DOCUMENTATION.... Good, with on-line help.

FEATURES..... Supports both SLIP/CSLIP and PPP and has its own built in Winsock and telephone dialer which means that it does not require Trumpet Winsock - it has its own corresponding features built in. Basic FTP, Telnet, Mail and Ping clients are included, but missing are others such as Archie and Gopher. Telnet emulation TTY/ANSI/VT52/VT100/VT220.

COMMENTS..... A good way to get going on the Internet, this beginner's Freeware package is intended to provide an introduction to the commercial version of Chameleon. It works well, and has

become very popular. It is included on the disk supplied with a number of introductory Internet books. If I have one complaint, its that I dislike software packages such as this which are programmed to make changes to an autoexec file during installation without prompting for notification or approval to proceed. Nonetheless over time this has proven itself to be a good stable package and other Freeware and Shareware Winsock clients can be installed and will work with it to make up for ones not included in this package (or to upgrade to better ones).

Recommended

2. CHAT / IRC / PERSONAL COMMUNICATIONS

Communicate with others through your keyboard, or a microphone. Be forewarned though that this is not always as easy as it sounds. The good news is that many of these packages are continually being improved by their authors, the bad news that some of the problems and limitations are beyond their control. Oh, and incidentally, claims by various IRC authors that their program is the only true IRCII client should be swallowed along with a spoonful of vinegar.

2.1

Internet Phone

PRIME PURPOSE.....	2 way Internet voice communications.
FILE NAME.....	iphone06.exe
FILE SIZE.....	628,142 bytes
LATEST VERSION.....	February 1995
AVAILABLE FROM.....	wuarchive.wustl.edu: /pub/MSDOS_UPLOADS/InternetPhone
STATUS.....	Demo version. Some features crippled - limited to a session of only 1.5 minutes of speech. Registration \$US 49 rising to \$US 99 as of April 1, 1995.
DOCUMENTATION....	Installation instructions and on-line help.
FEATURES.....	
COMMENTS.....	Requires sound card, microphone, and preferably a fast (486) computer with 8 meg ram. This program has created enormous enthusiasm because of its capability to allow live high quality conversations through the Internet (one way at a time - not simultaneous). The time lag is small and sound quality while not at telephone standards is nonetheless reported as impressive. I guess I'm going to have to buy that sound card now.....

To subscribe to the Internet Phone Mailing list sent an email message to

majordomo@pulver.com with no subject line and the words SUBSCRIBE IPHONE in the body of the letter.

One serious controversy has arisen in that Internet Phone connections (a voice communications product) are initiated through IRC servers (intended for keyboard communications). The IRC people have taken exception to this extra burden and begun cutting off their uninvited guests. As a result VocalTech has had to begin setting up their own sites for IPhone, the first two of which are:

irc.pulver.com
vocaltech.com

2.2

Internet Global Phone Project

PRIME PURPOSE.....	2 way Internet voice communications.
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FILE NAME..... ig16_102.zip This is the 16 bit version. An 8 bit version
 igp8_102.zip is also available at the same location.
 FILE SIZE..... 90,371 bytes
 LATEST VERSION..... Internet Global Phone version 2.1 BETA
 AVAILABLE FROM..... UMIST distribution version 1.02 December 1994
 STATUS..... wuarchive.wustl.edu: /pub/MSDOS_UPLOADS/winsock
 DOCUMENTATION.... Limited Freeware.
 FEATURES..... Basic start up and use instructions.
 COMMENTS..... Uses voice compression technology. Messages must first be
 recorded, compressed, then sent. Will work with a 386 processor
 although sound quality is better with a more powerful machine.

2.3

Internet Voice Chat

PRIME PURPOSE..... 2 way Internet voice communications
 FILE NAME..... ivc11.zip
 FILE SIZE..... 107,613 bytes
 LATEST VERSION..... 1.1 December 1994
 AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
 STATUS..... Shareware \$US 20
 DOCUMENTATION.... Installation instructions and on-line help included.
 FEATURES..... Registered version adds Answering Machine Mode capability. A
 Fax mode is planned for a future release.
 COMMENTS..... IVC allows live two way voice communications over a network
 such as the Internet. It requires microphone, sound card, 386 or
 better processor, separate file vbrun300.dll, etc. According to the
 author the new version is now fully compatible with SLIP and
 PPP. If using Trumpet it does require version 2.0B (older
 versions of Trumpet are not recommended). There have been a
 number of other improvements made. It does yet not support
 multiple party conference calls.

2.4

IRC4WIN

PRIME PURPOSE..... Internet Relay Chat II (IRC II) client.
 FILE NAME..... irc4win.zip
 FILE SIZE..... 91,039 bytes
 LATEST VERSION..... 1.10 beta October 1994
 AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
 STATUS..... Shareware \$US 50 single user, \$US 450 site license
 DOCUMENTATION.... Very minimal, with nothing much included in this unregistered
 version.
 FEATURES.....
 COMMENTS..... An upgrade of this program from David Elkind. No information on
 what's changed in this version. Registration cost is a bit stiff.

2.5

IRCII For Windows

PRIME PURPOSE..... Internet Relay Chat II (IRC II) client.
 FILE NAME..... ircii2-6.zip
 FILE SIZE..... 684,122 bytes
 LATEST VERSION..... January 1995
 AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
 STATUS..... Freeware (limited)
 DOCUMENTATION.... Basic installation instructions only.
 FEATURES.....

COMMENTS..... From Troy Rollo, author of TwinSock. Rather surprisingly considering this author's familiarity with IRC, the first release just didn't seem to work at all. I believe that this is a newer version out now (under the same file name) which presumably fixes the problems.

2.6

Sticky

PRIME PURPOSE..... Electronic notes exchange.
FILE NAME..... sticky08.zip
FILE SIZE..... 165,546 bytes
LATEST VERSION..... .8 March 1995
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Freeware.
DOCUMENTATION.... Basic installation instructions and on-line help..
FEATURES.....
COMMENTS..... Based on 3M's yellow sticky post-it notes that are so popular. This program contains separate talk and listen modules which allows you to exchange quick notes with another PC which also has the program running. New development of this program has been taken on by John Dovey. For people interested in Sticky there is now a mailing list. To subscribe send an email to listserv@oliver.sun.ac.za with the following in the BODY of the message (without the brackets):
SUBSCRIBE STICKY-TALK <Your firstname>
<Lastname>

2.7

Winsock IRC

PRIME PURPOSE..... Internet Relay Chat (IRC)
FILE NAME..... Three files: winirc.exe, winirc.doc (Windows documentation), irc.doc (DOS version documentation).
FILE SIZE..... 96,000, 313 and 8,276 bytes
LATEST VERSION..... .1 Beta
AVAILABLE FROM..... ftp.trumpet.com.au: /ftp/pub/winirc
STATUS..... No mention of any charges for using this program.
DOCUMENTATION.... Negligible/inadequate. Only documentation is in a separate file winirc.doc (MS Word format), 313 bytes, found in the same directory as the program file which should be downloaded at the same time, and in which the suggestion is made that if documentation is needed for this Windows version it should be obtained from one of the corresponding DOS versions (such as irc101.zip, 65,737 bytes, Nov. 1993) which is supposedly applicable. At this particular site at least the DOS documentation is available in a separate and readily available file so that it can be downloaded at the same time.
FEATURES.....
COMMENTS..... A very basic package which does not appear to be undergoing further development.

2.8

WinTalk

PRIME PURPOSE..... Two way on-line communications
FILE NAME..... wtalk121.zip
FILE SIZE..... 127,369 bytes
LATEST VERSION..... 1.21 February 1995
AVAILABLE FROM..... ftp.elf.com: /pub/wintalk

STATUS..... Freeware (limited). A more advanced version called WinTalk Pro is available for \$US 20

DOCUMENTATION.... Installation and start-up instructions, and on-line help.

FEATURES..... Uses the UNIX "ntalk" protocol.

COMMENTS..... Will not work properly with current Trumpet Winsock 1.0A, (Winsock bugs). It should be OK with newer Trumpet version 1.0B beta 2 or higher. It will generally not work with pseudo SLIP programs like TIA and TwinSock. Released by ELF Communications.

2.9

WS_CHAT

PRIME PURPOSE..... Real time bi-directional chat program.

FILE NAME..... ws_cha21.zip

FILE SIZE..... 453,280 bytes

LATEST VERSION..... 2.1 February 1995

AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)

STATUS..... Beggarware. \$US5 requested donation. Future versions will not be free.

DOCUMENTATION.... Basic startup instructions.

FEATURES..... Event driven programming: uses almost no processor time when not in use.

COMMENTS..... Released by Danny Brands. Source code available for \$US 5. The window may not fit well in some displays and is not resizable. Requires a minimum of a 386 PC. Works with Windows 3.1, WFW 3.11 and **Windows NT**.

2.10

WSIRC

PRIME PURPOSE..... Internet Relay Chat (IRC)

FILE NAME..... wsirc14e.zip

FILE SIZE..... 534,801 bytes

LATEST VERSION..... 1.14e-S January 1995

AVAILABLE FROM..... cs-ftp.bu.edu: /irc/clients/pc/windows
ftp.cica.indiana.edu:
/pub/pc/win3/winsock (or mirrors)

STATUS..... Shareware version \$US 39.95 (1 disk, 1 manual), students 24.95. Site license: \$US 449.95 (20 disks, 20 manuals)

DOCUMENTATION.... Very Good. Installation instructions, and on-line help included. The help file also contains a tutorial. A comprehensive list of IRC servers is also included.

FEATURES.....

COMMENTS..... This is a Windows client for the Internet Relay Chat (IRC) network. It allows users to chat (keyboard) with each other worldwide through IRC servers.

There are two execution files included. Wsirco.exe is for Freeware users who have chosen not to register the program and is limited to 2 concurrent channels. Wsirce.exe is an evaluation copy for Shareware users and is limited to 5 channels. With registration a registered Shareware version is provided which allows 255 channels and a larger help file and other features. According to the author, Caesar Samsi: "The future includes images, sound and video in both client and server versions."

A WSIRC homepage created by Roddie Hasan is located on the WWW at:

<http://www.io.org/~roddie/wsirc.html>

A questions and answers IRC FAQ is available by

FTP from:

[cs-ftp.bu.edu: /irc/support/alt-irc-faq](ftp://cs-ftp.bu.edu:/irc/support/alt-irc-faq)

Recommended

3. DIAGNOSTIC TOOLS

The increasing size and complexity of networks and their communications links attracts increasing problems. Fortunately, specialized tools are beginning to appear to deal with some of the problems.

3.1

Socket Wrencher

PRIME PURPOSE..... Winsock testing tool
FILE NAME..... socketw.exe
FILE SIZE..... 59,345
LATEST VERSION..... 1.0 April 1994
AVAILABLE FROM..... ftp.netmanage.com: /pub/demos/sockwrench
STATUS..... Free.
DOCUMENTATION.... Installation and start up instructions.
FEATURES.....
COMMENTS..... "Socket Wrencher provides a suite of performance tests over TCP and UDP as well as several tests to check characteristics of a Winsock based protocol stack." Released by NetManage Inc.

3.2

TracePlus/Winsock

PRIME PURPOSE..... Winsock API trace/debugger for Windows 3.1
FILE NAME..... xraywins.zip
FILE SIZE..... 252,738 bytes
LATEST VERSION..... 1.2 March 1995
AVAILABLE FROM..... ftp.netcom.com: /pub/ss/sstinc
STATUS..... Shareware. registration \$US 79.95
DOCUMENTATION.... Installation instructions and on-line help included
FEATURES.....
COMMENTS..... "Traces and displays the parameters of all Winsock API functions. Works with any version of Winsock." Some features crippled on this free version.

3.3

Windows Socket Test

PRIME PURPOSE..... Socket tester/debugger.
FILE NAME..... wsatest.zip
FILE SIZE..... 83,422 bytes
LATEST VERSION..... November 1993 ?
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Unknown.
DOCUMENTATION.... None.
FEATURES.....
COMMENTS..... A very interesting program. It seems fairly straightforward although some documentation would have been nice. I wish I knew more about this, including the developer's name.

4. FILE SEARCH AND TRANSFER PROTOCOLS

File searches on the Internet are made easier through the use of **Archie** programs which

can send queries to special Archie servers. The search can be done for a very specific file/program name (such as a search for "winter10") or for some fragment of that name (such as a more broadly based search for "wint" or "winter"). The server will return information listing "anonymous" FTP sites which carry the corresponding file name. Most Archie servers are located in Europe, North America and the Pacific Rim. Since Archie servers are usually backlogged with a large number of requests during the local prime time hours, knowledge of world geography and time zones comes in handy in jumping to other sites elsewhere in the world which are more likely to be available. Ah yes, this is your punishment for snoozing through those grade school geography classes. Note that the information available on different Archie servers is not necessarily the same and sometimes a search of more than one Archie server may be necessary. Note also that information available on Archie servers is not complete and represents only a fraction of the files/locations on the Internet.

File Transfer Protocol (FTP) is a means of transferring files between your PC and a remote server. Typically this is through so called "anonymous" FTP where you log on with user id "anonymous" and give your email address as the password. **Never** give your real password when logging on to an anonymous server. Anonymous FTP is a method many Internet sites use to allow users who don't have an actual account with them to access their files. Most usable file at these sites will be found in the /pub directory.

Typically you will use an Archie program to search for a known file you are looking for if you don't already know where to find it, and then an FTP program to retrieve it.

The search program WSARCHIE and John Junod's file retrieval program WS_FTP (16 bit) are the standards by which ALL Archie and FTP clients should be measured. I am referring to commercial programs, not just Shareware. Not only do they have features and performance, but they work well together for a one two punch.

4.1 (NEW)

CuteFTP

PRIME PURPOSE.....	File retrieval (FTP)
FILE NAME.....	cuteftpb.zip
FILE SIZE.....	83,578 bytes
LATEST VERSION.....	1.0 beta March 1995
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS.....	Shareware \$US 15. Registration not required for this beta version however the author suggests that the price might be higher by the time the final version comes out.
DOCUMENTATION....	Basic instructions.
FEATURES.....	
COMMENTS.....	A new GUI based FTP program just released by Alex Kunadze.

4.2

WINFSP

PRIME PURPOSE.....	File Service Protocol (FSP)
FILE NAME.....	winfsp12.zip
FILE SIZE.....	57,956 bytes
LATEST VERSION.....	1.2 August 1993
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS.....	Freeware
DOCUMENTATION....	Brief setup and use instructions, no on-line help. A good source of information about FSP can be found in the Frequently Asked Questions (FAQ) document available from: ftp.germany.eu.net: /pub/network/inet/fsp The file name is simply FAQ.

FEATURES.....
COMMENTS..... This is the only Windows based FSP based file retrieval program I've ever seen, and there are no recent versions. FSP is sometimes nicknamed "File Slurping Protocol" and is only usable on certain servers which support it. FSP operates similar to a Web browser - it only logs on to a site long enough to retrieve necessary information and thus provides a minimal burden on that site. It's ability to repeatedly log on to a site as necessary gives it a natural ability to recover from connection interruptions. Once touted as a potential replacement for FTP, it should perhaps be renamed the "Sleeping Protocol". It just doesn't seem to be going anywhere.

4.3

WinFTP

PRIME PURPOSE..... File retrieval (FTP)
FILE NAME..... winftp.zip
FILE SIZE..... 177,738 bytes
LATEST VERSION..... Jan. 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Released to Public Domain.
DOCUMENTATION.... Installation instructions, but no on-line help.
FEATURES..... Based on an earlier version of WS_FTP with some added features. Program contains both 16 and 32 bit execution versions, (winftp.exe and win32ftp.exe), your choice if you have 32 bit capability, although I'm not sure if there's any real difference in performance between the two. This program also includes some limited Ping capabilities.
COMMENTS..... I have seen postings indicating that this program is more firewall friendly than other FTP clients although the more recent versions of WS_FTP appear to have significantly improved their firewall capabilities.

4.4

WSARCHIE

PRIME PURPOSE..... File search client (Archie)
FILE NAME..... wsarch07.zip
FILE SIZE..... 174,837 bytes
LATEST VERSION..... alpha .7 November 1994
AVAILABLE FROM..... ftp.demon.co.uk: /pub/ibmpc/winsock/apps/wsarchie
STATUS..... No charge for non-commercial use.
DOCUMENTATION.... Installation instructions and on-line help included.
FEATURES..... Display shows file sizes and file dates. This latest version now has the capability to save search results to a text file for later viewing.
COMMENTS..... Visually well laid out and functioning main screen. Can be configured to work with WS_FTP to retrieve files.

Recommended

4.5

WS-FTP

PRIME PURPOSE..... File retrieval (FTP)
FILE NAME..... ws_ftp.zip
FILE SIZE..... 116,700 bytes
LATEST VERSION..... January 21, 1995. **Note:** Unfortunately the various versions to date are indistinguishable by file name, but latest version is always in the site listed below. If you are looking elsewhere for

this program, check the file size or file date with my information to avoid downloading an older version.

AVAILABLE FROM..... ftp.usma.edu: /pub/msdos/winsock.files
This site can be hard to access.

STATUS..... No charge for non-commercial use by individuals or for use by US government organization. For commercial use contact Ipswitch, Inc. at info@ipswitch.com

DOCUMENTATION.... Installation instructions and on-line help included.

FEATURES..... Can store repetitively used locations/directories for easy call up, and comes pre-configured with a number of the more popular sites. Can be set to a number of "redials" if unable to connect although there is unfortunately no time delay allowed between these redials. Supports firewalls. Multiple copies of this program can be activated for simultaneous downloads.

COMMENTS..... The best and most popular FTP program in use today. See also the matching file search package WSARCHIE above. A new version is also currently under development specifically for **Windows NT**, see below.

Recommended

4.6 **WS-FTP32** [Windows NT version by John Junod]

PRIME PURPOSE..... File retrieval (FTP)

FILE NAME..... ws_ftp32.zip

FILE SIZE..... 142,534 bytes

LATEST VERSION.... January 1995

AVAILABLE FROM.... ftp.usma.edu: /pub/msdos/winsock.files

STATUS..... No charge for non-commercial use by individuals or for use by US government organizations. For commercial use contact Ipswitch, Inc. at info@ipswitch.com

DOCUMENTATION.... Installation instructions and on-line help included.

FEATURES..... Contains the same features as the 16 bit version. See WS_FTP.

COMMENTS..... John Junod has ported his latest code to a 32 bit version for **Windows NT**. The latest release of this version also now runs on Windows 3.1 with the **Win32s** 32 bit extension installed (see the Non-Winsock section), **Windows NT**, and **Windows95**. There is no advantage in running this 32 bit version in a 16 bit machine even with **Win32s**. File transfers will not be faster.

4.7 **WSFTP32** [Windows NT version by Larry Kahn]

PRIME PURPOSE..... File retrieval (FTP)

FILE NAME..... wsftp32.zip

FILE SIZE..... 238,289 bytes

LATEST VERSION.... January 1995

AVAILABLE FROM.... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)

STATUS..... Freeware.

DOCUMENTATION.... Installation and startup instructions but no on-line help.

FEATURES..... This latest version now supports drag and drop.

COMMENTS..... This is an updated and recompiled version for **Windows NT** based on WS_FTP source code from December 1993 originated by John Junod. Some bugs have been fixed and some features added by the new author Larry Kahn who created this version which works on either NT 3.1 or NT 3.5. It will not work on windows under **Win32s** since it uses multi-threads. John Junod has also issued a **Windows NT** update based on his latest 16 bit



version of WS_FTP and so there are now two different 32 bit NT versions of WS_FTP to choose from. The author Larry Kahn is also considering producing an x-windows UNIX version of the program. If interested drop him a line:
kahn@kahn.pdial.interpath.net

5. FINGERS

No, not the kind you give other motorists. A program such as Finger is used to check servers for information about the users logged on at a particular location. Sometimes little more than their real name is available, and sometimes a brief profile. The Finger function can also be found included in some other packages such as more recent versions of Eudora, a popular mail program. A few service providers have begun to shut down their Finger servers because of concerns that the information provided could be misused by outsiders.

5.1

CFinger

PRIME PURPOSE.....	Finger and Echo client/daemons, Whois client.
FILE NAME.....	cfing11.zip
FILE SIZE.....	153,464
LATEST VERSION.....	1.1 beta March 1995
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS.....	Shareware \$US 5.
DOCUMENTATION....	Installation instructions and on-line help.
FEATURES.....	
COMMENTS.....	Requires vbrun300.dll which is not included. A nicely done Windows implementation just released by Charles Wells. Full featured and not crippled.

5.2

Finger: A Windows Socket Finger Client

PRIME PURPOSE.....	Finger query
FILE NAME.....	finger31.zip
FILE SIZE.....	68,108 bytes
LATEST VERSION.....	3.1 March 1993
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS.....	No mention of any charges for using this program.
DOCUMENTATION....	Minimal, but little required.
FEATURES.....	
COMMENTS.....	Contains two executables, one for Berkeley style synchronous blocking (finger.exe), the other for asynchronous Winsockets (mfinger.exe).

5.3

FINGER 3.0

PRIME PURPOSE.....	Finger query
FILE NAME.....	finger30.zip
FILE SIZE.....	70,135 bytes
LATEST VERSION.....	3.0 February 1995
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS.....	Shareware \$US 10. Volume discounts available.
DOCUMENTATION....	Start up and use instructions.
FEATURES.....	Enables multiple finger sessions at the same time - includes timer for re-fingering opened finger sessions every 1-60 minutes.
COMMENTS.....	From Zoran Dukic, a contribution from Europe. Fairly straight

forward and easy to use as are most finger clients.

5.4 **Finger32 [Windows NT]**
PRIME PURPOSE..... Finger query
FILE NAME..... finger32.zip
FILE SIZE..... 37,196 bytes
LATEST VERSION..... May 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/nt (or mirrors)
STATUS..... No information - not specified by the author.
DOCUMENTATION.... Nil.
FEATURES.....
COMMENTS..... This is a 32 bit version of the program Finger. It does appear to work with Windows 3.1 with the **Win32s** upgrade.

5.5 **Finger and Host Lookup (2 programs)**
PRIME PURPOSE..... Finger query and host name to IP number lookup/converter.
FILE NAME..... iwork.zip
FILE SIZE..... 17,017 bytes
LATEST VERSION..... January 1994
AVAILABLE FROM..... Try ftp.cuslm.ca: NETWORK/WINSOCK
STATUS..... Freeware.
DOCUMENTATION.... Minimal.
FEATURES.....
COMMENTS.....

5.6 **WS Finger**
PRIME PURPOSE..... Finger query
FILE NAME..... wsfng14.zip
FILE SIZE..... 62,014 bytes
LATEST VERSION..... 1.4 December 1994
AVAILABLE FROM..... sparky.umd.edu: /pub/winsoc
STATUS..... Shareware \$US 10
DOCUMENTATION.... Installation instructions, on-line help. A list of Whois servers is also included.
FEATURES..... A major new rewrite. Support now included for Finger, Whois and command line fingers, Finger address book, history, save to file, etc.
COMMENTS..... From Tidewater Systems, Shareware as of version 1.2. Previous versions Freeware. Nice new icon.

For a combined Finger / Ping / Echo client, see also WSNWUTIL in the PING section.

6. GAMES - MUDS

One interpretation from the introductory text in MUD Man: "MUD, short for Multi-User Dungeon, is a fantasy world where people can interact and fight monsters, go on quests, etc..." And then there's MUSH, a "Multi-User Shared Hallucination". And then there's MOO.....

6.1 **MUD Man**
PRIME PURPOSE..... MUD client
FILE NAME..... mudman12.zip
FILE SIZE..... 78,834 bytes
LATEST VERSION..... 1.2 August 1994

AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/misc (or mirrors)
 STATUS..... Shareware \$US 9, non-USA users \$US 15. Registration benefits include an upgraded version of the program.
 DOCUMENTATION.... Basic start up instructions and on-line help included.
 FEATURES.....
 COMMENTS..... According to author Samuel Ross: " The goal of MUD Man is to end the laborious typing required to move around and perform actions. Once initialized, every command can be issued from the click of a button."

6.2

MudWin (Mud Windows Client)

PRIME PURPOSE..... MUD client
 FILE NAME..... mudwin.zip Unfortunately the exact same file name continues to be used for each new version released.
 FILE SIZE..... 74,368 bytes
 LATEST VERSION..... 1.0.6 beta January 1995
 AVAILABLE FROM..... Try: ftp.microserve.com: /pub/msdos/winsock
 STATUS..... Copyright by the author but no mention of any charges for use.
 DOCUMENTATION.... Extensive start up and usage information.
 FEATURES.....
 COMMENTS..... Nice graphical toolbar. Continued development by author Sam Denton.

6.3

MUDManager

PRIME PURPOSE..... MUD client
 FILE NAME..... mudmgr01.exe
 FILE SIZE..... 762,013 bytes
 LATEST VERSION..... .1 beta June 1994
 AVAILABLE FROM..... caisr2.caisr.cwru.edu: /pub/mud/clients
 STATUS..... Shareware, but no charges yet while still in development.
 DOCUMENTATION.... Basic installation and use instructions.
 FEATURES.....
 COMMENTS..... Fairly stiff requirements to operate this, including Windows 3.1 with the **Win32s** extension or **Windows NT**, 8 meg RAM, 5 meg disk space etc. It also requires a permanent IP number which disqualifies many modem connections where the service provider uses dynamic IP numbers (you are assigned a new number each time you log on).

6.4

MUTT(tm) Lite (Multi-User Trivial Terminal client)_

PRIME PURPOSE..... MUD/MUSH/MU* client.
 FILE NAME..... mutt_01j.zip
 FILE SIZE..... 49,905 bytes
 LATEST VERSION..... .1j February 1995
 AVAILABLE FROM..... caisr2.caisr.cwru.edu: /pub/mud
 ftp.graphcomp.com: /pub/msw/mutt
 STATUS..... Freeware (limited).
 DOCUMENTATION.... Installation and start up info in a file "readme.bnd". No on-line help and none planned for the Lite version.
 FEATURES..... Multiple character connections with an MDI presentation. Separate send and receive windows with dialogue logging. Drag & drop support for sending files and command-streams. User-definable hot keys, including cursor key definitions.
 COMMENTS..... This is the first public release of MUTT(tm) Lite, a Multi-User

Trivial Terminal client that provides Winsock access to MU* hosts. Design criteria: the executable will remain below 32K in order to minimize Internet traffic and FTP site impact and therefore features are limited. A full featured version called MUTT(tm) Elite is planned for future release by the author Bob Free. More information on MUTT is available through the WWW from:

<http://www.graphcomp.com>

6.5

SneezyMUD Windows client

PRIME PURPOSE..... MUD client.
FILE NAME..... mudclnt.zip
FILE SIZE..... 153,489 bytes
LATEST VERSION..... .20a2 (Alpha test! Not released.)
AVAILABLE FROM..... Contact the author at russ.russell@em.doe.gov for info.
STATUS..... Not mentioned.
DOCUMENTATION.... Start up information.
FEATURES.....
COMMENTS..... Requires a minimum of a 386 computer. Program is at an early stage and somewhat rough, but under intensive development by the author.

6.6

VWMUD Master

PRIME PURPOSE..... MUD client
FILE NAME..... vwmud110.zip
FILE SIZE..... 57,821 bytes
LATEST VERSION..... 1.1 December 1994
AVAILABLE FROM..... xmission.com: /pub/users/kslewin
ftp.primenet.com
STATUS..... Basic package now Freeware. Optional registration brings 6 months of support and updates for \$US 15. Source code \$US 50.
DOCUMENTATION.... Start up instructions and on-line help. On-line help includes Scott Geiger's listing of 340 MUDS, MUSHES and MOOS.
FEATURES.....
COMMENTS..... Telnet client designed specifically for "Outlaws" - players who kill other players. You must have vbrun300.dll installed on your system. From author Vaughan Wynne-Jones.

6.7

WinWorld (formerly Winfugue)

PRIME PURPOSE..... MU* client
FILE NAME..... wworld02.zip
FILE SIZE..... 72,771 bytes
LATEST VERSION..... .2 alpha November 1994
AVAILABLE FROM..... ftp.mgl.ca: /pub/winworld
STATUS..... Donationware - contributions welcome but not mandatory.
DOCUMENTATION.... Very basic start up and installation instructions.
FEATURES..... Auto-login, multiple simultaneous worlds - but only one world displayed at a time (no window clutter!), definable function keys, built in bug report mailer (doesn't require any other software)
COMMENTS..... Program formerly known as Winfugue. This is at an early stage of development and is being released by the author Eric Stern for further testing purposes. It requires that you have the visual basic file vbrun300.dll on your system in an accessible directory.

7. GAMES - OTHER

Perhaps because Winsock is such a new standard, outside the MUD grouping there have been few games developed so far. In time we can expect to see others.

7.1 **First International Backgammon Server For Windows (FIBS/W)**
PRIME PURPOSE..... Backgammon server.
FILE NAME..... fibsw130.zip
FILE SIZE..... 218,095
LATEST VERSION..... 1.30 January 1995
AVAILABLE FROM..... sunsite.unc.edu: /pub/micro/pc-stuff/ms-windows/winsock/apps
STATUS..... Shareware \$US 40
DOCUMENTATION.... Start up information and on-line help.
FEATURES..... Works with dial-up dumb-terminal-server access, TCP/IP, SLIP and PPP. Built in dialer with script.
COMMENTS..... An Internet server which allows users to play against human opponents all over the world.

7.2 (NEW) **TeleChess**
PRIME PURPOSE..... Chinese chess.
FILE NAME..... tchess11.zip
FILE SIZE..... 50,440 bytes
LATEST VERSION..... 1.1 March 1995
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Shareware \$US 15
DOCUMENTATION.... Installation instructions but nothing on the game itself.
FEATURES.....
COMMENTS..... This game is designed to be played by two people over any TCP/IP network, including the Internet.

7.3 **WIGC**
PRIME PURPOSE..... Winsock client for the Internet GO server.
FILE NAME..... wigc1_3.zip
FILE SIZE..... 156,940
LATEST VERSION..... 1.3 March 1994
AVAILABLE FROM..... ftp.demon.co.uk: /pub/ibmpc/winsock/games/go
STATUS..... Shareware \$US 5
DOCUMENTATION.... Minimal start up instructions. It would be nice if there had been something in the instructions explaining the game of "go" with this package.
FEATURES.....
COMMENTS.....

7.4 **Winsock Chess**
PRIME PURPOSE..... Internet chess.
FILE NAME..... wschesb1.zip
FILE SIZE..... 163,546
LATEST VERSION..... Beta test release March 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Copyright Freeware.
DOCUMENTATION.... Basic usage instructions.
FEATURES.....
COMMENTS..... According to the program's author: "Winsock Chess is a chess implementation allowing two players to play chess over a

For Gophers see also the SuperHighway Access demo in the Web Browser section.

9. HOST LOOKUP CLIENTS

Host lookup programs do things like taking alphabetical site location information (such as ftp.cica.indiana.edu) and convert them into IP addresses (like 129.79.26.27) which for some reason computers absolutely insist on having. Or vice versa. For example, if you've been using FTP to download offensive pornographic images from that notorious and secretive site 127.0.0.1 and wanted to learn more about that location, you could input these numbers into one of these programs such as WSHost.

9.1 **Hopcheck and Ghostname** [**Windows NT**]
PRIME PURPOSE..... Two programs: a route tracer and a get host name program.
FILE NAME..... hop.zip
FILE SIZE..... 24,917 bytes
LATEST VERSION..... May 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/nt (or mirrors)
STATUS..... No mention of any charges.
DOCUMENTATION.... Negligible.
FEATURES.....
COMMENTS..... Two **Windows NT** programs from Larry Kahn.

9.2 **NSLOOKUP**
PRIME PURPOSE..... Name server information lookup.
FILE NAME..... nslookup.zip **Note:** same file name was used for version 1.0. If downloading from a different location match file size to verify correct version.
FILE SIZE..... 110,428 bytes
LATEST VERSION..... 1.1 August 1994
AVAILABLE FROM..... ftp.demon.co.uk: /pub/trumphurst/nslookup
STATUS..... Copyright, but no charge..
DOCUMENTATION.... Installation instructions, but no on-line help.
FEATURES.....
COMMENTS..... This program is one element of Wigwam for the Internet, a commercial offline news and mail reader from Ashmount Research Ltd. For more info email: ashmount@cix.compulink.co.uk.

9.3 (NEW) **NSLOOKUP** [**Windows95** and **Windows NT**]
PRIME PURPOSE..... Name server information lookup.
FILE NAME..... nslookup.zip
FILE SIZE..... 16,840 bytes
LATEST VERSION..... 1.0 February 1995
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Not mentioned, but presumably no charge for non-commercial use.
DOCUMENTATION.... Minimal.
FEATURES.....
COMMENTS..... From John Junod. This runs in a DOS window under **Windows95** and **Windows NT**. It bears no relation to any other programs with the same name from other authors.

9.4 **WORMHOLE**
 PRIME PURPOSE..... DNS query utility
 FILE NAME..... wormhole.exe (Do not confuse with wormhole.zip which is an unrelated and totally different program available on the Internet.)
 FILE SIZE..... 32,256 bytes
 LATEST VERSION..... 1.0
 AVAILABLE FROM..... Try ftp.cuslm.ca: /NETWORK/WINSOCK
 STATUS..... Not specified
 DOCUMENTATION.... None
 FEATURES.....
 COMMENTS.....

9.5 **WS Host** (Windows Socket Host)
 PRIME PURPOSE..... DNS query utility
 FILE NAME..... wshost11.zip
 FILE SIZE..... 5,124 bytes
 LATEST VERSION..... 1.1 October 1994
 AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
 STATUS..... Postcardware (Freeware for non-commercial use - just send the developer a nice postcard.)
 DOCUMENTATION.... Minimal, an intuitively simple program.
 FEATURES.....
 COMMENTS..... This nifty compact utility can convert an IP number into a host name, or vice versa. Everyone should have one of these in their tool box. This new version makes the program fully asynchronous, correcting a shortcoming in the original version.

10. HYPER - G

Hyper-G is a large scale distributed hypermedia information system very similar to the World Wide Web. Hyper-G is capable of accessing the WWW, WAIS and Gopher systems, and conversely WWW and Gopher clients can access Hyper-G. The big difference between Hyper-G and other networks is that Hyper-G servers track all links in their universe. If an object is deleted, the server can find and delete all links pointing to that object. The existence of a link server provides capabilities not possible in the WWW and Gopher space. Hyper-G is being developed in Europe. Unfortunately, I don't see that it has a lot to offer. There does not appear to be any interest in it in North America which is totally preoccupied with the WWW which has probably reached critical mass now. There is only one Windows browser available for Hyper-G.

10.1 **Amadeus**
 PRIME PURPOSE..... Hyper-G browser.
 FILE NAME/SIZE..... amadedoc.zip 291,987 bytes
 amadeus1.zip 1,210,593
 amadeus2.zip 1,336,528
 amadeus3.zip 425,323
 LATEST VERSION..... .83 beta January 1995
 AVAILABLE FROM..... iicm.tu-graz.ac.at: /pub/Hyper-G/pc-client/amadeus.083
 STATUS..... I didn't see anything mentioned, but presumably no charge for non-commercial use.
 DOCUMENTATION.... Extensive documentation and help files included. The separate zipped documentation file is in MS Word format (.doc) and may be difficult to view unless you have a powerful word processor which handles that format. You'll also need lots of memory since it's almost a 2 megabyte file unzipped and will also be painfully

slow scrolling down the pages with a less powerful PC.

FEATURES..... Automated installation with the choice of maximum, custom, or minimum install. This program comes with some familiar clients such as WS_FTP32 for FTP, and EWAN for Telnet included.

COMMENTS..... Requires **Win32s** which is included in the program and will be installed automatically if you do not already have it.

11. MAIL and MAIL ACCESSORIES

One writer recently gushed that electronic mail is the killer application for the 90's. He's probably right (and you thought that it was going to be the WWW). The development of electronic mail (email) and its rapid deployment and availability to the general public will have an enormous impact on our lives for years to come.

System info stuff. There are two types of servers necessary in most mail systems: **SMTP** and **POP**. The SMTP (Simple Mail Transfer Protocol, or as I prefer: Send Mail To People) server is primarily used to deliver mail. When you originate an email message it is sent via your local SMTP server which passes the message on to a chain of SMTP servers in other locations which route the message to the end destination. Unfortunately, the SMTP servers are only capable of delivering mail. If you are not connected to the network when delivery is attempted they will go away and try again later, perhaps repeatedly every few hours for several days or for however long they have been programmed. Eventually they give up and bounce the mail back to the sender as undeliverable. To overcome this problem most sites also use a POP mail server (current vintage POP3). The POP (Post Office Protocol, or as I prefer: Post Office Pickup) server acts like a mailbox, receiving incoming mail and storing it until such time as the user initiates retrieval/viewing.

In connection with email one issue cannot be emphasized enough. **There are major security risks with the current Internet mail system.** There are three points worth remembering. Let's call these the three monkeys, or perhaps more appropriately, the three mail monkeys:

Monkey #1. There is no guarantee that any mail to or from you will not be intercepted and read by others while it is in transit. Remember that it may pass through many sites, many potential "hands" while in route. Even when it reaches its destination it may be vulnerable to hackers while stored on the POP server. For this reason confidential information such as credit card numbers should never be sent through the Internet without some type of secure encryption system which can guarantee confidentiality. Lack of any current universal standard on the Internet for this is a limiting factor for companies trying to do business on the Internet.

Monkey #2. There is no guarantee that any email message you send will ever reach its destination, and no guarantee that that anyone will ever be notified of the delivery failure. Normally, undeliverable mail will be bounced back to the sender. Normally.

Monkey #3. There is no guarantee that that any email message (or newsgroup posting for that matter) is really from the person listed as the sender. There is no user authentication system to confirm that person's real identity, and false identities are easily created and have been used from time to time by people on the Internet.

One feature to watch for in email programs is the ability to send attached documents (zip files, spreadsheets, graphics, etc.) through the Internet mail system with **UUencode** or

of this free version.

Recommended

11.3

Pegasus Mail

PRIME PURPOSE..... Electronic mail
FILE NAME..... winpm122.zip
FILE SIZE..... 837,801 bytes
LATEST VERSION..... 1.22 September 1994
AVAILABLE FROM..... risc.ua.edu: /pub/network/pegasus
STATUS..... Free! Manuals, if required, are sold by the author to support development costs.
DOCUMENTATION.... Installation instructions and on-line help included. Look for a self extracting DOS display file **wguide.exe** which contains some of this information.
FEATURES..... SMTP/POP3 protocol. Supports UUencode, BinHex, and MIME, and now contains a spell checker. This newer version of Pegasus includes the long awaited polling feature giving it the capability to operate in the background constantly checking for mail at specified intervals. Some additional drag and drop capabilities are added and there is an improvement in the way attached documents can be sent.
COMMENTS..... This current version of Pegasus has many features and the price is certainly just about right! This is another very popular mail package.

Recommended

11.4

Pronto/IP and Pronto Remote

PRIME PURPOSE..... Electronic mail [Demo]
FILE NAME..... prontoip.exe for TCP/IP networks or SLIP dialup connections (Pronto/IP)
pronto.exe for UNIX shell dialup connections (Pronto Remote)
There are also documentation files at the same location for each program in both text and Word document form which should be retrieved at the same time: pronto.doc, prontoip.doc or pronto.txt and prontoip.txt.
FILE SIZE..... 1,124,215 and 1,430,325
LATEST VERSION..... February 1995
AVAILABLE FROM..... commtouch.com: /pub/commtouch
STATUS..... These are 30 day evaluation copies. Registration \$US 69 for Pronto/IP and \$US 99 for Pronto Remote. Both packages \$US 139.
DOCUMENTATION.... On-line help and separate documentation files available at the commtouch site.
FEATURES..... Pronto/IP supports MIME, UUencode and MAPI (has MAPI server capabilities). Pronto Remote supports MIME, SUN and UUencode attachments. Automated installation. Toolbar can be customized by adding or deleting toolbar icons - a rare feature in Internet programs to date.
COMMENTS..... From CommTouch Software. Pronto Remote is similar to Pronto/IP but can access mail by directly dialing into your shell account without SLIP. Some very nice features here, but not cheap.

11.5 **RFD Mail**
PRIME PURPOSE..... Electronic mail
FILE NAME..... Available as either rfdml123.zip or rfdmail.zip. If downloading from other sites do NOT try to use older versions such as 1.21.
FILE SIZE..... 813,495 bytes
LATEST VERSION..... 1.23 September 1994
AVAILABLE FROM..... ftp.std.com: /customers/software/rfdmail
garbo.uwasa.fi: /windows/comm
Various forums in CompuServe and Genie.
STATUS..... Shareware \$US 29.95
DOCUMENTATION.... Installation instructions and on-line help included.
FEATURES..... SMTP/POP protocol (for the Internet). Automated installation. Has direct dial mail access capabilities but creating or modifying script files for this can be very cumbersome unless you are fortunately using one of the on-line services for which script files are provided. Automatic polling (background checking for mail at scheduled intervals). Does not support UUencode/MIME/BinHex.
COMMENTS..... This package's strength lies in it's capability for dialup email access to a wide variety of service providers, from BBS's to commercial networks like CompuServe and Genie, to the Internet, and it contains all the necessary programs, scripts, instructions, etc. to support this. SMTP/POP capability has just been added with this latest version. Program seemed to hesitate too long on my machine when executing commands, and more features are needed (such as MIME/UUencode capability).

11.6 **Small SMTP Client For The Winsock API**
PRIME PURPOSE..... Electronic mail (send only)
FILE NAME..... smtp11.zip
FILE SIZE..... 15,568 bytes
LATEST VERSION..... 1.1 March 1993
AVAILABLE FROM..... dorm.rutgers.edu: /pub/msdos/winsoc/apps
STATUS..... Public domain.
DOCUMENTATION.... Some introductory information.
FEATURES.....
COMMENTS..... Of historical interest only. An example of an early, simple, mail client.

11.7 **WinBiff**
PRIME PURPOSE..... Windows mail notification utility (for Pegasus Mail and others).
FILE NAME..... wnbff20c.zip
FILE SIZE..... 67,665 bytes
LATEST VERSION..... 2.0c January 1995
AVAILABLE FROM..... oak.oakland.edu: /SimTel/win3/mail
STATUS..... Shareware \$US 10, students: \$5
DOCUMENTATION.... Installation instructions and on-line help included.
FEATURES..... Adjustable polling (mail checking) interval. Optional audible alarm. Supports multiple mailboxes.
COMMENTS..... A number of mail packages lack the ability to operate in the background periodically checking for new mail and notifying the user. This add-on utility corrects this notable deficiency on some mail clients. Usable with Waffle, Pegasus (PMail), FirstMail, Novell MHS, Mini-Host, FSUUCP, or Sendmail (with PC-NFS). No longer required for the new Pegasus version 1.2.

speaking it is really not part of the Internet, but for all practical purposes if it walks like a duck and quacks like a duck then it must be an Internet duck. Anyway, Usenet is like a series of thousands of electronic bulletin boards, each oriented to a specific area or topic of interest where users can post messages or respond to other postings. You subscribe to specific groups which interest you and your news program retrieves all the articles associated with those groups. Typically Usenet news is accessed by logging onto your service provider's news or NNTP (Network News Transfer Protocol) server.

There are some good on-line Usenet News readers here and most of these readers are being actively upgraded by their authors. The mail capabilities are usually limited to send only to support news postings.

There is no "best" news reader. Different programs present different strengths in areas like speed, features, stability, ease of use and "personality". There are differences in what is important to a newcomer versus what an experienced power user demands. Trumpet News and WinVN provide good overall choices in a news program. Both have basic capabilities for threading (following the postings on a particular topic) and offline viewing. For more advanced features and better overall performance there is the new program Free Agent. It is particularly suited for offline reading to help reduce connection costs. As with any program with more features be prepared to invest a little extra time in becoming familiar with it and customizing the options to your preference.

12.1

dMail for Windows

PRIME PURPOSE.....	Usenet news, mail (send and receive)
FILE NAME.....	dmailwin.zip
FILE SIZE.....	339,018 bytes
LATEST VERSION.....	1.0b (July 1994)
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS.....	Freely distributed for testing purposes.
DOCUMENTATION....	Installation instructions and on-line help included. Terminology sometimes confusing and frustrating, especially with initial setup.
FEATURES.....	Handles UUCP-g protocol (modem or TCP/IP), POP3, SMTP, and NNTP news reading. The news reader has some very good features including UUdecoding, and ability to sort articles by size, date, or subject and drag and drop capability, etc.
COMMENTS.....	Apparently produced somewhere in the former Soviet Union and probably intended primarily for distribution there. There is a novel replacement for the traditional hourglass cursor - a man digging with a shovel. The automated installation can be a nuisance since a version of Trumpet Winsock is included and its files may have to be deleted to avoid conflict if you already have a version of Trumpet loaded elsewhere (especially if it is a different version). This is a very interesting full featured package which requires extra start up and familiarization effort.

12.2 (NEW)

Free Agent (tm)

PRIME PURPOSE.....	Usenet news, mail (send only)
FILE NAME.....	agent038.zip
FILE SIZE.....	596,761
LATEST VERSION.....	Public beta 0.38 March 1995
AVAILABLE FROM.....	ftp.forteinc.com: /pub/agent http://www.forteinc.com/forte/>
STATUS.....	Demo.

DOCUMENTATION.... Brief start up instructions and on-line help.
 FEATURES..... Multiple configurable font colors. Single split window design similar to Trumpet newsreader, but with many enhancements including the ability to change screen layout. Includes the very unusual (and very welcome) ability to extract necessary network configurations (such as news server info) from an existing news reader such as Trumpet or WinVN which is already installed on your system. It will also extract and import the complete existing newsgroup listing as well as all your subscribed group information from that program to get up and running quickly. Very impressive! Other Winsock programers should consider including something similar. After all, why force the user to re-configure every program he installs when the information is there for the stealing if there is a similar program already installed?

COMMENTS..... An impressive debut. This appears to be a very stable program. It even took much longer than usual to find some bugs. This is an on-line / off-line reader with extensive customization capabilities. One of the best news programs for cutting your connection time costs. Good threading capability. Decoding (pictures) has been criticized as inferior to News Xpress and it is a bit awkward in this version. Free Agent will eventually be released in a basic Freeware version and in an enhanced commercial version (like Eudora).

Recommended

12.3 **NEWS [Windows NT and Windows95]**
 PRIME PURPOSE..... Usenet news, mail (send only)
 FILE NAME..... news.zip
 FILE SIZE..... 572,857 bytes
 LATEST VERSION.... X1.0-62
 AVAILABLE FROM.... ftp.digital.com: /pub/DEC
 STATUS..... No charge.
 DOCUMENTATION.... Set up instructions.
 FEATURES.....
 COMMENTS..... Released by Olav Tollefsen. If using pkunzip use the "-d" option.

12.4 **News Xpress**
 PRIME PURPOSE..... Usenet news, mail (send only)
 FILE NAME..... nx10b3.zip
 FILE SIZE..... 178,575 February 1995
 LATEST VERSION.... 1.0 beta #3
 AVAILABLE FROM.... ftp.hk.super.net: /pub/windows/Winsock-Utilities
 STATUS..... Public Domain
 DOCUMENTATION.... On-line help.
 FEATURES..... Good threading capability. Supports kill and auto-selection, local folders for storing articles, and outbox for queuing posts and mails. Built in UUencode/UUdecode. Word wrap now!

COMMENTS..... An interesting newcomer to the newsreader ranks. It has generated very favorable comments from many people. This latest version is just out and has an excellent interface and impressive features and functionality. Unfortunately I found this latest release to be still buggy and unstable and the documentation weak. This program is on the bleeding edge of development in this area and for features and performance is



potentially one of the two (Free Agent) best news readers currently available.

12.5

PC-Pine for Winsock
PRIME PURPOSE..... Usenet news, mail (send and receive)
FILE NAME..... pcpine_w.zip
FILE SIZE..... 528,763 bytes
LATEST VERSION..... 3.91 beta October 1994
AVAILABLE FROM..... ftp.cac.washington.edu: /pine/pcpine
STATUS..... Copyright, but freely available.
DOCUMENTATION.... Installation instructions and on-line help included.
FEATURES..... Supports SMTP/MIME/IMAP/NNTP protocols, but not POP3.
COMMENTS..... Unfortunately this Winsock version is quite disappointing because it is not a true Windows GUI application but has the same user interface as the UNIX and DOS versions of Pine. Additional customized versions are available from the same location for Sun's PC-NFS, Novell's LAN Workplace for DOS, etc.

12.6

Tetrix Reader Plug (TRP)
PRIME PURPOSE..... Usenet news, mail (send only)
FILE NAME..... trp104.zip
FILE SIZE..... 490,284 bytes
LATEST VERSION..... 1.0.4 December 1994
AVAILABLE FROM..... ftp.internet-eireann.ie: /pub/ie_access/dos/winsock
STATUS..... Shareware \$US 30
DOCUMENTATION.... Start-up information and on-line help.
FEATURES..... UUencoding, supports file drag and drop.
COMMENTS..... There have been problems with dynamic IP addresses - unknown in Ireland where this program originates. Some good potential here, but needs more work. Good graphics. The same location also contains version 1.0.8 under filename oneoeigt.zip, but this appears to be some kind of upgrade rather than a standalone version since it does not seem to contain a complete set of files.

12.7

Trumpet News Reader
PRIME PURPOSE..... Usenet news, mail (both send and receive)
FILE NAME..... wt_wsk.zip
FILE SIZE..... 96,305 bytes
LATEST VERSION..... 1.0 rev B final beta #4 September 1994
AVAILABLE FROM..... ftp.trumpet.com.au: /ftp/pub/beta/wintrump
This Australian site is difficult to access.
STATUS..... Shareware \$US 40. Site licenses also available.
DOCUMENTATION.... Good.
FEATURES..... Can decode UUencoded files. Threading capabilities, but could be better. Offline reading. If you have along list of article headers and you're searching for something in particular you can just start typing a key word and the program will jump you down to the header containing a matching word (undocumented feature).
COMMENTS..... No razzle dazzle here - this latest version is just a very nice general purpose news reader, not fast, but easy to use and stable. Split window design as opposed to the more common multiple windows style.

ftp.cica.indiana.edu: /pub/pc/win3/winsock (or

mirrors)
STATUS..... Shareware \$US 40, only \$20 for students. Registered users receive complete set of fonts, a full 85-page user manual, and upgrades for 1 year.
DOCUMENTATION.... Installation instructions and on-line help included.
FEATURES..... VT52/VT102/VT220 terminal emulation capable of supporting up to 15 simultaneous virtual terminal sessions. SMTP/POP3 send and receive mail, with polling (timed background mail checking). Capability to also operate as a server for FTP. A basic SMTP server daemon has also been added which allows direct receipt of mail for network users who are always logged on or for those who don't have POP mail. An RCP server allows file transfers to and from the remote user's UNIX command line.
COMMENTS..... Required minimum of a 386 processor. This is a very full featured package and this upgrade is welcome for the bug fixes and feature enhancements it brings.

12.11

WinVN

PRIME PURPOSE..... Usenet news, mail (send only)
FILE NAME..... wv16_93_14.zip [Windows 3.1]
winvn_93_14_intel.zip [Windows NT]
FILE SIZE..... 271,529 and 274,974 bytes
LATEST VERSION.... .93.14 February 1995
AVAILABLE FROM.... ftp.ksc.nasa.gov: pub/winvn/win3 and pub/winvn/nt
STATUS..... Public Domain
DOCUMENTATION.... Installation instructions and on-line help included.
FEATURES..... Can also send (but not receive) mail using SMTP or MAPI. Built in UUdecoding which is especially useful and convenient in downloading and viewing pictures
COMMENTS..... A fairly popular newsreader which is getting intensive development effort. One of the more common multiple window style newsreaders (as opposed to the split window style).

Recommended

13. MISCELLANEOUS

Or more specifically, a little bit of this, and a little bit of that.

13.1

Panda

PRIME PURPOSE..... Mostly a mail program and newsreader at the moment.
FILE NAME..... winpanda.zip
FILE SIZE..... 244,842 bytes
LATEST VERSION.... May 1994
AVAILABLE FROM.... chop.isca.uiowa.edu: /pub/Panda
STATUS..... No mention of any charges.
DOCUMENTATION.... Almost nothing with the package, but logging on as "public" with the default configuration allows you to retrieve some basic information from an Iowa server
FEATURES.....
COMMENTS..... Panda is a multipurpose customized program being developed at the University of Iowa for campus network use. It will include a Gopher, Usenet, mail, FTP, etc. Current version does not retain configuration setting changes between sessions and is somewhat rough and unstable at this point. A good example of

some of the development work taking place in one of the universities. Of passing interest only.

13.2

<u>Tcpmeter</u>	
PRIME PURPOSE.....	Unknown.
FILE NAME.....	tcpmeter.exe
FILE SIZE.....	19,200
LATEST VERSION.....	October 1994
AVAILABLE FROM.....	ftp.trumpet.com.au: /ftp/pub/beta/tcpmeter
STATUS.....	No information.
DOCUMENTATION....	None.
FEATURES.....	
COMMENTS.....	From Peter Tattam, the Trumpet Winsock author. This provides a chart recorder type graphical readout of data flow, in effect a two way data speedometer. Received bytes/second are shown from the top down in green and send bytes/second are shown from the bottom up in red. Clicking right and left mouse buttons increases or decreases the vertical display scale from the default 1 kbyte/second. I'm not really sure of the intended use for this but possibly it might be useful for monitoring the effective data transfer rates while Winsock or other settings are being adjusted. The graphics are kind of neat. I believe that this is designed to work only with Trumpet Winsock.

13.3

<u>WINAPPS</u>	
PRIME PURPOSE.....	A comprehensive client start up package.
FILE NAME.....	winapps.zip
FILE SIZE.....	131,516 bytes
LATEST VERSION.....	N/A. Most of these apps date from mid to late 1993.
AVAILABLE FROM.....	bode.ee.ualberta.ca: /pub/dos/win3/winsock
STATUS.....	Shareware, but no mention of any cost for using.
DOCUMENTATION....	None.
FEATURES.....	Includes FTP, Ping, Telnet, Archie, Hopchk, and Chat clients
COMMENTS.....	These are all very basic examples of simple Winsock clients which are no longer of any real interest although these clients are still usable and this file is still found on many sites. This version has now essentially been replaced by Winapps2.

13.4

<u>WINAPPS2</u>	
PRIME PURPOSE.....	A comprehensive client startup package.
FILE NAME.....	winapps2.zip
FILE SIZE.....	123,743
LATEST VERSION.....	2.0 Rev A. Released October 1994 to coincide with the release of the new Trumpet Winsock version 2.0. Individual clients range in date from 1993 to the present. Early versions were included in the original WINAPPS package listed above.
AVAILABLE FROM.....	ftp.trumpet.com.au: /ftp/pub/winsock ftp.cica.indiana.edu: /pub/pc/win3/winsock
STATUS.....	Shareware. No mention of any charges for use, but not to be resold or distributed for sale.
DOCUMENTATION....	Negligible.
FEATURES.....	Includes Ping, Telnet, Archie, Chat and viewer clients. The Telnet client has been available separately for a while and is listed in the Telnet section of this listing.

COMMENTS..... A basic starter package from Peter Tattam, the Trumpet Winsock author. An FTP client is surprisingly absent.

13.5 WinLab and NetProto

PRIME PURPOSE..... Advanced image processing/photo retouch with file transfer module.
FILE NAME..... wlabv30b.zip
FILE SIZE..... 855,660
LATEST VERSION..... 3.0 October 1994
AVAILABLE FROM..... hp750.dibe.unige.it: /pub/PHD (Prime site: Italy)
ftp.cica.indiana.edu: /pub/pc/win3/desktop (or mirrors)
STATUS..... Shareware WinLab: ITL 120.000 (~ 80 \$US)
NetProto ITL 30.000 (~20 \$US)
DOCUMENTATION.... Start up instructions and on-line help.
FEATURES.....
COMMENTS..... Package contains both the image processor (WinLab) and has the capability to remotely send or receive documents (NetProto) from another machine (also running NetProto) through the use of Winsock. This is fully functional, but still a beta release. A commercial version is also being developed.

13.6 Windows Sockets Net Watch

PRIME PURPOSE..... Host checker.
FILE NAME..... ws_watch.zip
FILE SIZE..... 213,469 bytes
LATEST VERSION..... Alpha 17 March 1995
AVAILABLE FROM..... ftp.usma.edu: /pub/msdos/winsoc.files
STATUS..... May be freely distributed and used, but not sold.
DOCUMENTATION.... Basic startup instructions.
FEATURES..... Lookup, Finger and Whois tools now added. Traceroute and Ping support only if you are using the Microsoft TCP/IP 32 stack.
COMMENTS..... This is a working alpha version of a graphical network monitor for **Windows NT**, **Windows95** and Windows 3.1 with **Win32s**. It is designed to monitor the status of hosts and other equipment connected to a small network by providing a graphical display of the network nodes. It is experimental, still at an early stage of development, but interesting.

14. NFS CLIENTS

Ha! Fooled you! There aren't any true Winsock NFS (Network File System) clients. The current Winsock 1.1 spec apparently doesn't support NFS. Therefore there won't be any until some future time when the spec is updated (a version 2.0 of the Winsock spec is expected later this year) and the new compliant products begin to appear. Best interim solution is to try and find an NFS client specific to your TCP/IP stack. This information on NFS is condensed from a variety of newsgroup postings from People Who Know About These Things. Some good possibilities for some specific systems:

14.1 WINDOWS SOCKETS NFS CLIENT ADD-ON FOR WINDOWS

PRIME PURPOSE..... NFS (Network File System) [DEMO - Function or time crippled]
FILE NAME..... nfs-demo.zip
FILE SIZE..... 421,487
LATEST VERSION..... 3.2 December 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/demo (or mirrors)

STATUS..... Demo trial version. Registered Shareware version \$US 49 per user (\$30 for educational users), with volume discounts and site licenses available.

DOCUMENTATION.... Startup instructions and on-line help.

FEATURES..... Automated installation.

COMMENTS..... Runs over Microsoft Workgroups TCP/IP-32, Trumpet TCP/IP, Novell TCP/IP, TCPOpen TCP/IP, and XLink's TCP/IP. From Xlink Technology Inc. Demo version has warning messages every 20 minutes. For installation purposes the unzipped files must be located either on the main directory level of the C drive or on a diskette. If you put the files in a subdirectory on your hard disk the install program can't find them when you run it and will abort.

14.2 **XFS** (16 bit)

PRIME PURPOSE..... NFS client

FILE NAME..... xfs186.zip

FILE SIZE..... 163,390

LATEST VERSION..... 1.8 September 1994

AVAILABLE FROM..... oak.oakland.edu: /SimTel/msdos/nfs
Lwfws1.uni-paderborn.de: /pub/xfs

STATUS..... Shareware \$US 15 for educational users and \$US 25 for business users. Site licenses also available.

DOCUMENTATION.... Start up documentation

FEATURES.....

COMMENTS..... XFS is a Network File System (NFS) client implementation for PC's running MS-DOS. It works with most recent versions of MS-DOS. It is *compatible with* Trumpet Winsock, but must be loaded first. It may also be used with Microsoft Windows For Workgroups, Microsoft LAN Manager, and Novell Netware IPX & ODI. It does NOT operate over a SLIP connection.

14.3 **XFS32** (32 bit)

PRIME PURPOSE..... NFS client

FILE NAME..... xfs32-11.zip

FILE SIZE..... 101,477

LATEST VERSION..... 1.01 September 1994

AVAILABLE FROM..... oak.oakland.edu: /SimTel/msdos/nfs
Lwfws1.uni-paderborn.de: /pub/xfs

STATUS..... Shareware \$US 15 for educational users and \$US 25 for business users. Site licenses also available.

DOCUMENTATION.... Start up documentation and on-line help

FEATURES.....

COMMENTS..... XFS32 is an NFS client for PC's running MS-DOS, Microsoft Windows For Workgroups (WFW) and Microsoft TCP/IP-32. It does NOT operate over a SLIP connection.

15. NULLSOCK

Opening most Winsock applications offline is not a problem as long as a winsock.dll (such as Trumpet Winsock) is installed in a path directory on that machine. If you attempt to open an application and it cannot find a winsock.dll available for use an error message will usually be generated. There are occasionally times when this is the case, and to overcome the error problem a dummy Winsock or nullsock can be used to fool the program into thinking that a network connection exists.

15.1 **Mozock**
 PRIME PURPOSE..... Nullsock.
 FILE NAME..... mozock.dll
 FILE SIZE..... 5,568 bytes
 LATEST VERSION..... N/A
 AVAILABLE FROM..... ftp.mcom.com: /unsupported/windows
 STATUS..... Unsupported
 DOCUMENTATION.... A brief note, mozock.txt is at the same location.
 FEATURES.....
 COMMENTS..... Rename this file winsock.dll and place it in a path directory.
 Although intended primarily for Netscape it should work with just
 about any Winsock program.

16. PH CLIENTS

Ph clients are used to access CSO nameservers which contain a database primarily used for the storage and retrieval of telephone and email directory information. Huh? Well, in other words, Ph is simply like an electronic phone book. Ph is another protocol similar to Finger. Ph clients are designed to access sites running a CSO server to obtain email addresses. If for example you only had a person's name and location but needed their exact email address, and there was a CSO server at that site, you could query it to obtain the necessary information. The database can also be used to store other general information such as weather data and be used for security purposes to validate users. Ph clients are increasingly being incorporated as components of other Winsock packages such as mail packages and WWW browsers. CSO was the acronym for the University of Illinois Computing Services Office which originally developed this. CCSO = Computer and Communications Services Office, formerly known as just CSO (I guess they got a promotion).

16.1 **IRL CCSO Phone Windows Client**
 PRIME PURPOSE..... CCSO Windows Ph Client
 FILE NAME..... irlphwin.zip or irlph23.zip
 FILE SIZE..... 399,110 bytes
 LATEST VERSION..... Beta 2.3.2 September 1994
 AVAILABLE FROM..... auck.irl.cri.nz: /pub/phone
 STATUS..... Freeware
 DOCUMENTATION.... Startup instructions and on-line help included.
 FEATURES..... Contains both 16 and 32 bit executives, your choice, although for
 the 32 bit version you must have Microsoft's **Win32s** extension
 installed (and the latest version, 1.15a. See the Non-Winsock
 Miscellaneous section below for more info.).
 COMMENTS..... This program by Graeme Campbell.

16.2 **PHWIN**
 PRIME PURPOSE..... CCSO Windows Ph Client
 FILE NAME..... phwin22.zip
 FILE SIZE..... 119,378 bytes If downloading from another location, watch the
 file size. For some strange reason useless fragments about 5k in
 size are found under this file name in many locations and should
 be avoided.
 LATEST VERSION..... beta 2.2 November 1993
 AVAILABLE FROM..... Try: ftp.cac.psu.edu: /pub/access/test
 STATUS..... Freeware
 DOCUMENTATION.... Startup instructions and on-line help included.

These are primarily intended to enable the sending of an output file to a remote network printer through a modem connection.

18.1 CSMLPDW (Computer Software Manufaktur Line Printer Daemon for Windows)

PRIME PURPOSE..... Winsock based line printer daemon [Demo]
FILE NAME..... csmlpdw.exe
FILE SIZE..... 213,290
LATEST VERSION..... 3.0 December 1994
AVAILABLE FROM..... ftp.eunet.co.at: /pub/vendor/csm
STATUS..... Demo trial version.
DOCUMENTATION.... Basic start up instructions and on-line help.
FEATURES..... Automated installation. Supports up to 10 Printer queues on your Windows PC. RFC 1179 compliant. Uses Windows Print Manager.
COMMENTS..... Full functional demo which ends at 50 print requests.

18.2 Windows LPR Spooler

PRIME PURPOSE..... Network printer spooler.
FILE NAME..... wlprs40c.zip
FILE SIZE..... 216,548 bytes
LATEST VERSION..... 4.0c December 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Shareware. 30 day evaluation. Registration cost available by contacting the authors.
DOCUMENTATION.... Start up and usage instructions in postscript (.ps) or text (.asc) files.
FEATURES.....
COMMENTS..... This program allows an application to print to remote network printers, and to check the print queue, etc.

18.3 WinLPR

PRIME PURPOSE..... Network printer.
FILE NAME..... wlpr20.zip
FILE SIZE..... 152,419 bytes
LATEST VERSION..... 2.0c January 1995
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Shareware. Registration cost available by contacting the authors.
DOCUMENTATION.... Start up instructions.
FEATURES.....
COMMENTS.....

See also WinQVT in the MAIL and NEWS section.

19. RCMD, RCP, RSH and TAR

Winsock versions of UNIX functions.

19.1 Windows Socket RCP client

PRIME PURPOSE..... RCP client
FILE NAME..... wrcp091.zip
FILE SIZE..... 55,734

LATEST VERSION..... .91 January 1995
 AVAILABLE FROM..... stoner.eps.mcgill.ca: /pub/windows/winsock
 STATUS..... Freeware.
 DOCUMENTATION.... Basic installation and start up instructions.
 FEATURES.....
 COMMENTS..... Author Steve McCauley.

19.2

WinRSH / WinRSH32 - Remote Shell for Windows

PRIME PURPOSE..... Remote shell for Windows.
 FILE NAME..... wrsh16.zip
 FILE SIZE..... 146,005 bytes
 LATEST VERSION.... 1.6 November 1994
 AVAILABLE FROM.... datacom.ee.ubc.ca: /pub/pc/winsock
 STATUS..... Freeware
 DOCUMENTATION.... Basic start up instructions.
 FEATURES..... Now supports multiple simultaneous sessions. Both 16 and 32 bit execution files are included.
 COMMENTS..... Requires minimum of a 386 PC, and a UNIX host supporting RSH or REXEC daemon. "WinRSH contains a very simple user interface to allow a Windows user to run a program remotely on your UNIX box.....The results of the remote execution are then displayed in a scrollable window." Written by William Cheung.

19.3

Winsock RCMD.DLL

PRIME PURPOSE..... Remote command function.
 FILE NAME..... wrcmdl15.zip
 FILE SIZE..... 67,596
 LATEST VERSION.... 1.5 March 1995
 AVAILABLE FROM.... oak.oakland.edu: /SimTel/win3/winsock
 STATUS..... Shareware \$US 29.95
 DOCUMENTATION.... Startup and usage instructions.
 FEATURES.....
 COMMENTS..... "Winsock RCMD.DLL provides a function similar to the Berkeley Sockets "rcmd" function for Windows Sockets. This provides the ability to initiate UNIX commands from within your Windows program and process any output from that command. Winsock RCMD.DLL is a Dynamic Link Library (DLL) callable from almost any language that allows DLL calls, such as C, C++, or Visual Basic." From Denicomp Systems.

19.4

Winsock RCP.DLL

PRIME PURPOSE..... RCP client
 FILE NAME..... wrcpdl15.zip
 FILE SIZE..... 67,596 bytes
 LATEST VERSION.... 1.5 March 1995
 AVAILABLE FROM.... oak.oakland.edu: /SimTel/win3/winsock
 STATUS..... Shareware \$US 34.95
 DOCUMENTATION.... Startup and usage instructions.
 FEATURES.....
 COMMENTS..... "Winsock RCP.DLL provides a function that allows you transparently copy files to and from remote hosts or between two remote hosts from within your programs, just like the "rcp" command. Winsock RCP.DLL is a Dynamic Link Library (DLL) callable from almost any language that allows DLL calls, such as

C, C++, or Visual Basic." From Denicomp Systems.

19.5

Winsock RCP/RSH

PRIME PURPOSE..... RCP/RSH clients
FILE NAME..... wrcprs15.zip
FILE SIZE..... 119,258 bytes
LATEST VERSION..... 1.5 March 1995
AVAILABLE FROM..... oak.oakland.edu: /SimTel/win3/winsock
STATUS..... Shareware \$US 29.95
DOCUMENTATION.... Startup and usage instructions.
FEATURES.....
COMMENTS..... "Winsock RCP, or Remote Copy, copies files from your Windows PC to a UNIX system, from a UNIX system to your PC, or between two UNIX systems. You can copy individual files or recursively copy entire directory trees. Winsock RSH, or Remote Shell, runs a specified command on the UNIX system. " Requires vbrun300.dll not included. From Denicomp Systems.

19.6

Winsock RSHD

PRIME PURPOSE..... Remote Shell Daemon (server)
FILE NAME..... wrshd15.zip
FILE SIZE..... 190,046 bytes
LATEST VERSION..... 1.5 March 1995
AVAILABLE FROM..... oak.oakland.edu: /SimTel/win3/winsock
STATUS..... Shareware \$US 34.95
DOCUMENTATION.... Startup and usage instructions.
FEATURES..... Security mechanism to allow/deny access for hosts and users.
COMMENTS..... From Denicomp Systems. Requires vbrun300.dll not included. It has been tested on the following TCP/IP stacks: Microsoft 32-Bit TCP/IP for Windows, Wollongong Pathway Access and Novell LAN Workplace for DOS Version 4.2

19.7

WinTAR (Windows Tape Archive)

PRIME PURPOSE..... Network tape drive archiving program.
FILE NAME..... wtar122u.zip
FILE SIZE..... 135,319 October 1994
LATEST VERSION..... 1.22
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
STATUS..... Shareware. Single copy registration \$US 20 or \$CDN 25.
Volume discounts.
DOCUMENTATION.... All instructions included in the on-line help.
FEATURES.....
COMMENTS..... This program uses Winsock to connect through a network to access a tape drive in order to archive files. It can either create or open files and can control the tape drive mechanism. It is not limited to just tape drives, and can also archive to a local hard drive or floppy. Nice colorful toolbar.

20. TELNET

For many users nothing has provided more frustration than the search for a good telnet program (the "Holy Grail"). Fortunately during 1994 some good new ones have appeared. In addition, most of the ones in this listing continue to be worked on and improved by their authors. A unique solution comes from David Yon, whose COMt program provides the usually powerful telnet functions of your commercial communications program with access

to the Internet.

20.1

COMt: the Telnet Modem

PRIME PURPOSE..... Modem telnet interface utility.
FILE NAME..... comt.zip A preliminary beta of the next version is also available at the same location under file name comt105b.zip (22,365 bytes). You must have an existing version already installed in order to use this upgrade.
FILE SIZE..... 115,842 bytes
LATEST VERSION..... 1.04 January 1995 A beta upgrade to version 1.05 is also available at the same location under file name comt105b.zip (22,160 bytes)
AVAILABLE FROM..... ftp.std.com: /customers/software/rfdmail
STATUS..... Shareware \$US 15.95
DOCUMENTATION.... Installation instructions and on-line help included.
FEATURES..... A fairly flexible package: Connect using IP addresses or host names, selectable terminal type options, baud rate options, serial port number etc. etc. Limited support for transparent TCP/IP access to modem pools. Automated installation.
COMMENTS..... According to this program's developer: ". . . solution to under powered Windows Telnet client programs. COMt allows you to use your favorite Windows communications program (i.e., Procomm Plus for Windows, Crosstalk for Windows, etc.) to communicate over TCP/IP. COMt does this by installing itself ahead of the standard Windows COMM driver (comm.drv), and intercepts accesses to the COM ports of your choosing, routing them to TCP/IP. Requests to access other ports are passed on to the original COMM driver, allowing you to continue to use those devices." Or in other words, COMt acts as an interface permitting the terminal emulators in your commercial communications package to access the Internet.

Compatible with Trumpet Winsock. This latest version now works with CompuServe's WinCIM version 1.3, although it will not work with Reflections (HP). It comes from the same company which produces RFD Mail and is deservedly proving to be popular.

20.2

CSMRLW (Computer Software Manufaktur Remote Login for

Windows)
PRIME PURPOSE..... Telnet (terminal emulator) [DEMO - Function or time crippled]
FILE NAME..... csmrlw31.exe
FILE SIZE..... 429,995 bytes
LATEST VERSION..... 3.1 December 1994
AVAILABLE FROM..... ftp.eunet.co.at: /pub/vendor/csm
STATUS..... Demo trial version.
DOCUMENTATION.... On-line help included.
FEATURES..... AT386 / IBM HFT(5151) / IBM 3151 / SCO (Ansi) terminal emulation. Automatic logon, windows cut and paste support, ISO to ASCII conversion. Automated installation.
COMMENTS..... Not tested under Trumpet Winsock, but does run under a wide variety of other stacks including Chameleon. This demo version is fully functional, but has a time limit. From Computer Software Manufaktur GmbH in Austria.

AVAILABLE FROM..... Freeware: ftp.ccs.queensu.ca: /pub/msdos/tcpip
 Shareware: ftp.cica.indiana.edu:
 /pub/pc/win3/winsock (or mirrors)
 STATUS..... Shareware \$US 35.00
 DOCUMENTATION.... Set-up instructions and on-line help
 FEATURES..... Support for IBM 3270 and Tektronix 4010 terminals. Has 1024
 character type ahead buffer and support for about a dozen
 foreign language character translation sets, German, Danish,
 Dutch, French, Swedish etc. Full customized keyboard.
 COMMENTS..... Both the Freeware and enhanced ("extra") Shareware versions
 have been circulated with the same filename, distinguishable
 only by file size (without unzipping). The Freeware version is only
 being supported (bug fixes and minor enhancements) for
 Queens University faculty and students and is up to version 3.2.
 The Shareware "extra" version started at 1.0 and is now up to
 2.1. For the best features get the newer Shareware version
 which is being very actively developed by its author.

20.7

Tektel

PRIME PURPOSE..... Telnet (terminal emulator)
 FILE NAME..... tektel1b.zip
 FILE SIZE..... 56,826 bytes
 LATEST VERSION.... 1b June 1994
 AVAILABLE FROM.... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors)
 STATUS..... Public Domain
 DOCUMENTATION.... Limited, no on-line help
 FEATURES..... Tektronix T4010 terminal emulation.
 COMMENTS..... Written in Visual Basic (requires VBRUN300.DLL, not included,
 but widely available and often bundled with other programs).

20.8

Trumpet Telnet

PRIME PURPOSE..... Telnet (terminal emulator)
 FILE NAME..... ttel0_07.zip
 FILE SIZE..... 29,639
 LATEST VERSION.... .07 alpha September 1994
 AVAILABLE FROM.... ftp.trumpet.com.au: /ftp/pub/beta/trmptel
 STATUS..... Currently copyright Freeware, but eventually Shareware.
 DOCUMENTATION.... None.
 FEATURES..... A basic VT100 now with cut & paste, font control etc.
 COMMENTS..... From Peter Tattam.

20.9

UNIBOL/Desktop Terminal

PRIME PURPOSE..... Telnet (terminal emulator) [DEMO - Function or time crippled]
 FILE NAME..... unitel.zip
 FILE SIZE..... 559,815 bytes
 LATEST VERSION.... 1.3 December 1994
 AVAILABLE FROM.... ftp.unibol.com: /pub/demo
 STATUS..... Demo trial version with an expire date.
 DOCUMENTATION.... Start up and on-line help.
 FEATURES..... VT100/Uniboll100 emulation. Record/playback script capability
 to automate sessions, keyboard re-mapping, dual character set
 support.
 COMMENTS..... Full featured demo from Unibol Ltd. Compatible with a variety of
 stacks including Trumpet. This can be a difficult site to access.

20.10

UW Term

PRIME PURPOSE..... Telnet (terminal emulator)
FILE NAME..... See comments below.
FILE SIZE..... Approximately 20 files, 1,261,000 bytes.
LATEST VERSION..... .97g November 1994
AVAILABLE FROM..... ftpost.cac.washington.edu: /pub/winsock/uwterm_0.97g
STATUS..... Freeware.
DOCUMENTATION.... Good, but no on-line help.
FEATURES..... VT52/VT100/VT200 emulation. Automated installation. Features include: adjustable colors, fonts, save & restore of configurations, auto login. Multiple terminals can be active simultaneously.
COMMENTS..... Available only as a cluster of files in a directory, all of which should be downloaded. Some of the files such as vbrun300.dl_ may create duplicates on your system and can be deleted after installation if you already have an existing equivalent version in a path directory. Slightly customized for intended use at the University of Washington and outside use is not supported by the author. **Note:** according to the author, this program does NOT work properly with Trumpet Winsock 1.0a OR the newer Trumpet 1.0b beta 6. No information on compatibility with more recent Trumpet releases such as 2.0.

20.11

VT-220 for Workgroups

PRIME PURPOSE..... Telnet (terminal emulator)
FILE NAME..... vt220.exe
FILE SIZE..... 552,388 bytes
LATEST VERSION..... 1.5 May 1994
AVAILABLE FROM..... bode.ee.ualberta.ca: /pub/dos/win3/winsock
STATUS..... Demo copy provided for evaluation purposes only.
DOCUMENTATION.... Negligible, no on-line help
FEATURES..... VT52 / VT100 / VT220 terminal emulation. Automated setup.
COMMENTS..... For latest pricing etc., e-mail: sales@dart.com (Dart Communications).

This older program has now been replaced by PowerVT listed elsewhere in this section.

20.12

YAWTEL

PRIME PURPOSE..... Telnet (terminal emulator)
FILE NAME..... yawtel02.zip
FILE SIZE..... 12,024 bytes
LATEST VERSION..... .2 beta July 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors).
STATUS..... No charge for now while being developed.
DOCUMENTATION.... Negligible, no on-line help in this early version.
FEATURES..... A VT100 emulator
COMMENTS..... This package was designed with Mosaic in mind. Use caution since this program is being released for testing purposes and is apparently at a very early stage in development and can be expected to be buggy, but the author will appreciate feedback.

For Telnet see also WinQVT in the Mail and News section.

21. TCP / IP

Things primarily for network groupies. Modem users can fast forward. TCP/IP = Transmission Control Protocol/Internet Protocol. This is the networking standard used by the Internet for the transfer of data packets. It's a standard which essentially allows two computers to talk to each other.

21.1	<u>Internet-Connect</u>
PRIME PURPOSE.....	TCP/IP networking package
FILE NAME.....	inetv21.zip
FILE SIZE.....	954,584 bytes
LATEST VERSION.....	2.1 February 1995
AVAILABLE FROM.....	cais.com: /pub/lvuong
STATUS.....	Evaluation copy.
DOCUMENTATION....	Extensive installation and use information, on-line help.
FEATURES.....	Full support for SLIP/CSLIP/PPP. PPP has client and server modes, userid/password authentication (UPAP), dynamic address assignment, built in DNS support, etc. There is a Windows based dialer with scripting and terminal emulation utility and Windows based automatic installation program. For developers there is Winsock API trace, Winsock developers kit, SLIP and PPP data trace etc.
COMMENTS.....	This very, very full featured package which is intended to provide a powerful platform primarily oriented towards network professionals and developers. Compatible with Novell Netware, Novell Personal Hardware, Microsoft Lan Manager and WFW 3.11.

21.2	<u>Microsoft TCP/IP-32 for Windows For Workgroups 3.11a</u>
PRIME PURPOSE.....	TCP/IP networking package
FILE NAME.....	WFWT32.EXE
FILE SIZE.....	Approximately 678,000 bytes
LATEST VERSION.....	3.11a November 1994
AVAILABLE FROM.....	ftp.microsoft.com: /peropsys/windows/public/tcpip
STATUS.....	No charge.
DOCUMENTATION....	Primitive, but requires little. It installs as a protocol in Network Setup.
FEATURES.....	
COMMENTS.....	Runs only in Windows For Workgroups. For network users. Includes the Microsoft Winsock and a few clients such as Telnet, Ping and FTP. This update has just been released to fix bugs.

22. TELE-CONFERRING: VIDEO AND WHITEBOARDS

22.1	<u>CU-SeeMe</u>
PRIME PURPOSE.....	One way / two way / multiple video(!) conferencing.
FILE NAME.....	cuseeme.zip
FILE SIZE.....	122,054 bytes
LATEST VERSION.....	W.34b4 August 1994
AVAILABLE FROM.....	gated.cornell.edu: /pub/video/PC.CU-SeeMeW0.34b4
STATUS.....	Free.

DOCUMENTATION.... Installation instructions and on-line help included. A Frequently Asked Questions (FAQ) document is also available from the same location under the name CU-SeeMe.FAQ. Further info on reflector sites is available through the WWW from: <http://www.ludvigsen.dhhalden.no/webdoc/video.html>

FEATURES..... 4-bit grayscale video at 160x120 pixels. Audio for the PC not available yet, but being worked on.

COMMENTS..... This was originally created for the Macintosh platform but is now available for both. It is under considerable development effort and this latest release seems considerably more stable than its predecessors. Even if you don't have the capability to send, there are several reflector sites available where you can use this package to sneak a peek. The low data transfer speeds on modem connections are a big problem, but this is nevertheless interesting. Try it! A newer Windows version with audio capabilities is currently undergoing controlled testing.

22.2

Insitu Conference

PRIME PURPOSE..... Document conferencing software

FILE NAME..... iconf10.zip

FILE SIZE..... 1,389,994 bytes

LATEST VERSION.... 1.0 January 1995

AVAILABLE FROM.... ftp.std.com: /vendors/insitu/demo

STATUS..... 30 day demo. Commercial price starting at \$US 269 for a single user with volume price breaks.

DOCUMENTATION.... Start up instructions and on-line help.

FEATURES..... OLE 2.0 compliant. Shared whiteboard allows group editing of any document or image. Integrated voice link (currently one to one only) through Microsoft/Intel TAPI standard. Automated installation. Some features are crippled in this demo version.

COMMENTS..... From Insitu Inc.

22.3

NCSA Audible Collage for Microsoft Windows

PRIME PURPOSE..... Multi-platform collaboration tool.

FILE NAME..... col_12b1.zip

FILE SIZE..... 203,546 bytes

LATEST VERSION.... 1.2 beta 1 December 1993

AVAILABLE FROM.... ftp.cica.indiana.edu: /pub/pc/win3/winsoc (or mirrors)

STATUS..... No mention of any charges.

DOCUMENTATION.... Installation and start up instructions.

FEATURES.....

COMMENTS..... Collage is a whiteboard program which allows users to collaborate and share data across the three supported platforms: X-Windows workstations, Apple Macintosh systems, and Windows systems. "You must have a Macintosh or an X-Windows workstation running a server in order to use the network collaboration capabilities." Interesting.

23. TIME LOGS

If you've just gotten the bill from your Internet provider and you're having serious breathing problems, you might want to look at the programs in this section.

23.1

SLIP db

PRIME PURPOSE..... Connection time and cost log.
 FILE NAME..... slipdb10.zip
 FILE SIZE..... 426,014
 LATEST VERSION..... 1.01 September 1994
 AVAILABLE FROM..... olc.mta.ca: /pub/slip
 ftp.cica.indiana.edu: /pub/pc/win3/winsock
 STATUS..... Shareware \$CDN 30.00
 DOCUMENTATION.... Start up instructions and on-line help.
 FEATURES..... Automated installation. SLIP db records the date and time of each connect and disconnect from your Internet service provider. It calculates elapsed time and figures out a cost based on a per minute charge. The program has a browse mode that lets you see a log of your calls, print a report, and delete records.
 COMMENTS..... A nice all purpose SLIP bean counter. This program is specifically designed to work with a SLIP dialup connection such as is provided by Trumpet Winsock.

23.2 UpTime for Windows 3.1

PRIME PURPOSE..... Connection time log.
 FILE NAME..... uptime.zip
 FILE SIZE..... 3,337
 LATEST VERSION..... 1.0 October 1994
 AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/util (or mirrors)
 STATUS..... Copyright, but no mention of any charges for use.
 DOCUMENTATION.... Basic startup and usage info.
 FEATURES.....
 COMMENTS..... Very simple utility designed to track session logon time. Primarily intended for use with a dialup SLIP connection but not limited to that. Requires that you have the Visual Basic module vbrun300.dll (not included) on your system.

23.3 (NEW) WS-TIMER

PRIME PURPOSE..... Connection time log
 FILE NAME..... wstmr121.zip
 FILE SIZE..... 65,021 bytes
 LATEST VERSION..... 1.21 March 1995
 AVAILABLE FROM..... ftp.sentex.net: /pub/winsock/apps
 STATUS..... Freeware for non-commercial use
 DOCUMENTATION.... Simple instructions
 FEATURES..... Automated installation.
 COMMENTS..... Basic features. My kind of program: easy to install, easy to use, nice digital readout.

See also ModemSta in the Modem Accessories section.

24. TIME SYNCHRONIZERS

Is the clock on your PC always wrong? Too lazy to be bothered resetting it? Here's the solution! These packages can access your local Internet server (and others) and compare their time settings to your PC, and either report the difference or, if you choose, do an automatic update for you. Features and operation vary somewhat from package to package. For most users synchronization with your local server is more than adequate for most purposes. If you have a critical requirement and are not satisfied with the accuracy of your local server, an atomic clock is available for access at location:

does NOT use NTP). This should make the time setting accurate to at least 1 second.

24.4

Windows Time Client

PRIME PURPOSE..... Time synchronizer.
FILE NAME..... wstim101.zip
FILE SIZE..... 86,527
LATEST VERSION..... 1.01 August 1994
AVAILABLE FROM..... sunsite.unc.edu:
/pub/micro/pc-stuff/ms-windows/winsock/apps
ftp.cica.indiana.edu: /pub/pc/win3/winsock
STATUS..... Freeware, all source code included.
DOCUMENTATION.... Startup instructions and on-line help included.
FEATURES..... Last five time servers accessed are added to host menu for easy access. Option to modify local system's time or simply report time
returned from the time server. TCP or UDP connection option.
COMMENTS..... This package can access your local Internet server (and others) and compare your PC to their time settings, and either report the difference or, if you choose, do the automatic update for you. Tested only on Trumpet Winsock, but should work on most stacks. A basic program with very limited features and options. There are better available.

24.5

WinSNTP

PRIME PURPOSE..... Time synchronizer.
FILE NAME..... wsntp15f.zip
FILE SIZE..... 157,926 bytes
LATEST VERSION..... 1.5f November 1994
AVAILABLE FROM..... sunsite.unc.edu:
/pub/micro/pc-stuff/ms-windows/winsock/apps
louie.udel.edu: /pub/ntp
STATUS..... Shareware \$US 25
DOCUMENTATION.... Startup instructions and on-line help included.
FEATURES..... Will operate over a wide range of different network connections from SLIP to high speed local area networks. WinSNTP can periodically poll the NTP server in order to keep the PC clock accurate within a configurable limit. Programmable daylight savings time cut over.
COMMENTS..... This program is an implementation of the Simple Network Time Protocol (SNTP) and is designed to keep a computer clock synchronized to the correct time with a very high degree of accuracy for critical applications. Requires access to an NTP server. A 32 bit **Windows NT** version is under development.

25. WAIS - Wide Area Information Server

The Wide Area Information Server (WAIS) project was initially started by Thinking Machines, Apple Computer, and Dow Jones News Retrieval. It is now being operated by the Clearinghouse for Networked Information Discovery and Retrieval. There are about 300 servers available world wide as part of the network. WAIS is an information search system which has never become very popular. In addition to these specific clients, WAIS searches can also be done through WWW browsers which is perhaps why development

28. WORLD WIDE WEB BROWSERS, etc.

Less than a year ago the only Web browsers available were Cello (feature poor) and Mosaic (buggy rich). Since then we have seen the release of a limited demo version of Air Mosaic and free versions of Netscape, WinWeb and others. Each newcomer has its fans and its critics and none is ideal. We have choices we lacked before and the competition between them will provide a rapid evolution of features. From a user point of view it's kind of like going to an ice cream store and one day finding to your surprise that instead of just vanilla they now have all of these different wonderful flavors to choose from. It may still be ice cream, but *it's different* and *it's better*.

What's the most popular Web browser? If you were to go to a bookstore and read through sections in books devoted to Web browsers you would form the firm conviction that Mosaic is THE Browser to have, an overwhelming favorite on the Internet. Unfortunately, while this was true 6+ months ago when such books were being written, there has been a dramatic change since then. Numerous bugs in Mosaic, long intervals between new versions, and the annoyance of having to install Microsoft's **Win32s** 32 bit extension in order to run any recent versions of Mosaic (on Windows 3.1) combined with the appearance of a variety of competing products has led to its dramatic fall in popularity.

The current most popular Windows browser in use is now Netscape, released by former Mosaic developers. This popularity was noted in Jayfar's survey (<http://www.netaxs.com/~jayfar/sursays.html>) where Netscape was also the most popular Macintosh browser. Although the sample size is small and there is no claim of scientific accuracy, the results do tend to be confirmed by other surveys I've seen. In newsgroup postings, questions, discussions and controversy centered on Netscape have also dominated. Dramatic improvements in recent versions of Mosaic, although very welcome, are unlikely to change the status in the near future.

For something a little different, another browser well worth looking at is the new browser InternetWorks which has been drawing critical attention and praise. Its start up menu is a great way for beginners to jump into the World Wide Web.

28.1

AIR Mosaic

PRIME PURPOSE.....	World Wide Web (WWW) Browser [DEMO - Function or time crippled]
FILE NAME.....	AMOSDEMO.EXE
FILE SIZE.....	1,003,793 bytes
LATEST VERSION....	1.1 October 1994
AVAILABLE FROM....	ftp.spry.com: vendor/spry/demo/AirMosaicDemo
STATUS.....	Demo trial version.
DOCUMENTATION....	On-line help file included.
FEATURES.....	Customized toolbars, pre-configured hot lists, user definable hot lists, full screen kiosk mode, etc. Automated installation looks for an already installed Winsock stack (such as Trumpet). Program includes its own nullsock.dll file for offline viewing.
COMMENTS.....	This is a fully functional demo except for the fact that it will only allow for the viewing of up to 6 external documents. The first release versions had image display flaws but these have now been corrected. Spry has done a good job in reacting to bug problems and posting fixed versions. The uncrippled 16 bit version is available for \$US 29.95. A 32 bit version of this program for that price would be more desirable.

NOTE: This is a licensed commercial version of the NCSA Mosaic browser developed by Spry. This demo is a

regular Windows 3.1 16 bit program. Spry has just been purchased by CompuServe and will contribute to their effort to offer their customers increased Internet access.

28.2

PRIME PURPOSE.....	Cello World Wide Web (WWW) Browser
FILE NAME.....	cello.zip (Watch out for older versions with the same file name - match file size if downloading from other locations)
FILE SIZE.....	328,429 bytes
LATEST VERSION.....	1.01a March 1994
AVAILABLE FROM.....	ftp.law.cornell.edu: /pub/LII/Cello
STATUS.....	No charge for non-commercial use.
DOCUMENTATION....	Installation instructions and on-line help included.
FEATURES.....	
COMMENTS.....	A basic WWW viewer, far easier to run than Mosaic, although it doesn't have many features. What it does have is fewer bugs, and it is far less demanding on your systems resources. Getting quite a bit dated and stale now, a new version has been imminent imminent imminent imminent for some time.....

28.3

PRIME PURPOSE.....	InternetWorks Lite WWW Browser
FILE NAME.....	beta7.exe
FILE SIZE.....	2,239,530 bytes
LATEST VERSION.....	Beta 7 February 1995
AVAILABLE FROM.....	ftp.booklink.com: /lite
STATUS.....	Demo preview version. Full commercial version with working mail, news and yellow pages available for \$US 99 from Booklink (which has just been purchased by America On Line (AOL)).
DOCUMENTATION....	Start up instructions and on-line help.
FEATURES.....	Automated installation. Multitasking support with separate windows created for each activity. No news yet in this version.
COMMENTS.....	The browser's background color (which will be white on most machines) is tied to Windows desktop settings and is not separately adjustable. Similar to Mosaic and Netscape, InternetWorks displays text first, allowing you to begin reading immediately while the graphics are being retrieved. The default pages provided are primarily menu driven and easy to use. The demo version works with SLIP only - there is no PPP support yet. This program is becoming increasingly more impressive with each new release. A good alternative to Netscape.

28.4

PRIME PURPOSE.....	Microsoft Internet Assistant For Word (Word 6.0 extension) HTML editor and WWW browser (Based on the InternetWorks browser from Booklink.)
FILE NAME.....	wordia.exe
FILE SIZE.....	1,094,151
LATEST VERSION.....	beta .96 March 1995
AVAILABLE FROM.....	ftp.microsoft.com: /deskapps/word/winword-public/ia
STATUS.....	Not mentioned, but I believe it will be freely available to licensed users of MS Word.
DOCUMENTATION....	Start-up info and on-line help.
FEATURES.....	
COMMENTS.....	Nearing final release, this is Microsoft's entry into the HTML

document creation market. This template also gives Word capability as a Web browser to access WWW sites. It is fairly basic and represents no threat to other existing major Web browsers. You must have MS Word 6.0 in order to install and use this. A 32 bit version for **Windows NT** will not be available until late this year. Same thing for the Macintosh version. This template provides another example of how Microsoft has succeeded in turning Word into the industry leader in word processing, on or off the Internet. Besides this, there are now at least half a dozen Shareware and Freeware HTML add-on creation templates available for MS Word.

Note: This program will only work with North American versions of Word 6.0a and only on Windows 3.1 at the moment. New beta versions continue to be released. This latest release does appear to solve the memory problems.

28.5

NCSA Mosaic (16 bit)

PRIME PURPOSE.....	World Wide Web (WWW) Browser
FILE NAME.....	wmos20a2.zip
FILE SIZE.....	243,749 bytes
LATEST VERSION.....	2.0 alpha 2 March 1994
AVAILABLE FROM.....	ftp.ncsa.uiuc.edu: /Web/Mosaic/Windows/old
STATUS.....	No charge for non-commercial use.
DOCUMENTATION....	Good
FEATURES.....	
COMMENTS.....	Regular 16 bit version only. This is the final release for a 16 bit Windows 3.1 version. No further development planned for this version. Not compatible with WFW 3.11. See 32 bit version below. NCSA = National Center for Supercomputing Applications. Quite dated now.

28.6

NCSA Mosaic [Windows 3.1 with **Win32s**, or **Windows NT**]

PRIME PURPOSE.....	World Wide Web (WWW) Browser
FILE NAME.....	mos20b2.exe (self extracting)
FILE SIZE.....	1,136,895 bytes
LATEST VERSION.....	2.0 beta 2 March 1995
AVAILABLE FROM.....	ftp.ncsa.uiuc.edu: /Web/Mosaic/Windows
STATUS.....	No charge for non-commercial use.
DOCUMENTATION....	Installation and setup instructions included. On-line help is precisely that, downloaded from the NCSA server as required and thus only available to you when you are logged on.
FEATURES.....	Documents displayed as received. Scrolling down the screen can be done as images are being received. The ini file configuration is now done through the menu - direct editing no longer required. Document caching and new Hotlist Manager added. Inline JPEG support now. Additional right mouse button functions.
COMMENTS.....	After a snoozing through most of last year development of Mosaic has accelerated in recent months with a number of new releases and a significantly improved product. If you have Windows 3.1 or WFW 3.11 then you must first install a special OLE compatible version of Win32s on your system before installing these newer versions of Mosaic. Details on it are in the Miscellaneous Non-Winsock/ Win32s section much further down this listing. Win32s is not required if you have a "true" 32 bit



dumping Mosaic and going over to Netscape - those Netscape people are so thoughtful! These programs are not supported.

New beta versions: Two newer beta test versions are available from:

ftp.mcom.com: /netscape1.1b1/windows

The files are

n16e11b1.exe (16 bit for Windows 3.1 and WFW 3.11, 1,390,739 bytes) n32e11b1.exe (32 bit for **Windows NT** and **Windows95**, 942,971 bytes). The files **expire on March 31/95** and will possibly be replaced with something else by then. The 32 bit version cannot be used with **Win32s**.

There are a number of enhancements in these.

Recommended

28.8

Quarterdeck Mosaic

PRIME PURPOSE..... WWW Browser
FILE NAME..... qmzip2.exe
FILE SIZE..... 936,384
LATEST VERSION..... Beta 2. February 1995 pre-release
AVAILABLE FROM..... <http://www.qdeck.com> There is a registration process of submitting basic information such as your name and email address.
STATUS..... Evaluation copy, expires May 16,1995
DOCUMENTATION.... Complete instructions and online help
FEATURES..... Multiple windows/multithreading. Global history list logs all sites visited during the last number of days (configurable) allowing easy return to an interesting site. Drag and drop file cabinet/hotlist. Gopher and FTP supported, but mail news and telnet have not yet been implemented. Movable toolbar. Automated installation.
COMMENTS..... From Quarterdeck Office Systems Inc., this WWW browser has been completely written from scratch. It is a very impressive first release - good documentation, easy configuration, and an extensive listing of known bugs and features not yet implemented. The default white desktop background is configurable to other colors. Inline image support has not yet been implemented.

28.9

SETMOS

PRIME PURPOSE..... Configuration set up utility for NCSA Mosaic .
FILE NAME..... smosaic.zip
FILE SIZE..... 349,321 bytes The program itself is actually very small, but the zip file does contain the obligatory vbrun300.dll standard visual basic file. You probably have at least half a dozen duplicates of this scattered across your system already if you've installed any number of Shareware packages.
LATEST VERSION..... 1.2 alpha September 1994
AVAILABLE FROM..... <ftp.cica.indiana.edu>: /pub/pc/win3/winsock (or mirrors).
STATUS..... Nothing stated.
DOCUMENTATION.... Negligible.
FEATURES..... Automated installation.
COMMENTS..... This program is designed to simplify the traditionally cumbersome process of configuring the mosaic.ini file with all the necessary viewers and connection info required. The information

which you input into a simple window screen is fed back and used to automatically update the corresponding sections in mosaic.ini. This program is not required with newer versions of Mosaic which have considerably improved the configuration process.

28.10 **SlipKnot** [NOT Winsock - operates on UNIX shell]
PRIME PURPOSE..... WWW Browser
FILE NAME..... slnot100.zip
FILE SIZE..... 1,193,552 bytes
LATEST VERSION..... 1.0 November 1994
AVAILABLE FROM..... oak.oakland.edu: /SimTel/win3/internet
STATUS..... Shareware. \$US 29 for USA, Canada, Japan, Western Europe.
\$US 20 elsewhere. 10% of all fees are donated to refugee relief.
Registered users get some additional features such as Gopher support.
DOCUMENTATION.... Start up information and on-line help.
FEATURES..... Up to 5 different documents can be displayed on the screen
simultaneously. You can ask for the retrieval of many documents,
and these requests will be queued up to be activated one-by-
one. X, Y and Z protocol downloads are all now supported (with
1.07 upgrade). You are allowed to switch between WWW and
your UNIX terminal session (except when downloading
documents). You can choose not to retrieve the pictures
embedded inside documents and speed up the downloading
process significantly. Then, if you change your mind, ask
SlipKnot to get the same document with the pictures.
COMMENTS..... An interesting and innovative program, a WWW browser which
uses Windows, but not Winsock or Slip. It is designed for modem
users with ordinary dial-up UNIX shell accounts. It does require a
386 processor or better and at least 4 meg of RAM. As well,
your service provider must have certain software on the server
(e.g. Lynx, which is quite common). It has not yet been tested on
Windows NT. Released by MicroMind. This is the first release of
a unique and very welcome addition to browser ranks.
NOTE: An interim upgrade to version 1.07 is available
from interport.net in directory /pub/pbrooks/slipknot under file
name snup107.zip (252,610 bytes). It adds support for fill-in
forms, Telnet capabilities. A newer version 1.1 is imminent.

28.11 (NEW) **SuperHighway Access**
PRIME PURPOSE..... WWW browser, Gopher+, WAIS, CSO, basic FTP client.
FILE NAME..... shademo.exe
FILE SIZE..... 1,079,069 bytes
LATEST VERSION..... January 1995
AVAILABLE FROM..... ftp.frontiertech.com: /pub/demo
STATUS..... Demo. **Expires March 31, 1995**. I would expect to see a new
demo with a new expire date by then.
DOCUMENTATION.... Start up information, brief tutorial and on-line help.
FEATURES..... Multi-session (30) capability. Can import Mosaic bookmarks.
COMMENTS..... From Frontier Technologies, this is primarily the WinTapestry
Web portion of their commercial package Super Highway Access
For Windows. This integrated package is designed as a very
easy to use menu driven system. The commercial version adds

FILE NAME..... waxr202b.zip
 FILE SIZE..... 458,584 bytes
 LATEST VERSION.... 2.02 beta January 1995
 AVAILABLE FROM.... terminator.rs.itd.umich.edu: /ldap/wax500/beta
 STATUS..... Copyright.
 DOCUMENTATION.... Startup instructions and on-line help included.
 FEATURES.....
 COMMENTS..... A Mac version is also available from the same site.

29.4

Windows Directory User Agent (WDLUA32)

PRIME PURPOSE..... X.500 DUA (Directory User Agent)
 FILE NAME..... wduainst.exe
 FILE SIZE..... 718,961 bytes
 LATEST VERSION.... Release 2.0B June 1994
 AVAILABLE FROM.... ftp.sunet.se: /pub/x500/windows-dua
 STATUS..... Not stated.
 DOCUMENTATION.... Start up documentation and on-line help.
 FEATURES..... Automated installation. Both 16 and 32 bit versions included.
 COMMENTS.....

-----NON

WINSOCK UTILITIES

Viewers, decoders, modem accessories, etc., these general purpose items are often used in conjunction with Winsock applications and are listed here for convenience.

40. DECODERS - BinHex, MIME, UU, and XX

UU (Unix-to-Unix) encoders/decoders convert 8 bit binary files (which most are, such as zip, exe, com, gif, jpg, and wav files) to 7 bit ASCII text files (or vice versa). And, you ask, why would we want to do that? Well, we don't, but we have to because the Internet forces us to do it. The archaic Internet Mail and News systems were designed to handle only ASCII text format. To send anything else, such as a graphics image, a spreadsheet or a compressed zip file we have to convert these from their natural 8 bit state to 7 bit "text" which can then be mailed or posted. The process will of course have to be reversed at the other end to convert the file back to its natural and usable format. XX, MIME and BinHex are other processes for doing the same thing as UU through their own methods. MIME (Multipurpose Internet Mail Extensions) is a newer Internet standard most frequently used in email programs to send attached documents or programs. It is newer, superior to, and should quickly replace UU in the email area. UU will continue to totally dominate the newsgroups. BinHex is an encoder format for the Mac world. All of these different formats are of course not compatible with each other - silly of you to ask.

40.1

PC BinHex [DOS]

PRIME PURPOSE..... BinHex encoder/decoder
 FILE NAME..... binhex13.zip
 FILE SIZE..... 45,638 bytes
 LATEST VERSION.... 1.3 March 1993
 AVAILABLE FROM.... oak.oakland.edu: /SimTel/msdos/mac
 STATUS..... Not mentioned.
 DOCUMENTATION.... Basic information.
 FEATURES.....
 COMMENTS..... This is from the University of Minnesota. Compatible with the

Macintosh version of BinHex.

40.2 UU [DOS]
PRIME PURPOSE..... UU Decoder.
FILE NAME..... uu33.zip
FILE SIZE..... 31,165 bytes (Unzipped the actual program is only 8,917 bytes
- the rest is all documentation).
LATEST VERSION..... 3.3 November 1994
AVAILABLE FROM..... ftp.io.com: /pub/usr/zboray/coding
STATUS..... Freeware
DOCUMENTATION.... Very extensive.
FEATURES..... This program can be used on as little as an 8086/8088 and down
to DOS 2.0.
COMMENTS..... From author Ben Jos Walbeehm this is one of the best
UUdecoders money can't buy. A very compact and very fast DOS
program capable of sorting through and decoding files
UUencoded by a wide variety of other packages. It is capable of
dealing with some of the variations and glitches sometimes
found. As much as I hate DOS, the ability to go into a directory
where I have downloaded a large number of encoded files and
just type uu *.* and watch it finish spitting out the viewable files
in seconds makes this indispensable. It's great for chomping
through Trumpet News archive folders (.mfl) and decoding and
putting together coded files and pictures which have been
archived from newsgroups.

40.3 UUCODE
PRIME PURPOSE..... UU and XX Encoder/decoder
FILE NAME..... uucod314.zip
FILE SIZE..... 177,030
LATEST VERSION.... 3.1.4 July 1994
AVAILABLE FROM.... Try: ftp.demon.co.uk: /pub/ibmpc/windows/uue
STATUS..... Shareware \$US 10. Manual and latest version add \$US 6.
DOCUMENTATION.... Start up instructions and on-line help.
FEATURES..... Supports UU and XX.
COMMENTS..... UUCODE requires a minimum of a 386 processor. From
Sabasoft Inc.

40.4 UNMACIT (UNSIT and UNHQX)
PRIME PURPOSE..... Mac BinHex (HQX) decoder and file decompression (SIT)
FILE NAME..... unmacit.zip
FILE SIZE..... 64,434 bytes
LATEST VERSION.... N/A
AVAILABLE FROM.... ftp.demon.co.uk: /pub/ibmpc/unmacit
STATUS..... Freeware
DOCUMENTATION.... Introductory comments only.
FEATURES.....
COMMENTS..... A pair of no frills Windows programs for decoding and
decompressing Macintosh formats.

40.5 Wincode
PRIME PURPOSE..... Encoder/decoder.
FILE NAME..... wncode26.zip
FILE SIZE..... 266,083

AVAILABLE FROM.....	Try: risc.ua.edu: /pub/network/netwire/novlib/02
STATUS.....	Shareware \$US 47
DOCUMENTATION....	Extensive, although I really wonder how many people will have the interest to wade through the 200 page manual in addition to several other files (all in MS Word format). Or am I the only one with a short attention span?
FEATURES.....	
COMMENTS.....	Self extracting file. From PKWARE Inc., this is the real thing. Registered version contains several additional utility programs. When using pkunzip it is often a good idea to use the "-d" option, i.e. "pkunzip -d filename.zip". Some zipped files actually contain more than one directory and if just normally unzipped all the files will be mixed together in a common directory. If there are files with the same name they may overwrite each other when being unzipped. The "-d" option will create all the appropriate directories and place the files where they belong.

41.3

WinZip

PRIME PURPOSE.....	File unzipper
FILE NAME.....	wzbeta56.exe and wznt56.exe (for Windows NT)
FILE SIZE.....	294,736 and 307,981 (NT) bytes
LATEST VERSION....	5.6 February 1995
AVAILABLE FROM....	ftp.winzip.com: /winzip
STATUS.....	Shareware \$US 29.
DOCUMENTATION....	Extensive, and includes on-line help.
FEATURES.....	Unique uninstall feature give you a chance to try a program, and then, if desired, it will restore your system to its original state. The uninstall step can selectively remove files, icons, or program groups created by an install program, and can restore any altered INI files. The program will even uninstall itself! A WinZip pull-down menu can be added to the Windows File Manager for quick access. In addition to handling ZIP files, WinZip provides a Windows front end for decompression of LZH and ARJ files when the corresponding dos utilities (such as lha213.exe and arj241.exe) are installed. The new version 5.6 adds the capability to handle Z, TAR and gzip formats.
COMMENTS.....	Some incremental features such as encryption are not built in and are only supported if a copy of pkunzip (DOS) is also installed.

41.4

ZipWhacker for Windows

PRIME PURPOSE.....	File unzipper.
FILE NAME.....	zipwhack.zip
FILE SIZE.....	105,183
LATEST VERSION....	1.0 June 1994
AVAILABLE FROM....	ftp.cica.indiana.edu: /pub/pc/win3/util (or mirrors).
STATUS.....	Shareware \$US 9.95
DOCUMENTATION....	Start up instructions and on-line help.
FEATURES.....	ZIP 2.x and Microsoft Compress (used on distribution disks) file decompression. Unzip all files or single files. View and unzip self-extract zip files.
COMMENTS.....	

42. DECOMPRESSION - OTHER

Although ZIP has become an overwhelming favorite and the standard compression format for the DOS/Windows world, there have been other efforts at introducing alternate compression schemes, including some which are very popular on other platforms such as Unix. These can cause serious heartburn when unexpectedly encountered, unless of course you have the right utility handy. Although not always indicated, many of these have dual compression/decompression capabilities and sometimes optional features like password protection.

42.1 **ARCE** [DOS]
PRIME PURPOSE..... File decompression - ARC files
FILE NAME..... arce.com
FILE SIZE..... 5,223 bytes
LATEST VERSION..... 4.0g April 1991
AVAILABLE FROM..... Try: dorm.rutgers.edu: /pub/DOS_Uncompress
STATUS..... \$US 15 donation to the author suggested.
DOCUMENTATION.... Basic use instructions by typing (in DOS): arce (return).
FEATURES.....
COMMENTS..... Rarely used any more.

42.2 **ARJ** [DOS]
PRIME PURPOSE..... File compression and de-compression - ARJ files.
FILE NAME..... arj241a.exe
FILE SIZE..... 223,856 bytes
LATEST VERSION..... July 1993
AVAILABLE FROM..... Try: ftp.utas.edu.au: /pc/dos/util/archiver
STATUS..... Shareware. No charge for individual use. For commercial, business, government, single license \$US 40.
DOCUMENTATION.... Very extensive with a large user manual.
FEATURES..... Archives can span multiple diskettes - handy for backups, password encryption. Numerous other features.
COMMENTS..... This program provides a good alternative to PKZIP, although it will never achieve the latter's popularity.

42.2 **COMPRESS** [DOS]
PRIME PURPOSE..... File decompression - Z format
FILE NAME..... comp430d.exe
FILE SIZE..... 35,354 bytes
LATEST VERSION..... 4.3d March 1990
AVAILABLE FROM..... Try ftp.utas.edu.au: /pc/dos/util/archiver
STATUS..... No information.
DOCUMENTATION.... Instructions included, self extracting.
FEATURES.....
COMMENTS.....

42.3 **DECOMP** [DOS]
PRIME PURPOSE..... File decompression - Z format
FILE NAME..... decomp2.zip
FILE SIZE..... 17,384 bytes
LATEST VERSION..... March 1990
AVAILABLE FROM..... oak.oakland.edu: /SimTel/msdos/compress
STATUS..... No information.
DOCUMENTATION.... Instructions included.
FEATURES.....

COMMENTS..... Simple command line operation: "decomp file.z newfile.out (return)"

42.3

GZIP (GNU zip) [DOS]

PRIME PURPOSE..... File decompression - Z and gz format

FILE NAME..... gzip124.zip

FILE SIZE..... 116,919

LATEST VERSION..... 1.2.4 August 1993

AVAILABLE FROM..... oak.oakland.edu: /SimTel/msdos/compress

STATUS..... Freeware

DOCUMENTATION.... Some basic documentation included.

FEATURES.....

COMMENTS..... The zip in the name is unfortunate since it really has nothing to do with the well known DOS standard ZIP format. Typical DOS command to decompress a file with this program is: gzip -d filename.z

The original compressed file will not be preserved when this is run. Typical files seen on servers which can be uncompressed with this program might be: filename.Z and filename.gz

42.4

LHA [DOS]

PRIME PURPOSE..... File decompression - LZH files.

FILE NAME..... lharc.exe

FILE SIZE..... 34,283 bytes

LATEST VERSION..... 2.13 July 1991

AVAILABLE FROM..... Try: dorm.rutgers.edu: /pub/DOS_Uncompress

STATUS..... No charge for non-commercial use.

DOCUMENTATION.... Basic use instructions by typing (in DOS): lharc <return>.

FEATURES.....

COMMENTS.....

42.5

ZOO [DOS]

PRIME PURPOSE..... File decompression - ZOO files.

FILE NAME..... zoo.exe

FILE SIZE..... 67,192 bytes

LATEST VERSION..... 2.1 July 1991

AVAILABLE FROM..... Try: dorm.rutgers.edu: /pub/DOS_Uncompress

STATUS..... No information.

DOCUMENTATION.... Basic use instructions are obtained by typing (in DOS): zoo (return) and zoo H (return).

FEATURES.....

COMMENTS.....

43. MODEM ACCESSORIES

In the old days hundreds of years ago modems were primarily external devices. They came in their own boxes encrusted with red and green flashing indicator lights. No one's really sure what the lights were for but it was very reassuring to see them blinking, confirmation that something must be happening. It's reminiscent of that scene from an old Frankenstein movie where the mad scientist is shouting "It's alive!!! It's alive!!!" In those days of old telephone systems, noisy lines and not always reliable service such joys could be the hi-lite of one's day. Today things are different. Modems are primarily internal devices squirreled away in the main computer case, out of sight and out of mind. No

visible lights, no joy in our lives. Fortunately there are high tech solutions to this deplorable state of affairs.

43.1

CCLINK

PRIME PURPOSE..... Modem status lights.
FILE NAME..... cclink.zip
FILE SIZE..... 41,312
LATEST VERSION..... 1.1a October 1994
AVAILABLE FROM..... Available from CompuServe in the Ziffnet/Applications Forum. I do not yet know of a location on the Internet for this.
STATUS..... Shareware \$US 10
DOCUMENTATION.... Start up documentation.
FEATURES..... Monitors both serial and parallel ports. Choice of 3 different LED colors.
COMMENTS..... There are two versions included, a CCLINK and a CCLINKjr. The main version allows inputting of AT commands to the modem and making serial port speed changes. The jr version provides strictly a monitoring function which I personally was more comfortable with. The program is crippled and unregistered versions will operate only for 30 minutes before shutting down.

43.2

ModemSta

PRIME PURPOSE..... Modem status lights.
FILE NAME..... modsta16.zip
FILE SIZE..... 152,198 bytes
LATEST VERSION..... 1.6 February 1995
AVAILABLE FROM..... oak.oakland.edu: /SimTel/win3/commprog
STATUS..... Shareware \$US 15
DOCUMENTATION.... Start up documentation and on-line help.
FEATURES..... Automated installation now. Multiple copies can be run to monitor more than 1 port. Fully adjustable RGB LED colors. Can send initialization string to the modem. On-line help. Incoming log file tracks connect time. Can play a WAV sound file when there is an incoming ring - handy if there's no telephone hooked up such as for a fax mode. Shows com port summary with configuration, UART info etc. for DOS and Windows.
COMMENTS..... Developed by Ted Johansson. For use with internal or external modems on any port. This is a well executed full featured product which is probably the leader in this category. Further information and file download is available on the WWW from:
<http://www-bprc.mps.ohio-state.edu/cgi-bin/hpp?ModemSta.html>

43.3

WinModem

PRIME PURPOSE..... Modem status lights.
FILE NAME..... wnm4.zip
FILE SIZE..... 165,705 bytes
LATEST VERSION..... 4.0 May 1994
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/util (or mirrors).
STATUS..... Shareware \$US 10. Site licenses available.
DOCUMENTATION.... Start up and usage instructions.
FEATURES..... Automated installation. Works with both Windows 3.1 and Windows For Workgroups (WFW) 3.11.
COMMENTS..... WinModem requires a minimum of a 386 PC. Particularly

deteriorates above 9.6 kbps. Compounding the problem is the fact that some of the hardware found in some PC serial ports is also incapable of handling the higher speeds. If incoming data bytes are not processed quickly enough by the PC's hardware and software then newer bytes of incoming data will overwrite previous bytes and result in what's known as com port overrun errors (data loss). This problem increases as the data speed increases. The data loss will be detected and replacement packets retrieved, but this duplicate transmission of data effectively slows the overall transfer down. Keep in mind that the loss of a single byte of data due to an overrun will require the entire packet (consisting of hundreds of bytes) to be sent again.

Software. When 14.4 kbps modems became popular a few years ago, a number of third party serial port drivers were produced to replace the standard (slow) Windows comm.driv to overcome some of the reliability problems being experienced at that speed. Remember that data compression capabilities of modern modems can substantially increase the data transfer speed above the nominal rating of the modem (up to 4 times). Overrun errors are a direct result of data coming in faster than it can be handled. A number of commercial communications software packages such as Winfax Pro also now sometimes include replacement Windows serial com drivers for optional installation. Replacement drivers are of less value if you have a slower modem (e.g. 9600 bps) and are *possibly* not needed if you have Windows For Workgroups (WFW) which installs its own apparently very good com driver.

Hardware. Changing software is not enough - to use these higher speed serial port drivers you must also have the corresponding hardware which is capable of handling higher speeds - a 16550 serial port UART (Universal Asynchronous Receiver/Transmitters) chip. The prime advantages of the 16550 are in its 16 byte FIFO (First-In-First-Out) buffer and its high speed capabilities. The older 8250 and 16450 UARTs only had a 1 byte buffer making them very susceptible to data overruns and errors if that single byte wasn't offloaded quickly enough. Adding to the problem the 8250 is also the slowest of the three, the 16450 slightly faster, the 16550 the fastest.

Internal modems come with their own serial port UART "on board" and fortunately with most better quality 14.4 internal modems this is a 16550 chip. External modems on the other hand do not have built in UARTs and rely upon the existing UART in your system. To find out if you have a 16550 serial port, exit Windows and run the DOS command MSD. Finding an older 8250 UART chip at the com port used by your modem is not good news if you are interested in speeds above 9.6 kbps. If you do not already have a modem then buying an internal one with a 16550 UART will overcome your system deficiencies. The MSD command also provides other useful information about your system. The UART chip simply processes the parallel data flow used internally in your PC to a serial data flow (and vice versa) required externally for transmission.

Windows configuration settings. If you have a 16550 UART and are running Windows 3.1, the following statements should be in the [386Enh] section of your system.ini file which is usually in the \windows directory. These statements activate the incoming data storage buffer on that UART and set the point at which incoming data is removed from this buffer.

COMnFIFO=1 Where n = the port number your modem is connected to. The "1" enables the 16 bit FIFO buffer in the 16550 UART. A "0" value would disable it.

COMnRXSize=8 Again n=port number. This statement sets the interrupt trigger level in the 16 byte FIFO (first in first out) buffer at 8 bytes. When the port fills up with 8 bytes of incoming data an interrupt request will be sent to the

CPU prompting it to offload the data. If for some reason the CPU is tied up on other activities the buffer can fill up with an additional 8 bytes of incoming data to its 16 bytes maximum capacity. If overruns are a problem at this level then the trigger level could be reduced to 4 which would result in a request to the CPU at only 4 bytes leaving a safety buffer of 12 bytes. In an extreme case the level could be set to 1 with a safety buffer of 15 bytes, but this would add to the burden on the CPU forcing it to service the port with every single incoming byte and could affect other activities. This particular statement is only relevant with a replacement com driver such as the Winfax one which supports these adjustable trigger levels. In the CyberCom driver the setting is fixed and you cannot adjust it.

One final note. Even with the right UART and a good com driver, overruns are still possible if your computer's processor (CPU) is momentarily tied up doing other intensive tasks and is unable to offload data in time. The PC speaker driver is notorious for tying up the CPU when being used, and it is possible that some video and disk activities could potentially have a similar impact.

45.1

Cherry Hill VM Com Buffer Driver

PRIME PURPOSE..... Windows replacement serial port communications driver.
 FILE NAME..... chcomb.zip
 FILE SIZE..... 5,981 bytes
 LATEST VERSION..... May 1993
 AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/util (or mirrors).
 STATUS..... Donationware (\$US 10) or Postcardware.
 DOCUMENTATION.... Basic instructions.
 FEATURES.....
 COMMENTS..... Although this is a Windows 3.1 replacement driver it's value is questionable since it is only intended to improve the performance of DOS applications running under Windows. Unzip the file first and then run the self extracting program which produces the actual driver and additional documentation. From Cherry Hill Software.

45.2

CyberCom

PRIME PURPOSE..... Windows replacement serial port communications driver.
 FILE NAME..... cyberc.zip or cyberdrv.zip In spite of different names these have absolutely identical content. The zip files have also been created with different compression ratios which adds to the illusion of two different files which can be found in various locations.
 FILE SIZE..... 8,237 or 7,766 bytes
 LATEST VERSION..... 1.1.0.0P November 1993
 AVAILABLE FROM..... Try ftp.demon.co.uk: /pub/ibmpc/windows/cybercom
 STATUS..... No charge for non-commercial use.
 DOCUMENTATION.... Simple installation instructions. Once installed, usage is transparent.
 FEATURES.....
 COMMENTS..... This is a replacement for the standard Windows driver (comm.drv) and enables data transfers up to 115 kbps if you have a 16550 serial port chip and operate Windows 3.1 in enhanced mode. With 28 kbps modems readily available now, this package from CyberSoft Corporation provides one solution to overcome the limitation of the standard Windows 3.1 driver.



This is a basic package, but both very popular and very effective.

45.3

Fix16550 Device Driver

PRIME PURPOSE..... To fix problems with AMI BIOS and 16550 UARTS
FILE NAME..... fx16550d.zip
FILE SIZE..... 3,915 bytes
LATEST VERSION..... 1.05 November 1993
AVAILABLE FROM..... oak.oakland.edu: /SimTel/msdos/io_util
STATUS..... Shareware \$US 10
DOCUMENTATION.... Basic information and instructions. This is fairly simple to install.
FEATURES.....
COMMENTS..... This device driver was written to overcome a problem which occurred in systems with an AMI BIOS combined with a 16550 UART serial port chip. Under certain circumstances and on some systems a failure may occur after a soft reset when the system becomes unable to recognize the serial com port, necessitating a hard restart to clear up the problem. This driver fixes that problem and should only be installed if you have specifically experienced this. As a secondary feature, this driver also can be installed to enable COM3 and COM4 capability on older systems lacking these ports (mostly older 286 and 386 machines from certain manufacturers).

45.4

WFXCOMM.DRV

PRIME PURPOSE..... Windows replacement serial port communications driver.
FILE NAME..... wfxcom.zip
FILE SIZE..... 7,556
LATEST VERSION..... March 1993
AVAILABLE FROM..... ftp.demon.co.uk: /pub/ibmpc/windows/comms
STATUS..... No charge.
DOCUMENTATION.... Installation instructions.
FEATURES.....
COMMENTS..... A replacement communications port driver to replace the standard Windows 3.1 driver and allow higher speed data transfers if you have the modem. Even though it's top speed capability is only 57,600 bps compared to CyberCom's 115,200 bps, It is preferred over the CyberCom driver for most situations because some of its parameters are adjustable. The CyberCom *might* be a better choice for newer 28,800 bps modems. From Delrina (WinComm Pro and WinFax) this was originally included in WinFax Pro 3.0 for optional installation.

Recommended

46. TELEPHONE DIALERS

Never got that archaic dialing script for Trumpet to work properly? Well at least there are other options. Be forewarned that as good as many of these dialers are they can't always anticipate all of the logon quirks of the various Internet service providers. Be prepared to try more than one package. The good news is that there are some significant improvements being made in some of these.

46.1

Dialer

PRIME PURPOSE..... Telephone dialer
FILE NAME..... dialexe.zip
FILE SIZE..... 31,072 bytes

convenient. I do not recommend using the optional WinG version unless you really need it and have adequate system resources.

47.3

XingIt!

PRIME PURPOSE.....	Moving picture player, MPEG (.mpg) format.
FILE NAME.....	mpegview.zip
FILE SIZE.....	190,672
LATEST VERSION.....	1.0 August 1993
AVAILABLE FROM.....	oak.oakland.edu: /SimTel/msdos/graphics
STATUS.....	Demo
DOCUMENTATION....	Start up instructions and on-line help.
FEATURES.....	
COMMENTS.....	An increasing rarity for those with regular Windows - a 16 bit MPEG player. A DOS MPEG player is also included.

48. VIEWERS - MOVING PICTURE - OTHER

QuickTime is a proprietary format for storing and viewing moving pictures and corresponding sound developed and controlled by Apple Computer. Files can be stored in either an Apple format or a DOS/Windows format (.mov) to enable viewing on either platform. The Windows version must be created as a special "flattened" file and this creation and editing can only be done on Macintosh based software. Once the picture file has been created and saved in the Windows format it can be incorporated into other Windows applications (through OLE embedding in word processing, spreadsheet or presentation documents for example). QuickTime sound cannot be played through the PC speaker - a sound card is required.

AVI is Microsoft's video format (.avi) which competes with Apple's QuickTime. It supports up to full color (24 bit), any screen resolution, 1 to 30 frames per second, and sound. It is primarily viewed through Microsoft's Video For Windows player. It has not proven as popular as QuickTime partially because up until now it has been a single platform system whereas the Apple product has cross platform play capabilities.

FLI/FLC are older Autodesk Animator formats with limited resolution, colors and frame speed. There is no sound.

As the world turns: Apple Computer has recently filed a lawsuit against Intel and Microsoft alleging that Microsoft's video products use pirated code originally developed for QuickTime. The lawsuit originated last year when Apple sued The San Francisco Canyon Company alleging that this company which had originally been hired to help develop Apple's QuickTime products had subsequently used some of the same code in Video For Windows (VFW) products it had sold to Intel which in turn sold them to Microsoft. Apple's lawsuit originally aimed at just Canyon has recently been expanded to include all three companies. As part of the suit Apple is seeking to stop distribution of Microsoft's Video For Windows product. The legal uncertainties may create a serious problem for independent developers working on VFW products. This may further widen the gap between VFW and the more popular QuickTime. Microsoft has issued an open letter to developers declaring that Microsoft will vigorously defend VFW 1.1d (current version) against Apple's lawsuit, and furthermore will defend any developers who might also be sued by Apple for distributing VFW 1.1d.

48.1

AVI Pro

PRIME PURPOSE.....	AVI video player
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STATUS.....
DOCUMENTATION.... On-line help.
FEATURES..... Automated installation.
COMMENTS..... This Video For Windows Runtime file is required to enable the media player included with Windows 3.1 to play AVI files.
NO LONGER AVAILABLE. This item appears to have been pulled from the Microsoft site, probably because of the Apple lawsuit. I don't see a replacement there at the moment.

48.5

VIDVUE

PRIME PURPOSE..... A comprehensive multimedia player.
FILE NAME..... vidvue31.zip
FILE SIZE..... 525,015
LATEST VERSION..... 3.1 September 1994
AVAILABLE FROM..... Try: ftp.fcu.edu.tw: /pub2/PC/uploads/graphic
STATUS..... Shareware \$US 35 for US locations, \$US 45 for non-US locations.
DOCUMENTATION.... Start up documentation and on-line help.
FEATURES..... VIDVUE supports GIF87a/GIF89a, JPG/JIF, BMP/DIB, PCX, TIFF, TGA, DCX, WPG, EPS, PICT and WMF still picture formats. It also plays AVI video, WAV audio, MIDI music, FLI/FLC animation files and Apple QuickTime MOVies.
COMMENTS..... Note that most of the moving picture formats for this program do require additional drivers and software which you must obtain from various sources if you don't happen to already have them on your system. A certain amount of configuration trial and error may also be required. Needless to say, all this is a bit of a nuisance. The program also requires vbrun300.dll which is not included, but which is widely available and if you've installed any number of other Shareware programs you should already have somewhere on your system. Non-USA residents may not be too excited at their stiffer registration cost.

48.6

WinFly

PRIME PURPOSE..... FLI video player.
FILE NAME..... winfli.zip
FILE SIZE..... 21,892 bytes
LATEST VERSION..... 1.0? October 1993
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/desktop (or mirrors)
STATUS..... Shareware, but no charge for this version. Version 3.0, which comes with an improved user interface and hi-res FLC support is \$5.00
DOCUMENTATION.... Basic information.
FEATURES.....
COMMENTS..... A simple one format player.

49. VIEWERS - STILL PICTURE

The standard still image format commonly found on the Internet and supported by all Web browsers is the GIF format (.gif), first created by CompuServe for efficient storage and transfer of images on it's on-line service. The GIF format by definition only supports 256 colors. In-line GIF images on documents are viewable by virtually all Web browsers. The GIF format is popular because of its effective compression of data and partly because it supports transparent background images in HTML documents, although few browsers

currently are actually capable of properly displaying these transparencies. (Many images which appear to have transparent backgrounds are actually pseudos - their backgrounds have been altered to match and completely blend into the browsers background gray colors providing the appearance of transparency).

GIF also supports interlaced images, where the image is both saved and retrieved in four passes. Interlaced images can primarily be seen on CompuServe with their WinCIM software, or on the Internet through the Web browser Netscape which begins to display an image as it is being received (the images on their home page are of the interlaced type). Interlaced images provide a preview of the finished picture and potentially allow time saving termination if the decision is made that the picture is not really wanted. Other browsers such as NCSA Mosaic display an image in its completed form and only after all of the information has been downloaded. By then, even if it was an interlaced image, the effect is not visible.

The JPEG (.jpg) format was created by the Joint Photographic Expert Group. There are several variations of JPEG, the most common of which is more properly called JFIF (JPEG File Interchange Format). JPEG images support full 24 bit color (gazillions of colors) as opposed to the more limited 8 bit (256 color) GIF images. The JPEG image format is popular for posting pictures in Internet binary newsgroups (smaller file size than corresponding GIF image) but is less popular on the Web where GIF is the preferred image format. Web browsers usually require auxiliary JPEG viewers such as these to display these images whereas GIF support is often built in. JPEG images cannot be used as in-line images in HTML documents (only X-bitmaps (.xbm), and Ifs are supported for in-line images). The JPEG format can be extremely compact, easily exceeding a compression factor of ten, but this is accomplished partially by discarding insignificant color detail and for this reason is known as a "lossy" compression method. It exploits the human eye's poor ability to distinguish small changes in color to limit the information being stored and produce a smaller file than could otherwise be obtained. A file stored with this format will no longer exactly match the original, although the difference might be unnoticeable. This format does allow the compression ratio to be adjusted, balancing size versus acceptable image quality.

Both JPEG and GIF are capable of being stored and viewed (with appropriate viewers) in the so called progressive or interlaced methods better known as venetian blind effect. Currently it is very rare for JPEG, but GIF images are commonly seen like this on CompuServe using its WinCIM software and on the Netscape home page when using the Netscape browser.

Enough? If not, see also the section in Other Information titled The Unisys / CompuServe / GIF Mess.

49.1	<u>ACDSee</u>
PRIME PURPOSE.....	JPEG/GIF graphics image viewer.
FILE NAME.....	acdsee122.zip
FILE SIZE.....	182,112 bytes
LATEST VERSION.....	1.22 March 1995
AVAILABLE FROM.....	wuarchive.wustl.edu: /pub/MSDOS_UPLOADS/win_graphics
STATUS.....	Shareware \$US 15
DOCUMENTATION....	Installation instructions and online help. Not much required - this is a very simple program.
FEATURES.....	Begins to display image while decompressing, with your choice of either one line or a block of sixteen lines at a time (JPEG). New version now also supports GIF/PCX/TGA and has resizable

COMMENTS.....

windows, drag and drop, and ability to open a multiple copy of the program for each image. Supports 4DOS file descriptions. OK guys, no more whining about not having a fast Windows JPEG viewer. No fancy features here - this is just a straight forward fast JFIF (JPEG) viewer. I tested it against LView Pro (16 bit) on a 150k file. ACDSsee was able to complete the display in 11 seconds while LView Pro took 40 (both on the same 386 machine). The performance ratio was even better on some of the smaller files I tried. This is not even factoring in the fact that ACDSsee begins to display the image immediately, displaying lines on the screen as they are decompressed whereas LView does not display anything until decompression is complete. Keep in mind of course that LView is feature rich, while ACDSsee is not. It does however allow you to grab oversized JPEG pictures with the mouse and quickly move them around on the screen. This program has just recently been released and is based upon original source code from the DOS viewer Q-Peg. GIF image display is similarly fast. The main menu screen is a bit difficult to like, with control buttons at the bottom of the screen, but the thumbnail image display feature which has recently been added is extremely handy. One negative: this program drops small hidden "descript.ion" files in every directory where it is used to view images. These file description caches are messy and very annoying. This new version provides an option to turn this "feature" off.

Recommended

49.2

LView & LView Pro

PRIME PURPOSE.....
FILE NAME.....
FILE SIZE.....
LATEST VERSION.....

Graphics image viewers
lview31.zip & lviewp1a.zip (both 16 bit software)
224,210 and 304,843 bytes
LView: 3.1 September 1993

LView Pro: 1a January 1995

AVAILABLE FROM.....
STATUS.....

oak.oakland.edu: /SimTel/win3/graphics
LView: Freeware.

DOCUMENTATION....

LView Pro: Shareware, single registration \$US 30 plus shipping. On-line help included. The Pro version on-line help includes some good information on the JPEG format, suitability, compression capabilities, etc. It also contains speed test results comparing the 16 and 32 bit versions of this program.

FEATURES.....

A graphics viewer capable of handling a wide range of popular formats (pro version): BMP/DIB/GIF/JPG/TGA/TIFF/PCX/PBM/PGM/PPM. It now supports interlaced GIF87a and GIF89a variations. The Freeware version is considerably more limited.

COMMENTS.....

LView is a very popular graphics viewer used primarily to view GIF and JPG picture formats commonly found on the Internet. Both versions have many features but are not noted for speed. The most significant advantage of the Pro version is that if you choose to register it you can receive a 32 bit version for either Windows 3.1 (if you have **Win32s** installed) or **Windows NT** systems which should be faster than the 16 bit versions. The author, Leonardo Haddad Loureiro, is very active in continuing to develop this program (the Pro version).



	registration provides latest version, a user manual and some sample JPEG images.
DOCUMENTATION....	On-line help
FEATURES.....	Displays JPEG, TIFF, Targa, GIF, PCX, OS/2 Windows BMP, PPM, and IFF images. Slideshow capability.
COMMENTS.....	This is a 286 processor version only and is very slow. A much faster version for 386+ processors is available upon registration.

50. VIEWERS - SOUND

The popularity of the World Wide Web and the need to install auxiliary sound players to enable Web browsers to play the various sound formats occasionally discovered has significantly increased the interest in these programs. In addition, if you're like me and don't have a sound card then you'll also need to install an additional driver capable of operating your computer's built in speaker, that little extra that Microsoft neglects to include with Windows. It was reportedly not included because of some potential hardware incompatibilities. Anyway, it's also listed in this section. Basic sound formats that you're most likely to run across are:

AU - Sun, NExT, or DEC
 IFF - Amiga
 MAT - Matlab
 SND - Raw or NExT
 WAV - Microsoft Windows standard sound format
 VOC - Sound Blaster
 MCI - Multimedia Command Interface Files
 MID/MIDI - I do not believe that this format can be played with the PC speaker driver.

Some of these formats apparently have a number of not always very compatible variations just to make things more interesting.

50.1	<u>GoldWave</u>
PRIME PURPOSE.....	Sound player, recorder, editor.
FILE NAME.....	gldwav21.zip
FILE SIZE.....	281,697
LATEST VERSION.....	2.11 August 1994
AVAILABLE FROM.....	oak.oakland.edu: /SimTel/win3/sound
STATUS.....	Shareware \$US 25
DOCUMENTATION....	Fairly extensive, and includes on-line help.
FEATURES.....	Supports the following sound formats: WAV, VOC, AU, IFF, SND, MAT. Impressive real time oscilloscope to visually display and edit sounds. GoldWave can enhance or distort sounds using its filter, reverse, invert and echo, etc., capabilities.
COMMENTS.....	This program requires a 32 bit processor - it will not run on a 286 PC. A sound card with driver or a PC speaker driver is also required to play sounds.

50.2	<u>PlayWave</u>
PRIME PURPOSE.....	Sound player
FILE NAME.....	playwv11.zip
FILE SIZE.....	18,737
LATEST VERSION.....	1.1
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/sounds (or mirrors).
STATUS.....	Shareware, voluntary \$US 5 if you really like the program.

DOCUMENTATION.... Start up instructions.
 FEATURES..... Can play a WAV file in a repetitive loop.
 COMMENTS..... PlayWave is a very simple little program meant to do only one thing: be a better WAV player than the Microsoft Sound Recorder. This program has not been widely tested yet.

50.3

PC SPEAKER DRIVER

PRIME PURPOSE..... Driver to operate built in PC speaker.
 FILE NAME..... SPEAK.EXE
 FILE SIZE..... 22,312
 LATEST VERSION.... June 1992
 AVAILABLE FROM.... ftp.microsoft.com: /Softlib/MSLFILES
 STATUS..... Free for personal use.
 DOCUMENTATION.... Installation instructions.
 FEATURES.....
 COMMENTS..... The poor man's "Sound Blaster". It does work adequately, but don't expect any kind of quality sound from that little PC speaker. The .exe file is a self extracting zip file which includes basic installation instructions. Note that the speaker does interrupt other system activities when being used which could cause a problem in some situations - it could potentially cause com port overruns if a file is being downloaded during speaker activation. There is an option in the settings to minimize this problem at the expense of sound quality.

50.4

WHAM (Waveform Hold And Modify)

PRIME PURPOSE..... Sound player.
 FILE NAME..... wham131.zip
 FILE SIZE..... 138,130
 LATEST VERSION.... 1.31 August 1993
 AVAILABLE FROM.... ftp.cica.indiana.edu: /pub/pc/win3/sounds (or mirrors).
 STATUS..... Donations of \$20 welcome.
 DOCUMENTATION.... Start up information and on-line help.
 FEATURES..... Plays AU, AIFF, IFF, VOC, WAV. WHAM can also record sound if you have a sound card. Waveform display.
 COMMENTS..... An older program which is still widely used.

50.5

WPLANY (Windows Play Any File)

PRIME PURPOSE..... Sound player.
 FILE NAME..... wplny11.zip
 FILE SIZE..... 28,788
 LATEST VERSION.... 1.1 September 1994
 AVAILABLE FROM.... ftp.cica.indiana.edu: /pub/pc/win3/sounds (or mirrors).
 STATUS..... Not mentioned.
 DOCUMENTATION.... Minimal. Nothing much required since this is a very simple to setup and use program which operates in the background.
 FEATURES..... Plays AU, IFF, SND, VOC, and WAV sounds.
 COMMENTS..... The proper drivers for your sound card or PC speaker must be loaded prior to using WPLANY. A fairly popular program often used as the sound player for Web browsers such as NCSA Mosaic (optional - not included with that package). A copy of this is included in the WinWeb browser package.

See also VuePrint in the VIEWERS-GRAPHICS-STILL PICTURE section.

51. WIN32S

Standard Windows 3.1 is only a 16 bit operating system in spite of the fact that all PC's starting with the 386 have had 32 bit capability. Abandoning the DOS boat anchor and moving forward into a full 32 bit universe would bring substantial performance benefits. Unable as yet to deliver a new operating system, Microsoft has provided an interim solution, the **Win32s** 32 bit extension. When installed on a Windows 3.1 system it enables that system to run certain 32 bit programs which have been specifically created for **Win32s**. Such programs should run faster, but not as fast or with other features (crash protection) found in true 32 bit systems like **Windows NT** and IBM's OS2/WARP. The most recent version of NCSA Mosaic is the best example of a program written to **Win32s**. It cannot be run on plain Windows 3.1 although an older 16 bit version of Mosaic is still available. Eventually when **Windows95** becomes available the **Win32s** extension will become irrelevant and programs written for it will run on **Windows95**. Until then, if you want to run the 32 bit version of NCSA Mosaic and other such programs you must install this extension [or use **Windows NT**]. The OLE version in particular must be installed for the most recent Mosaic versions.

51.1

Win32s (non-OLE version)

PRIME PURPOSE.....	32 bit enhancement to Windows 3.1
FILE NAME.....	PW1118.EXE
FILE SIZE.....	1,244,633
LATEST VERSION.....	1.20 October 1994
AVAILABLE FROM.....	ftp.microsoft.com: Softlib/MSLFILES
STATUS.....	Distributed free to licensed users of Windows 3.1 or Windows For Workgroups 3.11
DOCUMENTATION....	Minimal
FEATURES.....	
COMMENTS.....	This Microsoft Win32s program adds an extension to Windows 3.1 enabling it to run some of the 32 bit programs which are beginning to appear (such as all recent releases of Mosaic, <i>except</i> the latest alpha 8 version.). As a bonus, there is a free 32 bit game "Freecell". Being able to play the game confirms that this upgrade has been successfully installed. Newer version 1.20 has a simpler automated installation and automatically removes any unnecessary files from previous versions which it finds during installation. A minimum of a 386 processor (32 bit capability) is required. One disadvantage of Win32s is the additional burden it places on a systems resources which can be a problem on lower powered (processor and RAM) machines. Note: If it ever becomes necessary to remove Win32s from your system, the procedure is described in Microsoft document Q120486 dated Sept. 29, 1994 which should be available from ftp.microsoft.com: /developr/win32dk/kb/Q120/4/86.txt. Note: Regarding IBM's new operating system OS/2 Warp and the various versions of Win32s and associated applications: Windows/ Win32s115 - versions 1.0 up to this version 1.15 are supported under Warp Windows/ Win32s115a - not supported under Warp although some applications may still run OK.

other useful sources. Last updated September 1994 89,796 bytes. It is currently available by FTP from:

cap.gwu.edu: /pub/internet/slip-ppp.txt

60.2 WINDOWS AND TCP/IP FOR INTERNET ACCESS

A good explanation of the services available on the Internet by Harry M. Kriz, technical details of connecting a PC to the Internet including an explanation of Winsock, and a review of a number of basic client applications with installation instructions. This includes information on both modem and network based connections. A text version of this complete document, updated December 1994 (57,546 bytes) is available by anonymous ftp from:

nebula.lib.vt.edu: /pub/windows/winsock/wtcpip06.asc

A hypertext version is available at:

<http://learning.lib.vt.edu/wintcpip/wintcpip.html>

60.3 SCIENTIST FRIENDLY MS WINDOWS INTERNET KIT

In an effort to provide an easier introduction to Winsock software clients there have been a few efforts to supply a "bundle" of the major client packages in an easy to install format with detailed instructions. One of these is the SCIENTIST FRIENDLY MS WINDOWS INTERNET KIT. It is available by FTP from:

sol.dmp.csiro.au: /pub/internet/all

There are two files, **internet.exe** (2,181,885 bytes) which contains all of the programs and **install.txt** (12,834 bytes) which has the installation instructions and should be read first. The package currently includes Trumpet Winsock, WINQVT, NCSA Mosaic WWW client, HGOPHER, WinTrumpet news reader, WS_FTP, TRMPTEL terminal emulator, and some miscellaneous accessories like pre-installed Mosaic viewers. These are all Shareware and Freeware packages.

These are all fine programs of their type, but are not necessarily the latest versions. They have been chosen primarily for reliability and ease of installation. Basic Windows and Internet knowledge is required. For anyone just getting started this package is worth considering.

60.4 INTERNET SLIP STARTER KIT

This is a starter kit put together by Jean van Eeden containing Trumpet Winsock, WS_FTP, WSARCHIE, WinTrumpet news reader, HOPCHKW, NCSA Mosaic WWW browser, PINGW, FINGER, EUDORA14 mail, and EWAN terminal emulator. These are all Shareware/Freeware packages with installation instructions included. Again these are not necessarily the latest versions but have been chosen for reliability and ease of installation. A copy of Harry M. Kriz's WINDOWS AND TCP/IP FOR INTERNET ACCESS, listed above, is also conveniently included. This kit is available from:

aztec.co.za: /pub/win3/Slip_Starter_Kit

There are two files to retrieve: **readme** at 5,430 bytes and **starter2.exe** at 1,426,082

bytes.

60.5 WINSLIP COMPLETE

This is a newly created package from George Saunders with the best Winsock Shareware and Freeware applications. There is one program for each application along with an installation program and additional information. Available from:

ftp.netusa.net: /pub/winslip/prophet

There are four files in that directory to be retrieved and the main one, winslip.zip is 5,425,146 bytes. The others are all just a few kbytes. George has selected the best programs available, and plans to update this monthly with the latest versions.

Caution: This is an extremely large file. If retrieving this to your shell account make sure you have adequate disk storage space allocated to you by your service provider.

60.6 HIGHWAY 1.01 (from Centerline Computers)

This is another starter kit similar to the previous two, with the difference that this is Shareware from a commercial company with a registration fee of \$US 15, or \$US 10 for students. User manuals are \$US 12 extra. Included are the following clients: WS_FTP, WS_Gopher, Eudora (mail), WinVN (news), EWAN (telnet), Mosaic Netscape and Trumpet Winsock. Centerline Computers has done an excellent job of creating a smooth installation program and putting this package together. They have chosen fairly recent versions of the clients included, another plus.

For your money you are essentially buying the easy configuration and automated installation - the applications themselves are primarily Freeware and are all readily available on the Internet. I am a bit bothered by the lack of disclosure about this. In the initial announcement Highway 1.01 is described as "an all new Internet connectivity program..." which the installation and configuration utility portion certainly is. But the actual clients are not, and due to a lack of specific information about them I initially misunderstood what was being offered, and assumed that these were "new" as well. This might be annoying to someone who pays connect charges to download this large package only to find that he already has everything it offers, or even more recent versions already installed. Highway 1.01 is available from:

ftp.csos.orst.edu: /ftp/pub/slip/highway/testdrive

There are 3 files: highway1.exe, highway2.exe, and readme.doc for a total of about 2,800,000 bytes.

60.7 WINDOWS INTERNET TOUR GUIDE

Although the bookshelves are now jammed with guides to the Internet, Internet books oriented towards Windows are still extremely rare. This one by Michael Fraase and published by Ventana Press (344 pages) covers installation and use of basic Windows clients such as mail, Gopher, FTP etc. A disk included with the book contains the Chameleon sampler package and there is a special offer at the back of the book for those who decide to move up to the full commercial version. This is a well written and easy to follow book which is selling for about \$US 25.

61.0 ADDITIONAL INFORMATION

One of the friendlier aspects of the Internet is the existence of the Frequently Asked Questions (FAQ) documents which provide not only an invaluable guide for the newcomer but a source of reference information for everyone on a huge range of Internet related topics. Specifically, for those looking for more information about Winsock, the following are available. Unfortunately, these tend to be very technical and not very helpful for beginners. The "Demon" documentation also listed is somewhat more helpful although more oriented towards users in Great Britain. If you're already up and running and in particular you have WWW access, Craig Larsen's List provides the means of obtaining additional software and information and expanding your capabilities.

61.1 Bernard Aboba's "comp.protocols.tcp-ip.ibmpc Frequently Asked Questions (FAQ)"

Very well done, although somewhat technical and oriented towards professionals. This is mostly a TCP/IP FAQ with extensive coverage of currently available TCP/IP networking software, but Winsock is covered in a number of sections. Last update October 1994. Available through:

FTP: ftp.netcom.com /pub/ma/mailcom/IBMTCP/ibmtcp.zip (79,454 bytes)
WWW: http://www.zilker.net/users/internaut/update.html (approx. 219 kbytes)

61.2 Frequently Asked Questions About Windows Sockets Version 1.1

Fairly technical and oriented towards professionals this FAQ has been put together by Mark Towfiq and is available from:

sunsite.unc.edu: /pub/micro/pc-stuff/ms-windows/winsock

The filename is just FAQ.

Last update December 1993. (15,317 bytes)

61.3 "Demon" Documentation

"Demon" is the nickname of a large Internet site located in Britain. Some of the documentation available there is worth a look, although be forewarned that it is sometimes customized with unique Demon references for their users which may not be relevant to others. Most of these documents are regularly updated. The site address is:

ftp.demon.co.uk. Directory/filename/comments:

/pub/doc/os/windows.txt How to set up Windows software for the Internet.
/pub/doc/general/dis-meta.faq Contains references to other documents and books.
/pub/doc/os/winmos.txt Configuration of Mosaic for Windows.
/pub/doc/os/wintcp.txt Advanced configurations for Windows software TCP/IP & dialing.

61.4 WINSOCK APPLICATION FAQ/LIST

This is a regularly updated listing of Winsock applications that are available for FTP. A more broadly based listing than mine, Craig Larsen covers client, daemon and miscellaneous Winsock software with file, source information and comments. The email route will trigger a return email copy of his listing. The WWW access is particularly recommended because it provides capability to retrieve the software being described. Available by either :

Email to: info@LCS.com
Subject: FAQS (put nothing in the letter body)

Through WWW URL: <http://www.LCS.com/faqhtml.html>

61.5

Those with **Windows NT** machines might want to check out the **Windows NT Internet FAQ** by Steve Scoggins and Tom Baltrushaytis available from:

WWW: <http://www.luc.edu/~tbaltru/faq/>

62.0 TRUMPET WINSOCK

The previous release of Trumpet Winsock was 1.0a and it is available under a couple of names from different locations such as:

ftp.demon.co.uk: /pub/ibmpc/winsock/stacks/trumpwsk
tws10a.zip 120,569 bytes

ftp.cica.indiana.edu /pub/pc/win3/winsock
winsock.zip 120,569 bytes

Unfortunately, apparently due to some bugs in this version, the odd Winsock client does not properly work with this version. It has however been around for a while and proven to be fairly durable and widely popular for establishing a SLIP connection. Shareware \$US 25. This version is no longer officially being distributed and has been replaced by version 2.0 which adds PPP connection capability.

The newest version of Trumpet Winsock is 2.0b released in November 1994 and it is available from many locations including:

ftp.trumpet.com.au: /ftp/pub/winsock
tws20b.zip 179,015 bytes

ftp.demon.co.uk: /pub/ibmpc/winsock/stacks/trumpwsk
tws20b.zip 179,015 bytes

This Australian site is the prime release location, but it can sometimes be difficult to access and generally can only handle 20 connections at a time. The biggest advantage of the most recent version is that it now has a functioning PPP capability if your server will support it.

This latest full release contains improvements in stability and operability. Worth noting: addition of PPP support (but no CHAP or LQP yet) and firewall support for SOCKS 4.2 .

This Shareware has a registration cost of \$US 25.00.

An alternative means of obtaining a SLIP / PPP connection is through the Chameleon Sampler listed in the Commercial Demo Packages section or through SLIP emulators such as TIA and TwinSock, discussed further down.

63.0 POPULAR WINSOCK SOURCE LOCATIONS

There are a number of Internet sites which carry a fair amount of Windows/Winsock software including most of the packages listed above (but not always the latest version). These sites can be accessed and the software downloaded through FTP. The most

significant site is CICA, the Center for Innovative Computer Applications:

HOST NAME: ftp.cica.indiana.edu (US)
IP NUMBER: 129.79.26.27
DIRECTORY: /pub/pc/win3/winsock
GOPHER ACCESS: gopher.cica.indiana.edu
WWW URL: http://www.cica.indiana.edu

COMMENT: A major source for Windows software in general, and often difficult to log into because of its popularity. Downloading the various README files is the best place to start to identify what's available and in which directories if interested in other areas.

As well, there are a number of other locations which "mirror" or carry a copy of the CICA directories and files. These are often easier to access than CICA which is frequently busy.

USA Sites:

mrcnext.cso.uiuc.edu [128.174.201.12] (new mirror site in Illinois, updated nightly)
wuarchive.wustl.edu [128.252.135.4] (Missouri)
gatekeeper.dec.com [16.1.0.2]
ftp.cdrom.com [192.153.46.2] (California)
polecat.law.indiana.edu [129.79.131.170]
ftp.marcam.com [198.102.216.30]

Non-USA Sites:

ftp.cc.monash.edu.au [130.194.1.106] (Australia)
nic.funet.fi [128.214.6.100] (Finland)
ftp.uni-paderborn.de [131.234.2.32] (Germany)
ftp.uni-stuttgart.de [129.69.8.13]
ftp.uni-koeln.de [134.95.100.208]
ftp.uni-regensburg.de [132.199.1.17]
ftp.ij.ad.jp [192.244.176.50] (Tokyo)
ftp.nectec.or.th [192.150.251.33] (Thailand)
ftp.technion.ac.il [132.68.1.10] (Israel)
nic.switch.ch [130.59.1.40] (Zurich)
src.doc.ic.ac.uk [146.169.17.5] (London)
ntu.ac.sg [155.69.1.5] (Singapore)
nctuccca.edu.tw [192.83.166.10] (Taiwan)
ftp.cyf-kr.edu.pl [149.156.1.8] (Cracow, Poland)

64.0 SLIP EMULATORS: TIA and TWINSOCK

64.1 TIA - The Internet Adapter (tm)

As stated in my introduction, in order to use Windows packages on the Internet a special "SLIP" connection from an Internet provider is required. Many providers charge extra for this type of connection, and a few do not offer it at all. Recently an alternative has been offered, a commercial software package developed by Cyberspace Development Inc., which operates on a user's Unix shell account and emulates a SLIP account. This innovative product is called TIA, The Internet Adapter, and it has been very controversial.

Major Advantage of TIA:

1. Operates through the basic Unix shell account providing the user with SLIP access without the need to pay surcharges for true SLIP account. It provides access where SLIP

accounts are not available or very expensive. TIA is a very low cost package to purchase. 2. Although there may be some problems setting it up and getting it to work initially, it does appear to work well and has generated strong support from many of its users.

Major Disadvantages of TIA

1. Increases the burden on the provider's server more than a SLIP or straight Unix shell account would, although to what degree is arguable (and is being argued). Although this statement is used by system administrators against TIA, supporters of TIA feel that the real truth lies in the next item.
2. From the provider's point of view, the use of TIA deprives them of the incremental revenue gained from selling SLIP account upgrades.
3. TIA is currently not compatible with some minor Winsock packages such as Ping and CU-SeeMe, nor does it currently support PPP connections (although this is being worked on).
4. To keep costs low, technical support is only available for site licenses, and not individual users, although they do receive bug fixes when issued.
5. Because TIA is not a true SLIP connection, when logging on the user does not receive an IP number and thus it will be impossible to operate a remote server. (A permanent non-functional dummy number is used to satisfy client applications.)

Considerable documentation on TIA, including a FAQ, is available from:

FTP: marketplace.com: /tia/docs

WWW: <http://marketplace.com/0/tia/tiahome.html>

This location is also accessible by gopher. TIA operating software is available from the same location although a license code is required to actually use it. Free evaluation licenses good for 14 days are available. If you then decide to buy, single user licenses are only \$US 25. Host and site licenses are also available. It is suggested that as a first step you should talk to your Internet service provider to get their approval to use TIA.

64.2 TwinSock (Troy's Windows Sockets)

This Freeware program from Troy Rollo is similar to TIA in a number of ways. It creates a pseudo SLIP connection with your UNIX shell account allowing you to run many Winsock programs. You avoid paying the surcharges many services charge for a proper SLIP account. This program is available from:

<ftp.oak.oakland.edu> /SimTel/win3/winsoc/twnsck13.zip (or mirrors).

This version is dated February 1995, 97,138 bytes, and according to the author is more stable than previous versions. One problem as with TIA is that since this is not a true SLIP access you do not have a unique IP number, but in this case are using the host's number. This eliminates the possibility of running a remote server.

Some files must be transferred to your shell account and then compiled there. There are incompatibilities with a number of Winsock applications, but this seems to vary somewhat, and is possibly affected by differences between different service providers. Whatever the reason, although free, it does have more compatibility problems than TIA.

65.0 GROWSTUB ERROR

People using the Microsoft mouse with driver version 9.01 are experiencing a "growstub error" message when booting up Mosaic. The error is apparently caused by a conflict between Microsoft's Win32s 32 bit software extension program and the Microsoft mouse driver. It's just one of those cases where the left hand didn't know what the right hand was

doing. Anyway, the best solution is to upgrade to the version 9.01b mouse driver available by FTP from:

ftp.microsoft.com: /Softlib/MSLFILES/HD1061.exe

This file includes a new pointer.dll which fixes the problem.

An alternate solution is to remove "pointer.exe" from the load= line in the win.ini file and then restart Windows. Disabling the pointer.dll also deactivates the advanced features of the mouse driver: magnify, snap-to, screen wrap and locate. Unfortunately this does not always appear work, especially with the more recent versions of Mosaic.

66.0 EUDORA DOCUMENTATION

Qualcomm Inc's mail package Eudora is one of the better and more popular Internet mail readers currently available. Although the registered version comes with full documentation, the basic free version contains almost nothing. Fortunately, most of the features are fairly intuitive. However, if needed, there are some supplementary manuals available through the Internet.

NEW! A Windows version of the manual is finally available from Qualcomm Inc. by FTP from:

ftp.qualcomm.com: /quest/windows/eudora/documentation/14manual.exe

It's currently 376,851 bytes.

A third party HTML version manual for the PC and Mac versions is accessible through the WWW from:

<http://www.soc.staffs.ac.uk/eudora/contents.html>

Mark Branigan of the Staffordshire University, School of Computing has done an excellent job of setting this up. The text is applicable to both Windows and Mac versions, but the graphics shots are all Windows. The manual covers versions 1.4.2 and 1.4.3b1.

For North American's, there is a mirror site at:

<http://www.csos.orst.edu/slip/highway/docs/eudora/contents.html>

A variation of the previous Staffordshire manual is also available and a new version has just been released. Leopoldo Saggin took an older version of the previous item and revised it, bringing it completely up to date with Eudora version 1.4.4. His version is available through the WWW from:

<http://www.bio.unipd.it/html/eudora/contents.html> (new address!)

A mailing list called eudora-forum can be subscribed to by sending an email message to majordomo@qualcomm.com with "subscribe eudora_forum" in the body (without the quotes!). This is an unmoderated mailing list established to allow Eudora users to communicate with one another.

Eudora Freeware vs Commercial versions. While we're on the subject of Eudora, here's a brief summary of the key incremental features of the registered version of Eudora:

- Direct Unix dialup access (no Slip/PPP required).
- Supports UUencode.
- Technical support and on-line help.
- Return receipt notification
- Message filtering.
- Multiple signatures.

67.0 PENTIUM SERIAL PORT PROBLEMS

There have been the occasional posting from people having strange problems with pentium machines when trying to operate communications software. If you are using a pentium based machine with a 16550 UART chip and Windows For Workgroups installed and you are experiencing problems with the system hanging when using the serial communications port then consult Microsoft Product Support Applications Note "WG1001: Updated serial.386 driver for Windows For Workgroups." which provides a replacement serial driver for WFW. The product note and new driver are available from:

ftp.microsoft.com: /Softlib/MSLFILES/WG1001.EXE

The product note was dated March of 1994 and so the problem is only likely for those running older versions of WFW. Further details in the following Microsoft documents:

DOCUMENT:Q110568 22-NOV-1994 Pentium-Based Machine Hangs with
Communication Applications
DOCUMENT:Q112300 23-NOV -1994 WG1001: Updated SERIAL.386 Driver for WFW

68.0 SLIP vs PPP

The most recent version 2.0 of Trumpet Winsock which was just released has added support for the PPP protocol. As well, Microsoft in announcing its future plans has indicated stronger support for PPP rather than SLIP. These events are generating widespread interest in the PPP protocol. What is it? Why is it better than SLIP? Or is it? There are some unrealistic expectations that it must surely be faster than SLIP to have picked up this support. It is important to begin with the understanding that both SLIP and PPP are protocols for handling the transmission of packetized data through a serial connection between two devices. To answer some of the questions about the differences between the two I have put together a little chart summarizing these.

Compression

SLIP-None originally. Compressed Slip (CSLIP) added later as an option which must be supported by both the client and host. Use of CSLIP requires manual intervention and configuration, although for the same client/host it need only be done once.

PPP-Yes. Automatically negotiated as part of the connection process.

Connection Configuration

SLIP-Manual effort required for IP settings, or separate programs running to configure these (such as in a dialer log-in script). This is mostly a problem with servers using dynamic IP allocation.

PPP-IP configuration part of the connection process and is transparent to the user. PPP software will be more complex than SLIP.

Error Detection

SLIP-None. Slip is vulnerable to noisy lines, although error correcting modems will usually cover for this deficiency and the user will not be affected.

PPP-Built in error detection.

Industry Support

SLIP-

PPP-Although Microsoft out of necessity plans to support both clients in upcoming releases, only a PPP server is being implemented in Windows NT 3.5 (Daytona).

Protocol handling

SLIP-IP only.

PPP-Multi-protocol handling, including IP and IPX

Speed

In the few actual tests reported comparing Slip and PPP, there was no significant difference either way. A PPP frame does contain additional protocol overhead (some for error correction) which might theoretically result in very slightly slower transmission.

Standards

SLIP-A "de facto" standard only. It is not an Internet standard - i.e. not controlled or reviewed by any standards group. In the early 1980's someone used it, and then other people used it and now today many people use it.

PPP-PPP is an official Internet standard protocol.

Transmission circuit

SLIP-Asynchronous lines.

PPP-Asynchronous and synchronous lines

One point to keep in mind is that the connection choice of either SLIP or PPP will have no effect on your Winsock applications. Your current Winsock programs will all function normally no matter which method you use.

80.0 WINDOWS WWW BROWSER COMPARISON - IMAGES

<u>BROWSER & VERSION</u>	<u>Inline Image Internal Support</u>			<u>Supports Interlaced Images (GIF)</u>	<u>Normal Background Colors (RGB)</u>
	<u>GIF87a Normal</u>	<u>GIF89a Transparency</u>	<u>JPEG</u>		
Air Mosaic demo 1.1 Oct/94 yes	yes	no	no	no	Gray 192,192,192
InternetWorks Lite Beta 4 Dec/94	yes	yes	yes	no	White 255,255,255 **
Beta 7 Feb/95	yes	yes	yes	no	Gray 192,192,192
NCSA Mosaic32 2.0a7 Sept/94	yes	no	no	no	Gray 192,192,192
2.0a8 Dec/94	yes	yes	no	no	Gray 192,192,192
2.0b1 Mar/95	yes	yes	yes	no	Gray 192,192,192
Netscape 1.0 Dec/94 yes	yes	yes	yes	yes	Gray 198,198,198

SlipKnot 1.0

1.0 Nov/94 yes no no no Gray 192,192,192

WinWeb

1.0a2.1.1 Oct/94 yes no no no Gray 192,192,192

** Background color is actually default color of Windows desktop - not separately adjustable.

ISSUES

90.0 The Unisys / CompuServe / GIF Mess

A story.

In 1987 CompuServe first introduced the GIF format as an efficient means of storing and downloading graphics files from their on-line service. They continued to develop GIF and although they retained control over the standards they allowed universal free use of the format. In subsequent years independent developers were attracted to GIF and wrote many programs to create and display it. It became widely accepted and was used elsewhere such as on the Internet where it is the prime image format for Web pages and browsers.

Unfortunately, a key component of the GIF format was the Lempel-Ziv-Welch (LZW) compression algorithm which CompuServe had used mistakenly thinking that it was in the public domain. In reality Unisys had applied for, and received a patent on it in 1985, which according to Unisys covers both compression and decompression applications. CompuServe had based GIF development on technical information from a magazine article which had failed to mention the patent. During a 6 year interval Unisys claims they were not aware that LZW was a component of the GIF format and CompuServe claims that they did not know that LZW was patented.

It was not until GIF had essentially become a world wide standard that Unisys contacted CompuServe, with negotiations over the patent issue beginning in January 1993. Some time later, in June of 1994 CompuServe settled with Unisys to avoid being sued, and signed a licensing agreement allowing it to continue using the algorithm in the GIF format on their network, paying an undisclosed sum for that right. Since Unisys had a valid patent and was protecting its property which it had a right to do, CompuServe's options in this matter were limited. The Unisys patent had already apparently been challenged once, and upheld by the US Patent and Trademark Office.

In late December 1994 CompuServe announced that effective almost immediately, under terms of its agreement with Unisys, it would in turn begin issuing sub-licenses and collecting royalties from software developers on the CompuServe network who were using the GIF format in their programs. By promptly obtaining a license from CompuServe developers did not need a further license from Unisys. A subsequent statement issued by Unisys indicated that there would be no attempt to collect back royalties for the years of past use prior to 1995 from any developers since usage had been unintentional (an "all is forgiven" grandfather statement). This licensing and royalty agreement is only enforceable by CompuServe against developers of GIF programs which are primarily used in connection with the CompuServe network.

Developers of GIF software elsewhere (not tied to CompuServe) are not affected. They can however expect to be approached by other on-line networks they are involved with, or Unisys directly. Unisys has clearly indicated that in enforcing its patent rights against CompuServe and associates that it intends to vigorously enforce its patent rights against other users of the LZW algorithm. The patent is both technically important and financially valuable, and has in fact been licensed out to over 100 other companies to date for other non GIF applications.

Unisys has publicly stated that licensing and royalty fees are not required for non-commercial non-profit GIF applications (e.g. Freeware), whether used for on-line services or not. As well, they have clarified the licensing requirement to include only new products or product enhancements introduced beginning 1995. The licensing/royalty does not apply to end users since such users are paying indirectly when they buy a commercial software package or pay registration fees for Shareware. The developers and sellers of such software will be licensed and will pay the appropriate royalties on each copy sold.

Although the royalties payable to CompuServe/Unisys are not significant (typically 1 - 1.5 %) they are an aggravation for developers, as is the bookkeeping and paperwork required to track sales on which royalties are based. For those not being licensed through CompuServe the alternative is a license directly from Unisys where fees are negotiable - and may be better or worse.

It is likely that the GIF format has no future now and will be replaced with a non-proprietary equivalent on the Internet, although there is no obvious candidate at the moment. CompuServe has already announced its intention to work with graphics developers to develop a "free and open" replacement standard to succeed GIF. The new format would be a 24 bit (16 million colors) lossless standard replacing the 8 bit (256 color) GIF. CompuServe has rejected the use of JPEG as an option because it is a lossy standard and this is unacceptable in a number of applications.

End story (?).

91.0 DICS: DOES THE END JUSTIFY THE MEANS?

Today's case study.

One of the more popular mail and news programs in the UK has been DICS (Dialup Internet Connection Services). It is a batch mail and news transporter intended for use with a separate offline reader program. It has many features including MAPI capabilities and a Time client, works well, and has developed an enthusiastic following in that country. DICS officially became Shareware as of October 1994 and has a fairly standard 30 day evaluation period with single user registration starting at UKP 19.95.

In late 1994 allegations were made that the developer of this program had built in a back door to the program unknown to its users and not mentioned in any of the documentation. Specifically it was alleged that the program was sending unauthorized email to the developer of the program, unknown to the users of the program who had installed it on their machines. Furthermore, it was alleged that the developer was also subsequently sending email commands to prompt the program for additional information and that it was responding with more email information back to him. After an initial silence when these allegations were made public in local Demon newsgroups, the program's developer Mark Gibbons publicly responded with the following information (summarized):

When DICS is installed for the first time or upgraded to a new version, the first thing it does is to register itself by email with the developer, supplying basic site information only. This information is fed into a database and tracked for two purposes:

1. The information is useful in providing technical support for users who sometimes neglect to identify or to properly identify the version of the program they have installed and are having problems with. Some problems are very version specific.
2. Most importantly, the database is used as a means of tracking abuses of the Shareware license under which the program is made available. The database is used to identify particular sites which are repeatedly installing newer versions of DICS but never registering them over a cumulative period of time greater than the 30 day evaluation period. In such cases a message is sent to the DICS program at that site, which, if it is still active, will be prompted to return a status report. This communication takes place between the program on the user's machine and the developer without the user's awareness. This response is confirmation that the site is in fact still using the program and is violating the Shareware agreement. In other words, a software piracy has been confirmed. A letter is now sent to the user at that site clearly identifying that the developer is aware that the program is active at the site and requesting that the program be immediately registered and the Shareware fee forwarded. The method by which the information has been obtained is not identified in the letter.

A storm has erupted over the issues raised. There are two areas of concern:

1. All communication between the program and its developer, including the initial installation notification, is done without the user's knowledge. Nothing of this is mentioned in any program documentation. The information has been withheld. Awareness of these capabilities might have allowed a user to decide not to install the program. The stealth which was used to secretly monitor the program's users has left a bad taste.
2. The potential for abuse is enormous since there is nothing to prevent such a program from stealing confidential information including passwords from a user's PC and sending this to outsiders. Can such a program be considered a virus? In this particular case there has been no indication that any such thing has happened. There is nothing to indicate that the developer used the program other than has been stated - to protect his rights from software piracy. The issue is more along the lines that allowing such an undocumented "feature" in a program offers an enormous potential opportunity for abuse from someone unscrupulous and in general ought not to be allowed for this reason. A user has been given no knowledge of this back door and no defense against it if improperly used.

The controversy continues in the UK in local newsgroups. The developer steadfastly maintains that his actions were essential to prevent the piracy of the program. His delay in publicly responding to the initial allegations in the first few weeks has somewhat damaged his credibility. On the other hand some of the critical outrage is being offset by admissions from people that they were in fact illegally using the program.

While insisting that his actions are justifiable and that he has done nothing wrong Mark

Gibbons has agreed to add the necessary information to the program's documentation so that users will at least be informed of what is happening and will have the up front option now of not installing the program if this is unacceptable to them. This should satisfy some of his critics. He has however no intention of making any other changes.

The back door as it currently exists is very limited in capabilities and cannot apparently be used by hackers seeking entry into a system. There is the issue of whether or not what has been done violates any British laws or regulations, and this has not been clearly resolved yet. The service provider, Demon, which makes this program available on their FTP server intends to continue offering it and will remove it only if it is found to be illegal.

Questions

1. Could the developers intent not have been equally well accomplished through the normal nonintrusive methods employed in other Shareware programs without opening this can of worms? These methods have typically consisted of time limit or feature crippling to encourage registration. How far can a developer go to protect his property rights?
2. Would you consider what has been done with DICS to be an acceptable and necessary practice to fight piracy? Would you be in favor of it being implemented by other software companies, including commercial software companies?
3. Knowing what you now know about this program, would you be prepared to install DICS on your PC?

End case study.

92.0 FTP SERV-U: ONCE UPON A TIME IN AMERICA

In January 1995 a new program called FTP Serv-U was released by Rob Beckers. An FTP server/daemon it was well written with good security features and an easy to use interface. It was very well received and was generated some very positive reviews on newsgroups within days. Unfortunately, within days it was revealed that FTP Serv-U also suffered from the dreaded DICS disease - the author had built in undocumented communications capabilities into the program for the purpose of copy protection. Specifically (summarized from the author's explanations):

Whenever started, Serv-U will contact the author's home server and request permission to work. Basic information such as the version number of the program and the requestor's IP number is included with the request. The IP number of the requesting location is automatically logged and subsequent requests checked to see if that location has exceeded the 30 day try out time period. A go or no-go flag is sent back to the requesting location which will either enable or disable the software. Once the software is registered the checks will of course no longer be made. (For backup purposes there is also a hard wired expire date which will terminate the program in October 1995 in the current version. This date will be extended out with new releases.)

The information that the program is sending a message to the author at start up was not documented. When the function was identified and the author questioned about it he was very open and forthcoming. He has apologized to anyone who may have been offended by it and acknowledged that he did not expect such a hostile reaction to this secretive protection method. An interim release, version 1.03 has been quickly distributed to

replace the original release. The new version clearly identifies the method by which the 30 day try out period is enforced. As in the case of DICS, other than changing the documentation the author strongly feels that this is a good method of protecting his property from piracy and has no intention of abandoning it.

As in the case of DICS, the same questions and concerns apply. Since the author has demonstrated the ability to code in an expire date to prevent permanent use of the unregistered version it is again hard to understand why it was (and is) so necessary to also resort to such an intrusive method of property protection.

Addendum: In the current version 1.1 the author offers users the choice of two distinct try out options. You can use this fully functional version for 30 days through contact with and activation from his home server essentially as described above. Alternatively, you can use the existing Shareware version as is without any such contact taking place. In this case the program will be limited to a maximum of one hour online at a time, and an overall maximum of 10 file transfers (5 uploads and 5 downloads). These options are clearly explained in the documentation included with the program.

DAEMONS AND SERVERS

100 FINGER

100.1 (NEW)

PRIME PURPOSE.....	<u>FINGERS</u> [Windows NT] Finger server.
FILE NAME.....	fsi386.zip
FILE SIZE.....	18,922 bytes
LATEST VERSION.....	beta February 1995
AVAILABLE FROM.....	emwac.ed.ac.uk: /pub/fingers
STATUS.....	Freeware, cannot be sold.
DOCUMENTATION....	Start up and use instructions.
COMMENTS.....	This program originates from the European Microsoft Windows NT Academic Centre (EMWAC), located at Edinburgh University Computing Service.

100.2

PRIME PURPOSE.....	<u>Windows Finger Daemon for Windows Sockets</u> Finger daemon
FILE NAME.....	fingd100.zip
FILE SIZE.....	116,031
LATEST VERSION.....	1.0 August 1994
AVAILABLE FROM.....	ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors).
STATUS.....	Public Domain (limited), source code included with program.
DOCUMENTATION....	On-line help with installation and use instructions.
COMMENTS.....	Not supported. Released by Frederick Bent.

See also CFinger in the Finger client section.

101 FTP

101.1

PRIME PURPOSE.....	<u>Serv-U</u> FTP server
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Support for MAPI in a future release. UUencode support only at present, MIME and BinHex in the future. Automated installation. Auto-responder (text/UU/MIME capabilities) and mailing list support. A Win32 version is being worked on and will be available to registered users. A commercial version is also available. From Jack De Winter.

104 MISCELLANEOUS

104.1 CLS-Syslogdaemon [For Windows 3.1, WFW 3.11, **Windows NT**]
PRIME PURPOSE..... Syslog daemon
FILE NAME..... syslogd.zip
FILE SIZE..... 262,784 bytes
LATEST VERSION..... 1.0
AVAILABLE FROM..... ftp.cica.indiana.edu: /pub/pc/win3/winsoc (or mirrors).
STATUS..... Freeware
DOCUMENTATION.... Basic start up instructions.
COMMENTS..... Automated installation.

105 NEWS

105.1 (NEW) NNS [**Windows NT**]
PRIME PURPOSE..... Usenet network news server
FILE NAME..... nns-latest.zip
FILE SIZE..... 532,572 bytes
LATEST VERSION..... X2.05 beta February 1995
AVAILABLE FROM..... ftp.wa.com: /pub/local/ntnews
STATUS..... Freeware.
DOCUMENTATION.... Extensive documentation.
COMMENTS..... Can send and receive articles through either NNTP or UUCP protocols. Formerly known as NetNews. **Windows95** is not currently supported but will be at some future date when the final version ships.

106 TELNET

106.1 Ataman TCP Remopte Logon Services [**Windows NT**]
PRIME PURPOSE..... Telnet server, rlogin and rexec.
FILE NAME..... atrls16i.zip
FILE SIZE..... 172,197 bytes
LATEST VERSION..... 1.6 March 1995
AVAILABLE FROM..... rmii.com: /pub2/ataman/products
STATUS..... Shareware \$US 40 with volume discounts.
DOCUMENTATION....
COMMENTS..... I'm not sure if this supports Winsoc.

106.1 InterAccess Telnetd [**Windows NT**]
PRIME PURPOSE..... Inet daemon and Telnet daemon.
FILE NAME..... interact.exe
FILE SIZE..... 620,474 bytes
LATEST VERSION..... beta 2.3 released February 14,1995.

AVAILABLE FROM..... ftp.ccsi.com: /pub/pragma
 STATUS..... Demo. Expires April 15, 1995.
 DOCUMENTATION.... Installation instructions.
 COMMENTS..... ANSI and VT100 emulation. **Windows95** will be supported in a future release. Released by Pragma Systems Inc.

106.2

Telnet Daemon for Borland Pascal 7

PRIME PURPOSE..... Telnet daemon.
 FILE NAME..... pastel10.zip
 FILE SIZE..... 26,478
 LATEST VERSION.... 1.0
 AVAILABLE FROM.... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors).
 STATUS..... Public Domain.
 DOCUMENTATION.... Introductory comments.
 COMMENTS..... A demo based on Borland Pascal 7 from Mike Caughran. This is not really a finished product, but is more suitable for someone with the capability to put a little work into it.

107 WAIS

107.1 (NEW)

WAISS [Windows NT]

PRIME PURPOSE..... WAIS server
 FILE NAME..... wsi386.zip
 FILE SIZE..... 80,764 bytes
 LATEST VERSION.... beta .3 September 1994
 AVAILABLE FROM.... emwac.ed.ac.uk: /pub/waiss
 STATUS..... Freeware, cannot be sold.
 DOCUMENTATION.... Start up and use instructions.
 COMMENTS..... This program originates from the European Microsoft Windows NT Academic Centre (EMWAC), located at Edinburgh University Computing Service. MIPS and DEC Alpha versions are also available from the same location. In order to use this you also need to retrieve the WAIS Toolkit in directory pub/waistool.

108 WWW

108.1 (NEW)

HTTP Server [Windows NT]

PRIME PURPOSE..... WWW server
 FILE NAME..... hsi386.zip
 FILE SIZE..... 192,905 bytes
 LATEST VERSION.... .96 beta
 AVAILABLE FROM.... emwac.ed.ac.uk: /pub/https
 STATUS..... Freeware, cannot be sold.
 DOCUMENTATION.... Start up and use instructions.
 COMMENTS..... This program originates from the European Microsoft Windows NT Academic Centre (EMWAC), located at Edinburgh University Computing Service. MIPS and DEC Alpha versions are also available from the same location. A professional high end commercial version is planned.

108.2

SerWeb

PRIME PURPOSE..... WWW server.

FILE NAME..... serweb03.zip
FILE SIZE..... 277,504 bytes
LATEST VERSION.... .3 November 1993
AVAILABLE FROM.... ftp.cica.indiana.edu: /pub/pc/win3/winsock (or mirrors).
STATUS..... Free for non commercial use.
DOCUMENTATION.... Basic start up instructions.
COMMENTS..... Can run in the background while other tasks are being performed. Functional, but no longer being developed by its author.

108.3

Windows httpd

PRIME PURPOSE..... WWW Server
FILE NAME..... whttpd.zip
FILE SIZE..... 664,684 bytes
LATEST VERSION.... 1.4a January 1995
AVAILABLE FROM.... http://www.alisa.com/win-httpd/
ftp.alisa.com: /pub/win-httpd
STATUS..... Free for personal and educational use.
DOCUMENTATION.... Start up and operating instructions spread out in a number of text and HTML documents.
COMMENTS..... Support for forms and image mapping. Handles up to 16 simultaneous users. Basic security features. An easy to get up and running package. If unzipping with pkunzip, use the "-d" option to properly create all of the subdirectories. There are some problems with Trumpet 2.0b when running this in full multithreading mode.

108.4 (NEW)

ZBServer [Windows 3.1, WFW 3.11, and **Windows95**]

PRIME PURPOSE..... WWW and Gopher Server
FILE NAME..... zbs.exe
FILE SIZE..... 274,972 bytes
LATEST VERSION.... .09p March 1995
AVAILABLE FROM.... unix1.utm.edu: /pub/zbs
STATUS..... Pre-release version is free with a Shareware version to follow. The Shareware version will have more features. Pricing not yet determined.
DOCUMENTATION....
FEATURES..... Can service up to 10 concurrent requests.
COMMENTS.....

File Name: winter11.doc
Release date: March 27, 1995

Errors and Omissions: Every effort is made to ensure completeness and accuracy of the above information. Corrections are appreciated, and will be incorporated into a subsequent update. This file has been uploaded to the prime sites:

ftp.cica.indiana.edu: /pub/pc/win3/winsock
oak.oakland.edu: /SimTel/win3/winsock

The Winsock Client List may be freely distributed to all mirror FTP sites provided that this is done with the contents unchanged and in its current format (zip file) only. It may be included in authorized SimTel and CICA CD-ROM collections with contents unchanged and in its current format only. All other use, including all other CD-ROM collections,

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