

Windo Watch



SEPTEMBER 1995

Vol 1 No. 7

NEXT

ww

WHAT'S INSIDE

Vol.1 No. 7

September 1995

Editorial

Win95 and OS/2 Warp

Herb Chong

Where is Windows95 in Corporate America

Paul Williamson

Windows Aspect: A Tutorial Part 5

Gregg Hommel

ProComm for Windows Internet Tools

Phil Leonard

Test Driving QModemPro For Windows95

John M. Campbell

Derek Discusses '95

Derek Buchler

Computer Programming Without Spaghetti

Peter Neuendorffer

Idiots-Redux

Bob Miller

Welcome! Robin and Stan...

What is a Winsock?

Robin Mabry

Before You Plunge

Paul Kinnaly

Change of Address: A *Product Review*

John M. Campbell

An Essential Utility for Win95: FDFormat

Frank McGowan

Reflections of a ModemJunkie

Leonard Grossman

Stanley Does Windows

Bob Miller

What is CompuHigh

Stan Kanner

Multi - Alice

Peter Neuendorffer

The Chinese Game of Strategy and Chance

Jerry Laulicht


The Last Word

Ben Schorr

Herb's Computer Art Gallery

Herb Chong

The King Didn't Die - - He Snuck Off !

 The after-shock of the two year OS/2 vs '95 war is over. IBM has abandoned OS/2 to what appears a dwindling corporate market and the rhetoric of its faithful following. The aggressive taunt of OS/2 boosters - "My operating system is better than your operating system" has fallen to the marketing mastery of Microsoft. The language spoken these last months has been arbitrary, combative, and, most important, outside the fiscal reality of the installed base of DOS-Windows computers.

In this issue, Herb Chong and Paul Williamson will each discuss the impact of Windows95. Herb has the skill, knowledge and objectivity to compare each of the operating systems to each other discussing their strengths and weaknesses. Paul will report of what is really happening in Corporate America, the developing systems criteria, and if, among other things, the corporate trend really is toward Windows NT and Windows 95.

Those who fear the scepter of a Windows of all flavors- read Microsoft dominated computer world - have raised their voices too late. The DOS world has become a Microsoft world but like the universe around us, it is merely a single world. The Internet has spawned a renewed interest in Unix. That interest will be short lived if Unix operating systems remain esoteric and archaic. Those among us who have learned to manage our computer affairs quite well within the limitations of DOS will refuse to be a party to the continued foolish and arrogant esoteria of Unix. Those of you who resent the dominance of a Microsoft...stop belly aching and write an operating system for the Internet that is inclusive by keeping the best of Unix and incorporating the best of Windows and System7. Copy the successful Netscape marketing strategy. Make your fortune by creating a viable alternative and give the product away for a few months until it takes off.

As an aside, I find the same people who stridently advocate against government regulation or in their terms, interference and control, are actively lobbying the Fed to curtail the Microsoft web of modestly priced software and services. All of which, simply establishes the lack of faith in open competition - particularly if you've lost your traditional edge in this burgeoning home market.

* * * *

Visit our Homepage

<http://www.channel1.com/users/winwatch/WindoWatch.html>

EDITORIAL

Editor	Lois B. Laulicht
Contributing Editor:	Herb
Chong	
Production Editor	Paul
Kinnaly	
HomePage Editor	Jim Plumb
Associate Editor	Kyle Freeman
Business Manager	Bob Miller
Contributing Writer s:	Derek Buchler, John M. Campbell, Leonard Grossman, Jim Gunn, Gregg Hommel , Stan Kanner, Jerry Laulicht, Phil Leonard, Robin Mabry, Frank McGowan, Peter Neuen- dorffer, Ben Schorr, Paul Williamson

EDITORIAL BOARD

Herb Chong, Gregg Hommel, Lois Laulicht, Paul Williamson.

SUBMISSIONS and REQUESTS

Email using Internet
lois.laulicht@channel1.com
windowatch@ins.infonet.net
winwatch@user1.channel1.com

Editor WindoWatch
Valley Head, WV 26294

Submissions remain the intellectual property of the author. Manuscripts will NOT be returned if not used.

Electronic File Access
[FTP>ftp.channel1.com/pub/WindoWatch](ftp://ftp.channel1.com/pub/WindoWatch)
[FTP>oak.oakland.edu/pub3/win3/winwatch](ftp://oak.oakland.edu/pub3/win3/winwatch)

WindoWatch is found on Channel One in several formats by calling
617-354-3137 (28800) or
617-354-3230 (9600 and 14.400).

We publish in a Windows compatible format and in HTML on our home page.

The DOS format uses ReadRoom (*.TOC) One can also read online from the Reader Room itself - Door 48. Non-members of Channel One can download the latest WindoWatch issue by typing J Free from the main board prompt Annual shareware subscriptions at \$20 per year for electronic delivery of the ASCII or Acrobat edition. Sponsorship and contributions at various levels.

Comments, letters, and requests can be sent to us at various locations. Postlink to Lois Laulicht ->15 tagging the message "receiver only" and on the Internet

lois.laulicht@channel1.com
WindoWatch (c) 1995 all rights reserved,
is the property of
Lois B. Laulicht and CCC of WV
Valley Head, WV 26294

Windows 95 and OS/2 Warp

Copyright 1995 by *Herb Chong*

Windows 95 is now finally with us. Those who planned to upgrade to the newest Windows have done so. Those who wanted to wait and see are waiting and seeing some more. Those still using OS/2 are either gloating at the problems people are having with their Windows 95 upgrades or wondering why they haven't made the leap over to Windows. Somehow, the grass always looks greener on the other side, but not green enough. The press argues once more about the relative merits of Windows 95 and OS/2 and how they perform.

Just what is it about the operating systems wars that make it natural to mention Windows 95 and OS/2 together in the same breath seem so natural? If you believe some of the articles in the press and some of the press releases from Microsoft and IBM, Windows and OS/2 are locked into a battle to the death for control of the PC desktop. This might be true in the minds of some, but frankly there is more imagination in this way of thinking than fact.

Windows in general, Windows 95 in particular, and OS/2, are designed for two different sets of users, for which there is very little overlap. This doesn't stop Microsoft and IBM from marketing and selling their products to the other's sets of users, but so far it's been

mostly a futile exercise for both. The only warring there is to speak of is over the small group of users who sit in the middle ground where both Windows and OS/2 might be an equally good solution for them. This group is much smaller than people like to admit.

Lets look at Windows 95 first. Just what is Windows 95, aside from lots of advertising dollars and marketing hype? What is it and what is it designed to do? Way back in April of '94, Microsoft released something called the Chicago Reviewer's Guide. In it, there are four points that form the basis for much of how Windows 95 is designed:

- Compatibility with existing DOS-based and Windows-based applications
- Compatibility with existing hardware
- Performance equal or better than of Windows 3.1
- Safe, hassle-free upgrade and migration

Given that these are the guiding principles, one can deduce several things about the target market.

1. It's very price sensitive because of the compatibility requirements.
2. It's geared toward people who don't write their own applications.
3. It's skewed toward people who don't have a major investment in hardware
4. It's written for people who are not computer experts and/or don't have an expert support staff.

In a short, it's the consumer and SOHO market!

How does OS/2 fare on these design points? It's compatible with many, but not a large majority of DOS-based and Windows-based applications. Most run fine, some run fitfully, and some not at all. OS/2 is fussy about the hardware it runs on and generally won't work except on well-known or very generic hardware. It demands higher compatibility and supports less variety of systems. Under most conditions, running Windows programs in OS/2 are slower than in native Windows with adequate hardware resources and downright abysmal in minimal configuration. It's meant to be a migration tool so that users can run the Windows applications they still need while moving over to running native OS/2 applications. The install and upgrade process for OS/2 Warp is more cantankerous than Windows and requires much more technical expertise if something goes wrong.

The people OS/2 is targeted for are the people who are not very price sensitive because they are willing to buy compatible hardware to make it work well. They are willing to write their own applications because there are few to choose from. Also, they are either computer experts or have a staff of experts on hand to solve their problems. This is medium and big business.

Although it's hard now to find something documenting OS/2's original design goals, one can infer some of them from reading the IBM's press releases and looking at its design to see what they ended up with. Making these into four points, just to match Microsoft's guidelines for Windows 95, we have:

- **Integrate into the enterprise computing environment**
- **Provide migration environment for Windows users**

- **Provide a protected environment for supporting mission critical computing applications**
- **Provide a multitasking, multithreading, environment for client/server applications**

IBM today essentially still owns the enterprise computing environment. For better or for worse, if anyone enters the enterprise computing market, they have to talk to IBM hardware and IBM software. OS/2 still provides, for desktop operating systems, the most complete and up-to-date support of mainframe and enterprise connectivity. Enough of the major Windows applications run on it to make it a useful migration or compatibility environment for corporations to write their in-house client/server and mission critical applications for OS/2 while still letting them run their Windows productivity applications. For the moment, OS/2's protection is still better than Windows 95's. Corporations care a lot more about that than individuals do.

How does Windows 95 measure up against these criteria? Although Windows 95 provides several LAN support options, it really doesn't support many of the other protocols needed to talk to IBM mainframes without connecting to a helping server. Its migration environment is much better in that it is Windows. For many corporations, the protection that Windows 95 gives to applications is inadequate. An errant application needs to do less to bring down the system, or worse yet, corrupt data without being detected. Finally, because of the Win16 code still remaining in the kernel, Windows 95 can't multitask as well as it needs to so as to prevent lockouts caused by badly coded or designed applications.

Windows 95 and OS/2 are both designed to do different things well, and they do. People who really need to spend time deciding whether to use Windows 95 or OS/2 are people for whom all eight design principles are important. For most people, it is immediately obvious that one set of four are more important than the other set. Marketing people who try to sell their product to the other set of users face an uphill battle because they have to both convince them that the opposite four design principles are not as important and also that their own set of design principles are more important. It's no surprise that OS/2 has had a limited penetration into the home market and that Windows 95, within the corporation, has a role mostly outside that of enterprise computing. It makes no sense to say they battled over the PC desktop because they each were designed for different, and dissimilar, segments of it. It's like comparing a pickup truck with a sports car. They both have four wheels and an engine, but you would never use a sports car for fixing fences on the range, and you wouldn't use a pickup truck in the Daytona 500.

Herb Chong is the Contributing Editor of [WindoWatch](#). His reputation as a careful and knowledgeable programmer carries over to his lucid written presentations. Herb has been a contributing writer for both [Windows Sources](#) as well as the [Cobb Group's Inside Microsoft Windows](#).



Where is Windows95 in Corporate America?

Copyright 1995 by Paul Williamson

Even though Windows 95 made a triumphant debut, many business users won't see it on their desktops at work until the corporate MIS organizations first solve many issues.

This isn't a matter of *why* corporations aren't using Windows 95 as their desktop operating system, but really of question of *when*. A recent survey of corporate MIS managers indicate that approximately 80% of corporations will wait until sometime in the coming year, or later, before more than half the desktops will be using Windows 95. In an *Information Week* survey of 75 Information Managers, the majority of nearly 50% said they prefer to wait and see because they "don't have enough information yet" to make the monumental decision. On the other hand, many large corporations have already begun the move. Dow Chemical, Chevron and Ford are a few that have started the mass installation or will shortly. Others, like Chase Manhattan Bank, haven't completed the data gathering yet, but have committed to the switch.

Before considering installing Windows 95, or any operating system for that matter, a thorough evaluation needs to be completed in several areas. These areas should identify whether or not the operating

system meets the needs of the end user and the business. The investigation needs to focus upon both technical and business issues. It may be necessary to break the corporation into different disciplines to make the decision process easier. This is especially true for large corporations. To start with, you may need to learn some things about these groups -

- What is the technical level of the users? How many *power users* will be available to act as mentors for the groups?
- What hardware is currently being used?
- What software is in use?
- What training resources are available?
- What is their network connectivity requirements?
- Is remote network access to the network needed?

Once these questions have been answered, then the evaluation can begin based on the following criteria:

Technical Criteria

- Ease of use
- System performance
- Security
- Networking Services and Connectivity
- Compatibility: Hardware and Software
- Desktop Support and Administration
- Remote Access

Business Criteria

- **Training**
- **Equipment Needs**
- **Support Costs**
- **Migration Costs**

Technical Criteria and Ease of Use

When evaluating an operating system, you must look at it from both the novice user's and experienced user's perspective. With Windows 95, an additional factor must be taken into account: the comfort level of the user with Windows 3.1. When evaluating this area, the following questions should be considered:

- **Is the operating system easy to learn?**
- **Does the operating system provide the most efficiencies for most of the users?**
- **Is the user's interface discoverable? Does it reveal new efficiencies as the user becomes more proficient?**
- **Does the operating system make it easy for the novice to complete their assigned tasks, while maintaining flexibility for the experienced users to customize and tailor the way they interact?**

System Performance

System performance is measured on how the operating system performs overall while running a set of broad tasks as well as the ability of individual components or sub-systems to perform a narrow set of operations.

There are several suites commercially available which test the ability of the operating system. However, benchmark suites don't necessarily give you the whole picture. Good performance testing requires the use of broad, generally accepted benchmarking suites and programs, but these need to be augmented with sub-system or low-level tests to indicate how well the operating system can support services required by the business applications that will be used. Some of the more common performance tests that should be run, will measure the effectiveness of the file I/O and printing sub-systems. Additionally, desktop operating systems need to be tested in networked environments to measure the network load and I/O throughput, as well as the responsiveness for server functionality, if necessary.

Performance measuring tests need to run on a variety of hardware configurations to best determine what the minimum acceptable configuration will be. Also, the results of the tests should be able to provide guidelines in developing the "standard" desktop configuration and indicate the necessary additions for the more experienced and/or more demanding users. During the performance evaluation, consider the following:

- **Does the operating system perform well on a wide variety of configurations that are likely to be used in your environment?**
- **How well does the operating system complete a benchmark test on a given configuration?**
- **How well does the system perform when connected to a network?**

Security

The need to protect corporate resources from unauthorized access ranks pretty high in most organizations. During the evaluation of the operating system, a decision on the level of security required may immediately eliminate some operating systems from contention. Most organizations should find the security built into Windows 95 to be more than adequate. For those situations where a higher level of security is needed, such as Class C2 as authored by the United States Department of Defense (DOD), then Windows NT may be the operating system of choice.

As you evaluate the operating system protection and security aspects, consider these questions:

- How well can a PC's data be secured against those with physical access to the machine?
- How well are server-based resources protected by the desktop operating system's security integration with the network?
- How well are locally shared resources secured on the network?
- Is there the capability to record both PC and network events to allow administrators to perform security audits and trace security breaches?

Networking Services and Connectivity

In most corporate environments, it is extremely important for an operating system to be able to provide network support for a broad range of clients. If the operating system can support connectivity in a heterogeneous environment, it will be distinguished from all the

others. Corporate user's not only demand support for internetworking capability, but require that the operating system support industry-wide standards to prevent reliance upon a single vendor to support a multi-vendor environment. While evaluating the networking capabilities, you should consider these questions:

- Is the operating system an open and layered networking architecture that will allow you to mix components from different sources at each layer?
- Does the operating system have built-in, native support for your networks?
- Does the operating system support a wide range of transports and protocols? Even more than you are currently using, to provide for future growth and expansion?
- Does the operating system provide a common, easy to use and consistent user interface for accessing the network and networking services and resources?
- Does the operating system support an open architecture to allow third party and other NOS vendors to easily integrate and add networking connectivity enhancements and/or application support?

Compatibility: Hardware and Software

Many organizations have invested large amounts of money in their applications, desktop systems, printers, modems, and other peripheral hardware. When you need to replace your existing operating system, a key question that needs to be answered in, "Can my company continue to use our existing applications and hardware?" Also, as the company grows, so will the hardware and software needs. The choice

of an operating system should not restrict the anticipated growth with limited driver support. It must provide the capability to add new hardware to the existing environment.

When examining device support of an operating system, consider the number of devices supported, the industry standards that the operating system supports, and the compatibility for using existing device drivers shipped with earlier operating systems or with devices themselves.

As you evaluate the device and application support in an operating system, consider these questions:

- **Does the operating system provide broad device support for existing hardware and associated MS-DOS- and Windows-based device drivers in use today?**
- **Does the operating system easily recognize, install, and configure devices?**
- **Does the operating system support running existing MS-DOS- or Windows-based applications as well as MS-DOS 6.x or Windows 3.1?**
- **Does the operating system allow easy exchange information between applications or support advanced inter-application communication mechanisms?**
- **Does the operating system provide services for new types of applications such as, multimedia, remote access, and communications-related applications?**

Desktop Support and Administration

Medium and large businesses invest tens of thousands of dollars each year, not only on the hardware and software for new and existing computer systems, but also for system setup and administration. So far, there is little consistency and almost no integration among available tools for managing and administering PCs in a networked environment.

Standards organizations are now working to simplify the management scenario by developing standard ways for managing PCs. These standards will mean better and more integrated management tools for the network administrator. To reap any benefits, however, an administrator must choose an operating system that supports management mechanisms adhering to existing standards or one with an infrastructure designed for adaptability to a new standard.

As you examine the support for manageability or administration of a desktop operating system, consider these questions:

- **Does the operating system provide the tools and platform infrastructure for supporting existing industry standard management mechanisms such as SNMP, and provide the flexibility for supporting future standards such as DMI?**
- **Does the operating system provide tools and mechanisms for MIS organizations and administrators to customize and control the functionality and capabilities on the desktop?**
- **Does the operating system provide support for administering or managing the desktop PC remotely over a network?**

Remote Access

To realize seamless mobility, you must be able to easily communicate and remain productive, whether you are in the office, at a customer site, or at home. You must be able to communicate with coworkers and clients regardless of their location, and your transitions between home computer, portable computer and office computer must not interrupt your workflow. Support for mobility services as part of the operating system ensures tight integration and connectivity between portable computer and desktop PCs, allowing minimal interruption from real work as you switch from one location and/or computer to another.

As you evaluate the operating system support for mobile services, consider these questions:

- **Does the operating system support remote access to the key services or information you need on your corporate network?**
- **Does the operating system have robust support for the dynamic nature of mobile hardware, such as PCMCIA, power management, and docking stations?**

Business Criteria (Cost and Requirements)

- **Training requirements**
- **Equipment requirements**
- **Anticipated support cost**
- **Migration cost**

Training

End-user training and support training help ensure effective use of any product. A product's features and intuitiveness, however, can determine what and how much training is necessary.

As you evaluate an operating system's training requirements, consider these questions:

- **Does the operating system present any new features that may be difficult to use or support?**
- **Does the operating system offer on-line help to provide answers to common questions?**
- **Does the operating system offer tools that will help your support staff resolve end-user issues?**
- **What changes will be evident, but not intuitive?**

Equipment Requirements

Stated system requirements are usually the minimum supported environment, which will normally not meet the needs of most large businesses. As you evaluate operating system equipment requirements, consider these questions:

- **What are the recommended minimum system requirements?**
- **What is your current configuration of desktop or laptop systems?**
- **Can the systems be upgraded?**

Support Costs

Support costs related to a operating system are often a byproduct of training—or the lack of it. Adequate training costs money, but it can diminish support costs.

As you evaluate anticipated operating system support, consider these questions:

- **Does the operating system present any new features that may be difficult to support?**
- **Does the operating system offer tools that will help support staff resolve end-user issues?**
- **Are advanced documentation or support tools available to reduce problem research time?**

Migration Costs

Migration costs usually involve upgrading current equipment and installing the new software. In large organizations, these cost can be significant. It has been estimated that upgrading some of today's desktop system to meet the needs of the user and support Windows 95 may run as high as \$700 per PC. However, the Gartner Group has suggested that these migration costs should be recoverable within a year due to lower support costs.

As you evaluate the migration cost of an operating system, consider these questions:

- **Does the operating system lend itself to an automated installation procedure?**
- **What is the cost to upgrade the current standard machines to the operating system requirements?**

- What is the cost of the products?
- If manual installation is necessary, how long does it take?

The close ties between Windows 95 and Windows NT may cause some companies not to consider Windows 95 at all, but wait until the next major version of NT and install the NT Workstation. They also may decide to employ a test group scenario of Windows 95 users and see what develops. Whatever the corporation decides, it is inevitable that the desktop user will eventually be using Windows 95 or Windows NT. The IS managers today, have their jobs cut out for them in evaluating these two operating systems and planning for the implementation of one or the other or both. The decision isn't whether or not to move on to a new operating system, the decision is when can we move on and what will it take to get us there.

Paul Williamson in an on-site consultant for Chase Manhattan Bank. He serves on the Editorial Board of *WindoWatch* and is a regular contributor. Paul is a well known DOS and Windows expert and can be found on a variety of networks. He can be reached at 72611,1543@compuserve.com or Paul_Wmson@msn.com

Window Aspect: A Scripting Language**A Tutorial: Part Six Ghost BBS v3.20****© 1995 by *Gregg Hommel***

I want to digress in this column from our discussions on using an INI file, to that of a problem that I ran into recently with GHOST BBS 3.21 alpha. The actual problem and it's solution are not the point, but how I discovered what the problem was and what represented its solution, I think you will find interesting . The point of the discussion rests in the *theory and practice* that were used to uncover the problem, and then fix it. It is this information that can be quite valuable to you when scripting, and, in my opinion, makes this column worthwhile....

I had modified some code in GHOST BBS as I'm working on 3.21 alpha, to improve the functioning and speed of opening and closing DOS doors. My original GHOST BBS 3.10/3.20 code had several pauses placed in it, to allow the modem time to get set, or so I thought. I wanted to test that theory, and lower or eliminate, those pauses to make opening and closing a door faster.

At first, it appeared that no pauses at all were needed. I had eliminated them, and GHOST opened and closed the DOS doors on my system without any problems, - until I threw Adaptive Answer and fax into the mix!

You see, before I released GHOST 3.20, I had never actually tested GHOST'S use with Adaptive Answer enabled for incoming fax calls myself. I couldn't because I didn't have a fax modem. My venerable old ZOOM 9600 Turbo was doing just fine, and in truth, I didn't want to have a fax on my computer. But my GHOST beta sites wanted Adaptive Answer, so I wrote the code, without testing it myself, and let them do it for me. Never will I do that again! Even so, Adaptive Answer support didn't turn out to be all that complicated, and eventually, we got it working.

The GHOST 3.20 users along with beta sites were asking if I planned on adding fax back functionality to GHOST 3.20! No way was I going to write such code without a fax modem. In the shareware world one simply can't ignore the *vox populi*. The obvious solution was the purchase of a fax modem that supported Adaptive Answer to test GHOST current and future features .. and so I did <sigh>.

It turned out that DOS doors appeared to function perfectly without any PAUSE commands in the code, when Adaptive Answer was not functioning. However, the same could not be said of the doors when it was enabled. Their operation became inconsistent, and unreliable which sent me looking for the cause....

I noticed that when I opened a door from a remote site, with Adaptive Answer enabled, I never saw when Adaptive Answer was disabled. I kept seeing, on the remote screen, a string that that made me certain that GHOST was not sending. The string *ATS0=0*, which, if you know Hayes modem commands, is one that turns off autoanswer in the modem.

This really confused me, as I knew that in my PCP/Win set up, that string location was empty, i.e. there was nothing stored there, that GHOST was *not* sending the string, and finally, PCP/Win 2.xx does not use the *S0* register to control autoanswer, the string I was seeing was completely useless.

However, I do know enough about modems to know that if you send such a string to the modem, while carrier is high, i.e. while on-line, whatever comm application you are using is going to see the drop in carrier that sending the string will cause. The communications applications will decide that you have gone off-line. Indeed, in order to avoid just such a situation in GHOST, when the modem port is switched back to your *real* port after a door is opened, GHOST sets the modem initialization string to null, and uses it's own internal strings whenever the modem needs to be initialized.

When this string appeared on the remote screen, it was not too terribly difficult to determine that it came *after* GHOST had switched the current modem port to NONE. The logic here is that if the string came before that, the modem port would still be the active one, and there would be a carrier drop, which GHOST would notice, and handle as if the user had logged off. Ergo, the string had to be sent after GHOST had changed the comm port to NONE. This made me suspect that it had something to do with that switch, and the fact that the modem port was not changed from the *real* port, and still *saw* autoanswer as being on.

If this *ATS0=0* string appeared on my remote screen before the door had actually opened, i.e. while GHOST was dropping to DOS and running the BAT file to start the door, there was no problem. The

door opened, and everything worked properly. However, there was absolutely no consistency when this string actually appeared at the remote end (i.e. was sent to the fax side of the modem on the host end). It might appear anywhere from 1 second, to 10 or 12 seconds after the modem port was switched to NONE and it was the latter that was the problem. If the *ATS0=0* string was sent to the modem when the door had control of the comm port, it saw the dropped carrier, assumed the remote had lost it while in the door, and returned control to GHOST.

I most certainly did not want to use a PAUSE of 10 or 12 seconds on the off chance that such a long pause was necessary, but I also did not want this problem to go on. The obvious solution was to find out where the *ATS0=0* was coming from, change the PCP/Win set up to eliminate it, and then add the code to GHOST to modify that setting when GHOST was running.

This turned out to be far more difficult than it looked. I checked everywhere in PCP/Win set up for such a string. I looked at PW2.INI, and even went so far as to look at my PW2.PRM file in a hex editor to see if I could locate where it was set. Nothing! Nowhere! Nada!

While all this had been going on for me, I had been discussing my difficulties with Paul Heim on CompuServe. Paul is a first class script writer, and a bulldog when it comes to problems. We discussed what was happening back and forth, and when I finally could not find anywhere that this was set up in PCP/Win, Paul asked me what FAXMON said.

I hate to say this, but I couldn't answer, for the simple reason that I

had totally forgotten that FAXMON.EXE was even in my \PROWIN2 directory, and that it could be used to monitor commands, etc. sent to the fax modem. Paul suggested that I run Faxmon in its Transaction Spy mode, and do nothing more than initialize the fax modem, but to be prepared for a surprise....

I am afraid that Paul's warning was not strong enough... I wasn't just surprised... I was shocked! My fax init string in PCP/Win setup was a simple *AT&K3^M*, that is, to turn on hardware flow control. Indeed, this is the string put there by PCP/Win when I installed the fax modem, and seemed to make sense. As a result, I expected to see that init string sent to the fax when I checked the report in FAXMON.

Well, the init string was indeed there *but*, it was number seven out of a total of *nine* strings sent to the modem when the fax was initialized! Nowhere in PCP/Win setup did those other eight strings appear....

Some time ago, when my eldest daughter was three or four years old, she used to like to *drive*. She would sit on my lap to she could see out the windshield, steer the car, shift the gears, and drive around town. Of course, we were parked at the time and the keys were not in the ignition but in my pocket. The steering wheel moved a fraction of an inch because it was locked without the ignition on, and the gear shift required her to push a button to move it, -- a button positioned out of the reach of her tiny hands. She thought she was driving, but in reality, I had complete control of the car, and she had none.

After running FAXMON, and initializing the fax modem, I began to feel like a three year old *driving* the car. I had the illusion of control, but in reality, had none at all!

Of course, the conclusion became inescapable. If PCP/Win, unknown to me, was sending a total of nine init strings to the fax modem, was it not logical that PCP/Win might also be sending that silly and useless *ATS0=0* string, without either my knowledge or any control of the string on my part?

Sure enough, running FAXMON clearly showed the string *ATS0=0* was being sent to the modem each and every time I switched the modem port from the *real* port to NONE. It was not of my doing, and nowhere in PCP/Win could I configure things to stop it from doing this. I had already realized that PCP/Win would send the modem init string out when I switched the port back from NONE to the real port, and was able to prevent this by setting the modem init string to a null. But I could not do anything similar to stop the *ATS0=0* from being sent.

I was one frustrated script writer! That silly, and absolutely useless *ATS0=0* string was preventing my script from functioning as it should, and I could do nothing to stop it from being sent.

Or so I thought then. Luckily, like Paul, I tend to be something of a bulldog. When I calmed down, I began to wonder if that string was being sent because somehow, PCP/Win still saw the fax modem as being on the *real* comm port, and it had autoanswer turned on. Even though it was useless, PCP/Win was sending the autoanswer off Hayes command in that situation. Perhaps some code left behind from before PCP/Win handled autoanswer the way it does now was never removed because the developer didn't think it important or that it would hurt anything?

In any case, it appeared fairly obvious that I had to turn off autoanswer so that the string would not be sent, and my doors would therefore, never see it. Obvious, but not that simple.....

The logical place to do this, was immediately after GHOST had determined that a connection (data) was made, and a user was online. So, following that logic, I inserted a simple *set autoanswer off* command in that spot in the script. Nothing happened. FAXMON did not show that autoanswer was disabled for the fax, and indeed, if I did a *fetch* on autoanswer after issuing the command, the result showed autoanswer still set to data and fax. What now?

There were at least two other places where this command would also work, or so I thought. I tried the same command in these places with exactly the same results - none! Now, I really was getting confused. Why wasn't the *set autoanswer off* command working? What was going on??

Test script time... first one, a simple one, like this...

```
proc main
  set autoanswer datafax
  pause 5
  set autoanswer off
endproc
```

I compiled and ran the script and it seemed to work. When it started, FAXSTAT began running, and showed autoanswer enabled. When it stopped, FAXSTAT showed autoanswer disabled, and PCP/Win setup showed autoanswer set to Off.

So that didn't help until I remembered what might be different when GHOST was running. By the time GHOST knows that a user is online, and thus, can safely set autoanswer off, carrier is high on the modem.

Time for another test script, this one a little more complicated, to test the command with carrier high.....

```
proc main
  set autoanswer datafax
  pause 5
  transmit "AT&C0^M"
  if not waitfor "OK" 8
    statmsg "Carrier change not sent"
  endif
  pause 2
  if $carrier
    statmsg "Carrier high"
  else
    statmsg "Carrier low"
  endif
  pause 5
  set autoanswer off
  transmit "AT&C1^M"
  pause 5
endproc
```

Whoops! Again, FAXSTAT began running as it should when the script began, and indeed showed that autoanswer was enabled. BUT! And this is a big one. This time, when the script stopped running,

FAXSTAT still showed autoanswer enabled, and so did PCP/Win setup! The *set autoanswer off* command had, as in GHOST, done nothing. PCP/Win had ignored it!

Logic again.... obviously, *set autoanswer* has no effect when carrier is high. I tested all possible *set autoanswer* commands and none of them worked if carrier was high. Solution! I had to turn autoanswer off before carrier went high. Problem! In order to allow the use of Adaptive Answer, GHOST does not take over and do anything until such time as a CONNECT message is received, i.e. the call is a data call, and by then, carrier is already high.

I was stymied, but couldn't stop thinking about it. Then it hit me.... when a user goes to open a DOS door, GHOST switches the port from the *real* port, to NONE. When it does so, **THERE IS NO CARRIER ANY LONGER!**

Could I insert the command right after the port switch, and have it take effect before PCP/Win decided to send that silly *ATS0=0* to the fax side? Since the earliest I had seen that *ATS0=0* string appear was approximately one second AFTER the port switch, maybe, just maybe, it would work.

And guess what ? It did!! As soon as the data modem is switched to NONE, carrier drops, and the *set autoanswer off* command turns autoanswer off. And this happens before PCP/Win decides that it is going to send the *ATS0=0* string to the fax side. That string is no longer seen on the remote end, and no longer interferes with door operations.

What can we learn from this?

1) Use every tool available to you when debugging a script. Don't just use the obvious, but look to tools that may not appear to have any use. One never knows. In my case, the forgotten FAXMON was the tool that eventually gave me the lead to the solution. Had Paul not mentioned it, I might still be struggling with the problem .

2) Do not always assume that it is your coding that is causing a problem. Review your code carefully, but if you still can't see anything that might be causing the problem, try looking elsewhere for a cause. Don't trust any application. It may be doing something stupid and senseless like PCP/Win does by sending an `ATS0=0` string to the modem. Just as startling is that string means absolutely nothing, since the S0 register isn't used under PCP/Win 2.xx.

If your code looks solid to you, try looking elsewhere for the problem, using whatever tools you have available to track it down.

3) Don't trust the Wasp manuals to tell you everything. **Nowhere in those manuals is there a mention that SET AUTOANSWER does not function if carrier is high on the modem port even though this is, indeed, the case.** Do not expect that *all* SET commands will function as you want/expect them to, under all conditions.

4) When you have a problem with your code not working as expected, don't always look for a problem that is logical or makes sense. PCP/Win sending a useless "`ATS0=0`" string to the modem is illogical, and makes no sense, but it was the cause of my problem. I suspect that, in most cases, if the cause of a problem was logical and/or made

sense, it wouldn't be a problem. Don't forget to look for the stupid and illogical when hunting down a cause for a problem.

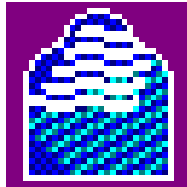
5) **DON'T GIVE UP EASILY!** Some problems are easily solved. Others take time and effort, but can generally be solved, - just not as quickly. If you give up too easily, you may not find that solution, and may thus, abandon code that might be useful to yourself and others. Hang in there... it may be frustrating, and nerve wracking, but it also may pay off in the end.

6) If you are having a problem that you can't seem to solve, ask others for their help. None of us knows everything there is a lot to know about Wasp, or, for that matter, anything else. If you can't find a solution, someone else may have run into a similar problem, and that experience could be useful to your situation. If nothing else, just talking about things can sometimes crystallize your own thoughts to the point where the solution becomes clearer, or even, obvious. Ask, and believe it or not, sometimes you just might receive! <GG>

Enough for now.... I know we were going to continue discussing INI format files, and their uses, but this problem came up, and I wanted to discuss it here while it was still fresh in my mind. Next column, we'll go back to INI files.....

Gregg Hommel is a much respected Aspect script writer and programmer. He is well known on the various nets hosting any number of conferences. Gregg sits on our Editorial Board. Comments concerning this or earlier tutorials can be directed to him as gregg.hommel@canrem.com

Procomm for Windows Internet Tools



Procomm for Windows v2.11 - Another Look!

Copyright 1995 by *Phil Leonard*

If you're like most people, it seems just yesterday when you bought Procomm Plus For Windows 2.0 and you coughed up a half of a month's rent for it. It looked like a good investment at the time! Who dreamed computing would change so rapidly that a lot of Procomm's features would soon be obsolete. If you are like me, you have been spending more and more time on the Internet and less and less time with Procomm.

Datastorm, the producers of Procomm Plus for Windows, must feel much the same as well. In the latest Procomm upgrade to V2.11, they have added three applications for use when you connect to the Internet. In this article, I will show you how to upgrade from version 2.0 to 2.11, and how to setup and use these applications: Telnet, FTP, and Ping.

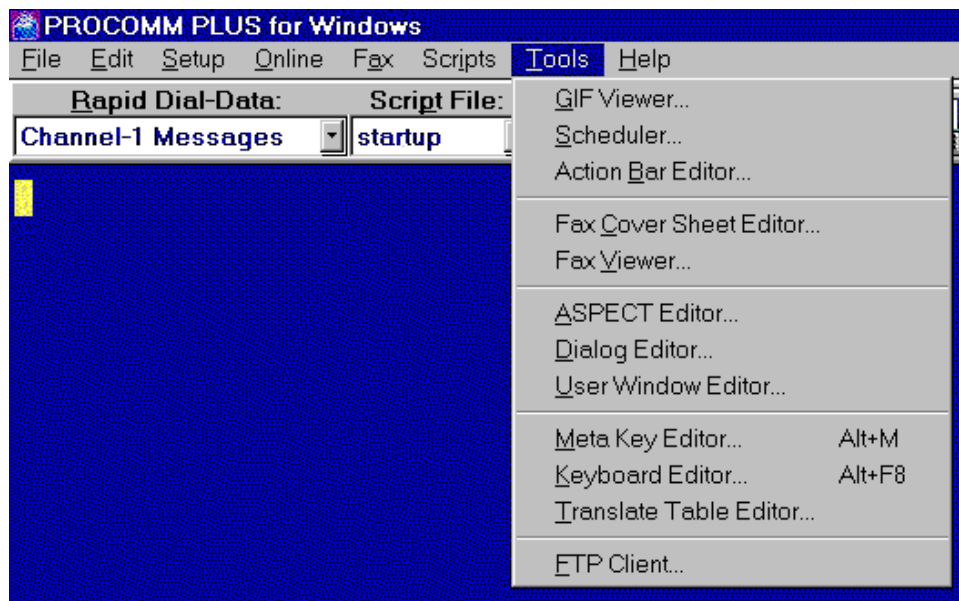
This article assumes you already have the ability to connect to the Internet via PPP/SLIP with your Internet Provider. It is beyond the scope of this article to explain all of these intricacies here. They will be a subject covered in a future article. I am also assuming you have Procomm Plus For Windows 2.0 or above and Windows 3.1 or above.

If you have not upgraded from Version 2.0 to 2.11, you will need to get the patch first. The name of the file to retrieve is PW211.EXE which can be found on the Internet at <ftp.cica.indiana.edu> in directory

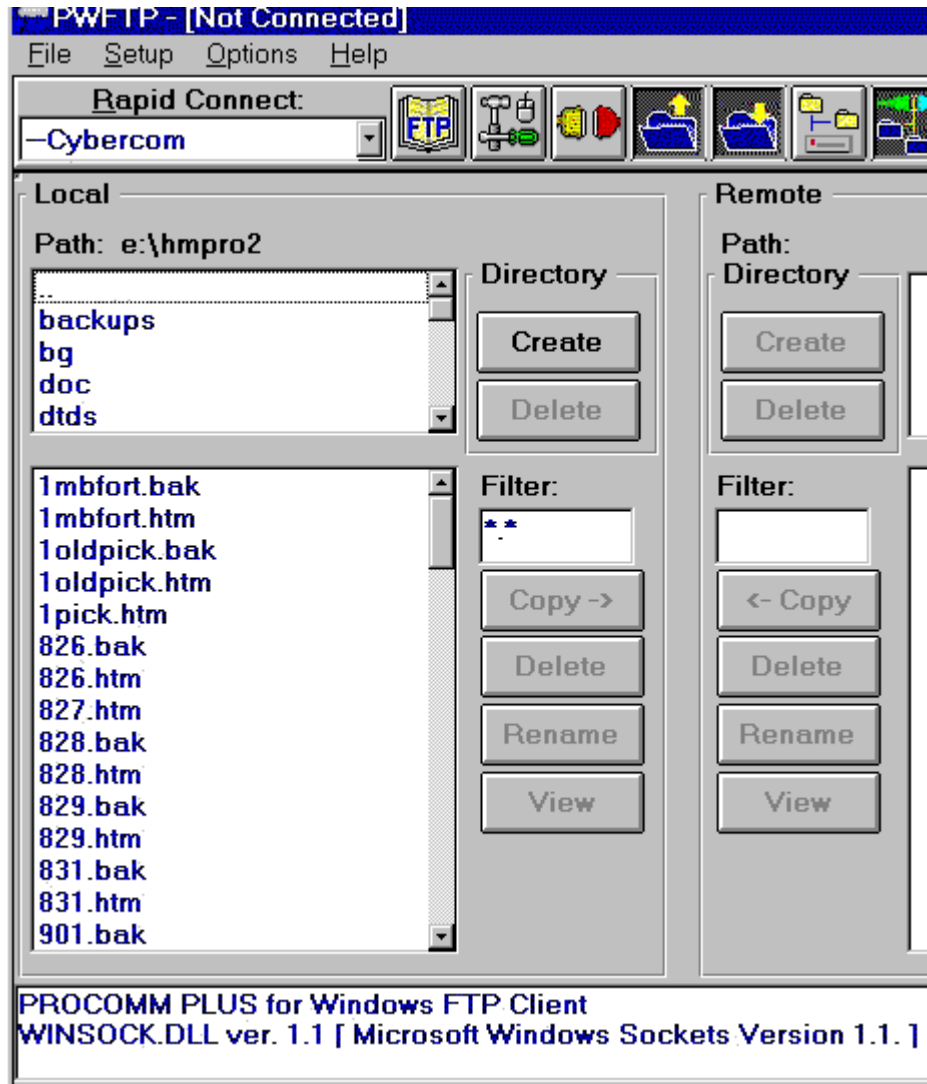
/pub/pc/win3/patches/pw211.exe. It is also available at the home of WindoWatch, Channel1 BBS 617-354-2505, in File Directory #3. Once you have the patch, it is easy to upgrade. Just put PW211.exe in your C:\PROWIN2 directory with File Manager. Quit Windows and change directories to C:\PROWIN2. (CD\PROWIN2 *enter*) Then type in PW211 *enter*. Next type UPDATE *enter*. That's all there is to it. And restart Windows.

PW-FTP

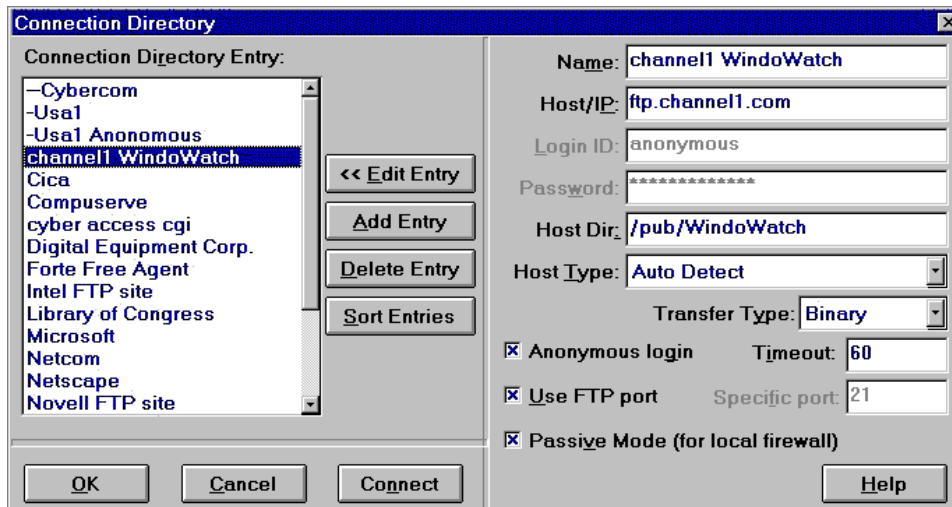
Go ahead and start Procomm. Be sure your copy is upgraded to version 2.11 by pressing ALT-F10. It should say Version 2.11 February 17, 1995. Click on the Tools Menu (Or ALT-T) and you will notice that we have a new menu item called FTP CLIENT. You can also use PW-FTP separately with it's own icon.



If you were to click on FTP CLIENT, here's what you would see. Notice on the left of the screen where your local file directory shows. On the right side of the screen, the remote host's file directory will show up when connected.



Now to add an address, you will select **FILE | CONNECTION DIRECTORY** or click the **FTP Book Icon**. This opens the **CONNECTION DIRECTORY** shown below.



Press the **ADD** button. I have filled in the appropriate entries needed to connect with the Channel1 BBS, home of WindoWatch. You can choose any name for the **NAME** field but you must enter the proper address for the **HOST/IP** field. Channel1's FTP address is **ftp.channel1.com**. You can also add the host directory you want **PW-FTP** to start in when you first connect. In most cases you will select anonymous logon, unless of course it is password protected. Your home page address is an example of a location requiring a password.

Here, for example, I have added a new FTP site:

Add Connection

Name: Channel1 BBS

Host/IP: ftp.channel1.com

Login ID: anonymous

Password: *****

Host Dir:

Host Type: Auto Detect

Transfer Type: Binary

☒ Anonymous logon Timeout: 60

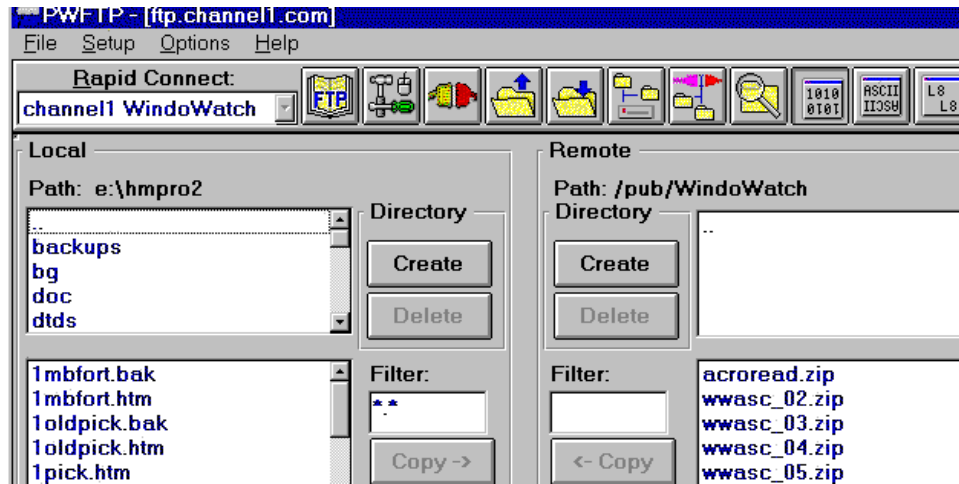
☒ Use FTP port Specific port: 21

☐ Passive Mode (for local firewall)

OK Cancel Help

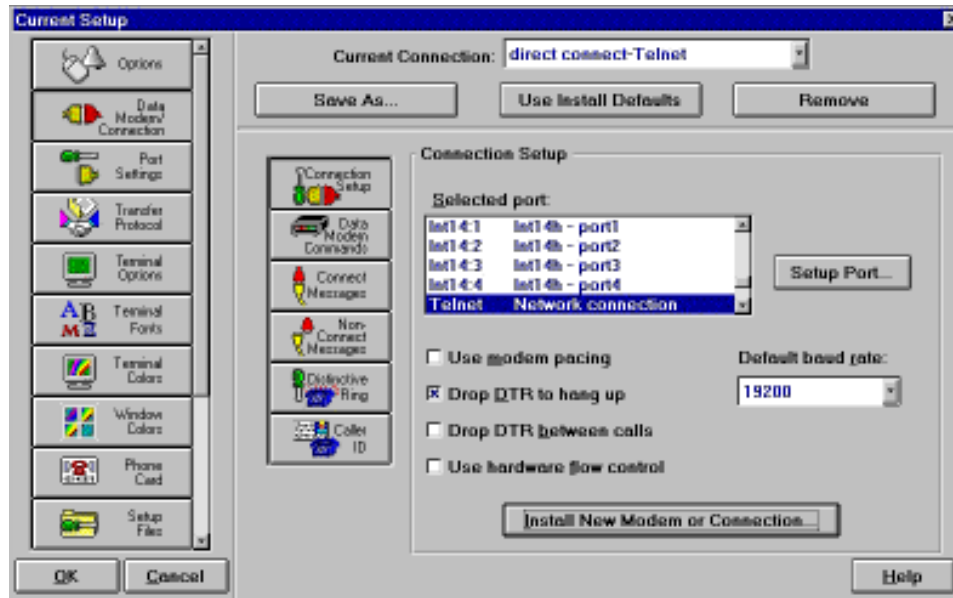
Finally, it is time to connect. After you connect with your Internet Provider, open PW-FTP and select an entry from the RAPID CONNECT menu. If you press on the arrow and select an item, it will automatically try to establish a connection.

The following picture shows a connection to the WindoWatch FTP site on Channel1.

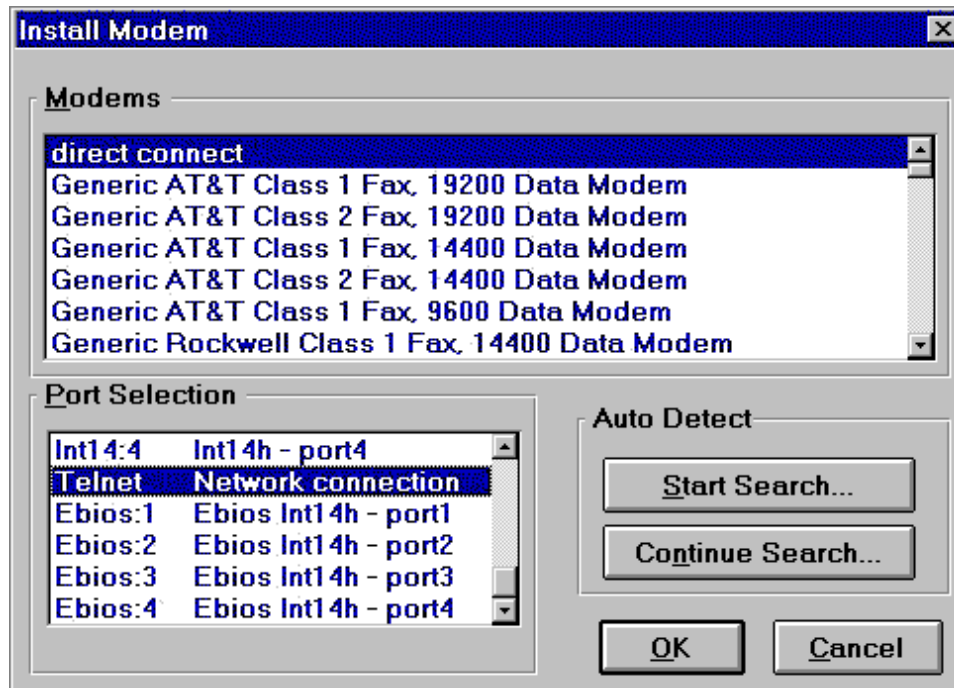


PW-TELNET

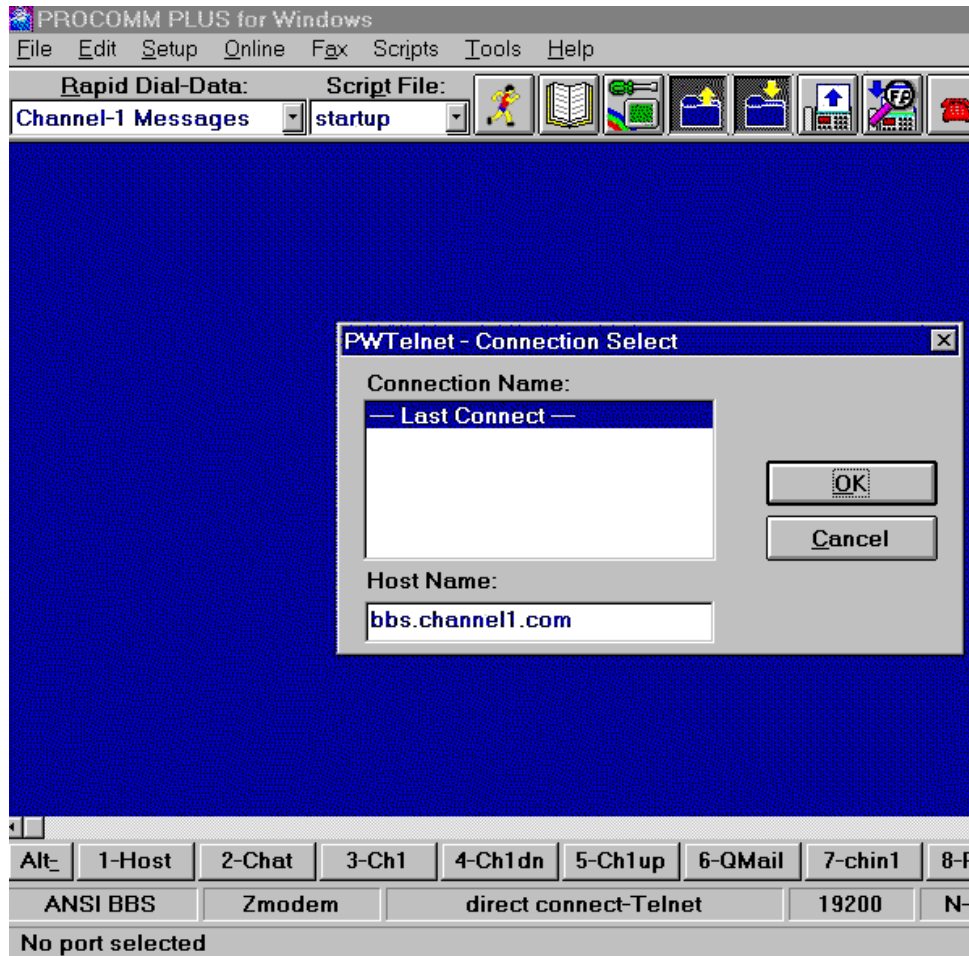
Setting up Procomm with a Telnet Connection is actually just as easy as adding a new modem. In this case, we do not have to add a modem. It is called a **DIRECT CONNECTION**. First we need to open **SETUP | DATA MODEM /CONNECTION**. It should look something like the following:



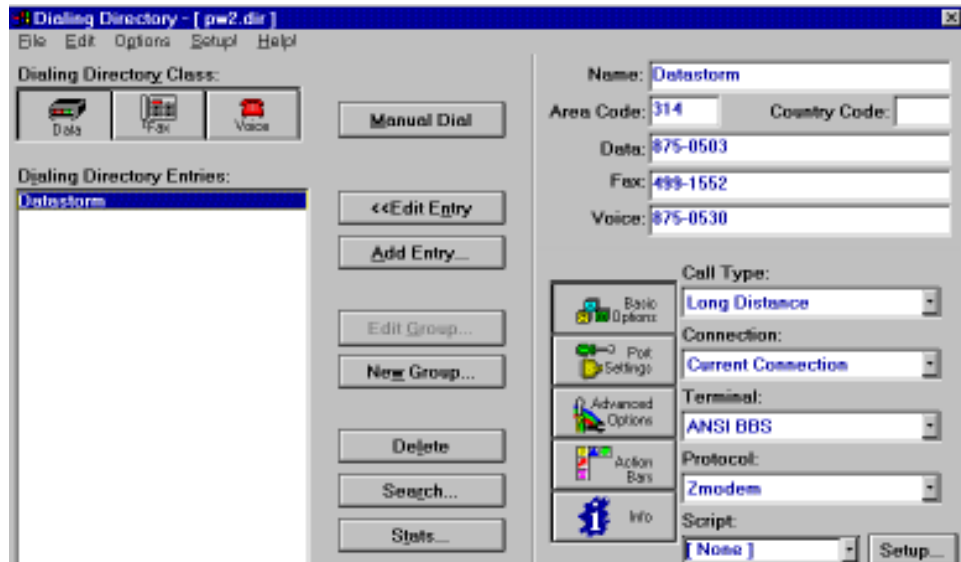
Now Press the button titled *Install New Modem or Connection*. You will be presented with the following screen.



For this new connection, be sure that your modem entry says **DIRECT CONNECT** and your **PORT** selection is **TELNET NETWORK CONNECTION**. You have just added a new telnet connection. Press OK and get back to the main screen. Now you have an additional connection for telnet. To test that everything is working properly, press your mouse pointer on the **QUICK SELECT LINE** at the bottom of the screen where your modem shown. You should see a pop up list with **DIRECT CONNECT-TELNET**. Select it and a screen should pop up requesting an address to connect to. I have shown an example of this in the snapshot below.



W can now go a step further and add commonly used addresses to the ADDRESS BOOK just as if we were calling a local BBS. In place of the DATA NUMBER you will enter the TELNET address you want to connect to. Open the DIALING DIRECTORY from the FILE menu or click on the OPEN BOOK icon. An example of the DIALING DIRECTORY follows:



Press the ADD button to add a new TELNET address. Enter any name that you want in the NAME FIELD. Enter a valid TELNET address in the DATA NUMBER FIELD. For Channel1, the address would be bbs.channel1.com. Press the drop down list in the CONNECTION FIELD and choose DIRECT CONNECT-TELNET. Select the OK button to finish.

An example follows:

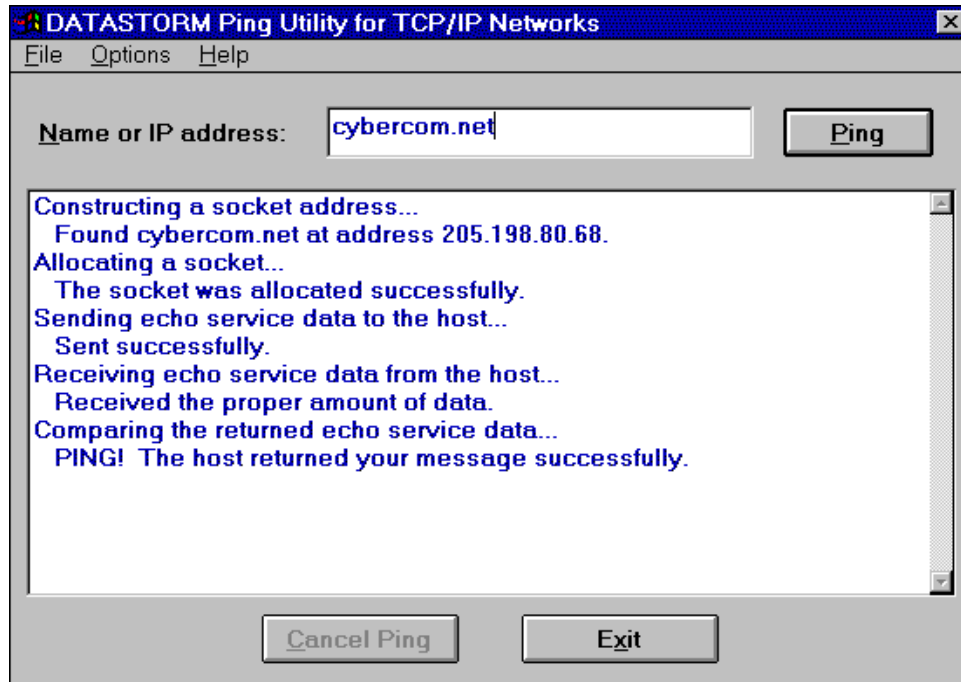
Add Data Directory Entry		
Name: ch1 BBS Home of WindoWatch	Call Type: Local	Baud Rate: Modem Default
Area Code: 	Country Code: 	Connection: direct connect-Telnet
Data Number: bbs.channel1.com	Terminal: ANSI BBS	Data Bits: 8
Company: 	Protocol: Zmodem	Stop Bits: 1
Fax Number: 	Script: [None]	Parity: None
Voice Number: 	Capture: [None]	Groups: [None]
		Setup...
		Setup...
OK	Cancel	Help

If everything is set up properly now, you can just double click the **RAPID DIAL DATA** field when connecting on the Internet just as you would calling a local BBS. What's more, all of your basic Aspect scripts still work the same as when dialing into your local BBS. I merely copied my scripts, changed the names and changed the directory number to accommodate the Internet connections.

PING

During your upgrade of Procomm Plus For Windows 2.0 to 2.11, or in 2.11 if that was the package you bought, you will find a program that does not show up in the menu list or in the installed icon group. **DSPING.EXE**. If you do not already have an icon setup for this, set one up now. For Win3, in program manager, select the Procomm group and add the Ping program. In Win95, add the shortcut. To use Datastorm's Ping, merely load it up and enter the address of your Internet provider while you on line and it will return a response based

on it's findings. The last snapshot shows a successful PING with my Internet Provider.



Phil Leonard is a Systems Administrator and Accounting Controller. He is the latest to be added to the WindoWatch list of contributing writers. He can be reached at pleonard@cybercom.net

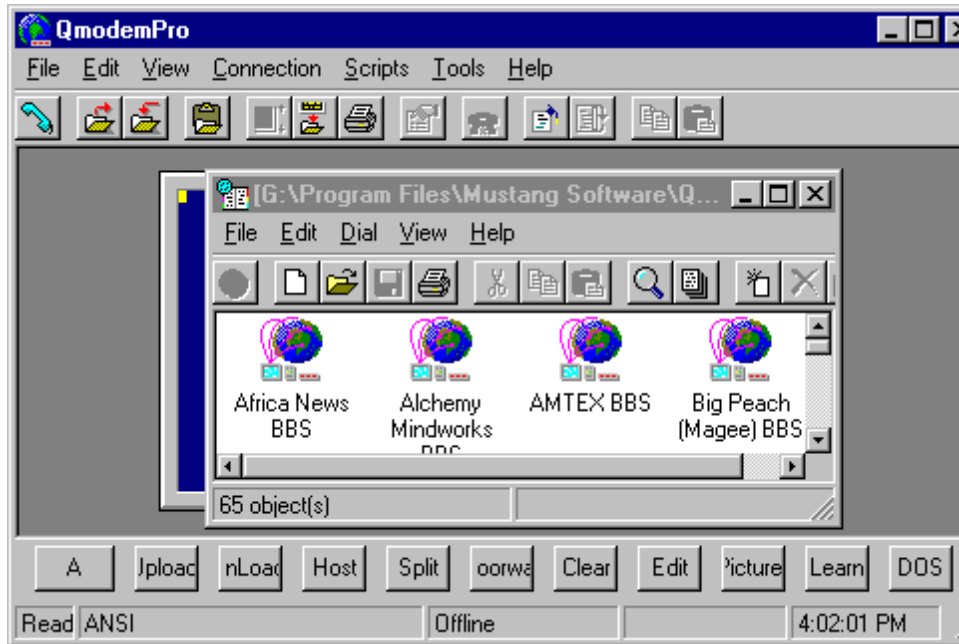
Test Driving Qmodem Pro for Windows '95

copyright 1995 by *John M. Campbell*

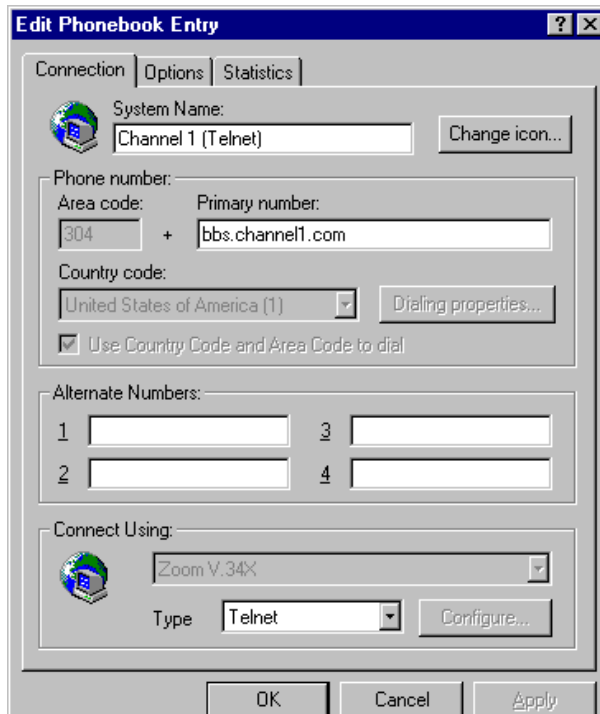
Mustang Software claims to have the first full-feature communications program for Windows 95. That may well be true, since QmodemPro for Windows 95 became available in a timed edition during late July of 1995. This edition will expire on September 15, but the regular edition of the program became available in late August.

This is not a comparison of features review, since I haven't used any other Windows communication program. Qmodem Pro (for DOS) served me well in the past, even under Windows 3.1. But that situation is about to change, thanks to QMPro 95's Telnet performance.

I have seldom used Telnet utilities because most such programs lack the standard BBS file transfer protocols, making it impossible to easily transfer files without firing up a FTP utility. But QmPro 95 makes its full arsenal of protocols available for Telnet connections. These include ASCII, Zmodem, Kermit, CIS B, and the usual assortment of both Xmodem and Ymodem flavors. Also in its favor, the program makes setting up a Telnet connection easy. Since it was its Telnet capability that drew me to try the program, I'll start with this feature.



Settings for each BBS are made from the Phonebook window. Right-clicking an entry, then Properties, brings up a Connection dialog. Using Channel 1 BBS as an example, one would enter *Channel 1 Telnet* under System Name, *BBS.Channell.com* for the Primary Number, and Connect Using *Telnet*. That's all there is to it.



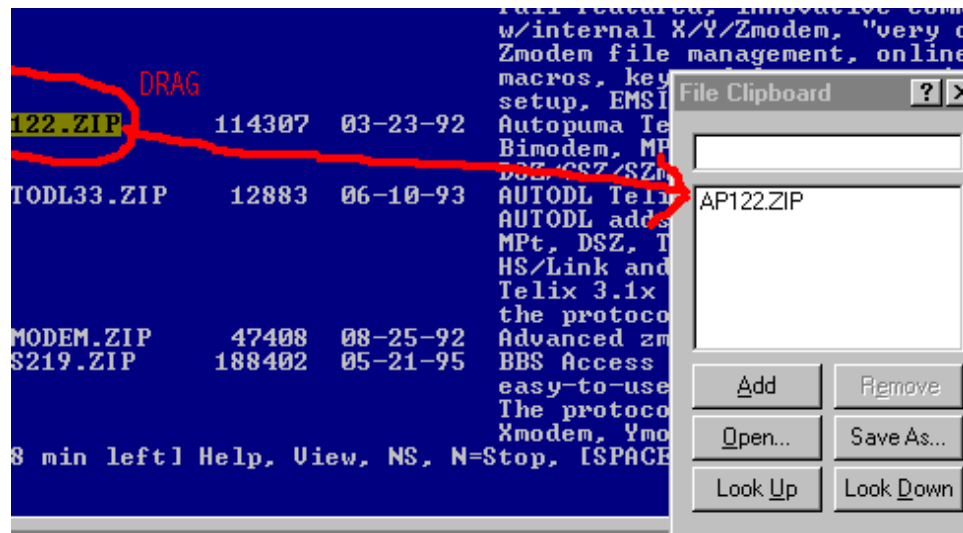
Now, start a PPP connection to your Internet provider, and dial the Channel 1 Telnet entry. On one attempt, I was able to establish a 24000 PPP connect to Compu-serve, then Telnet to Channel 1 and download a QWK message packet from the Qmail Door at a throughput of better than 1700 cps. This was using QmPro's Zmodem protocol. (I had set my default Qmail Door protocol to *Telnet Zmodem*.) But

on a later attempt, the throughput dropped to 600 cps. BBS Telnet transfers aren't yet as dependable as those obtained via a direct modem connection.

QmPro 95 has all of the bells and whistles one would expect from a full-featured communications package. There are no fewer than 33 Terminal emulations. These should cover just about every possible connection. In case they don't, as many as 256 key reassignments are possible for each emulation. The program features a powerful

scripting language and a macro system that can be used to perform many functions. QmPro 95 supports both the messaging application program interface (MAPI), and TAPI. The former allows the user to send mail, text or graphics from the terminal window directly to mail applications such as Microsoft Exchange. The TAPI feature allows controlled sharing of application access to the modem so that it is not necessary to close one communication application before opening another. The package also supports OLE 2.0, so phone-book entries can be dragged from the phonebook to the Win95 desktop for instant access.

QmPro 95 also has a neat feature that makes it easier to download files from a BBS listing. A file clipboard has been added, to which you



can simply drag filenames - right from the terminal window listing! Then, after you have captured everything you want to retrieve, and

have the BBS prompt to enter filenames for download, just click on a *Send Now* button. The selected file names will be returned to the terminal screen. And, for uploads, filenames can be dragged from Windows Explorer into the clipboard. No more typing filenames!

There are still more features. The program supports RIP graphics for those BBSes that use this interface; there is a free-standing text editor; and there is even a GIF/BMP/JPG file viewer, so you can view images while they download. Users of other popular comm programs will have an easy time converting their phone-books. QmPro 95 has a utility that automates the conversion of entries from a variety of popular competing programs, and from other Mustang packages, such as QmPro for DOS and Windows. Of course, there is a script learn feature, and a Host mode. In addition, a MD5 feature has been added to permit sending encrypted passwords to Internet sites that support this RSA Data Security, Inc. algorithm.

All in all, Qmodem Pro for Windows 95 appears to be a well thought-out general communications program. But for me, the selling feature is the ability to easily Telnet to services that until now meant a long-distance call.

Qmodem Pro for Windows 95 (\$69 + \$10 s&h: after 9/95 \$129.)
Mustang Software, Inc (Upgrade from earlier version \$49+s&h)
P.O. Box 2264
Bakersfield, CA 93303-2264
800-663-7512 (inside the U.S.) 805-873-2599 (Fax)

John M. Campbell is a WindoWatch regular bringing his wit and skill to a variety of computer related subjects. He is the manager of the Elkins, WV unemployment office.

A Unique View of '95

Derek Discusses '95
Copyright 1995 by Derek Buchler

Microsoft Windows 95 Stuns World

Redmond, Wash (AP) - Fans and detractors of the long-awaited Microsoft Windows 95 have been stunned and amazed by the incredible events surrounding the August 24 release. Windows 95 has been hailed by industry giant Pierson Holcombe Pewter as "the most advanced operating system ever produced." But even he could not have predicted yesterday's events.

It began when peace was declared in Bosnia. Said Ahmad G'Hui, spokesperson for the Serbs, "Now that Windows 95 has been released, we just don't see any reason to fight each other. This is an amazing product."

Then France announced its intention to stop all testing of nuclear weapons. "We used to think that our national boundaries were of utmost import. To safeguard them, it was necessary to continue testing [nuclear weapons]," said Jacques Fenetre of the French government. "The Microsoft Network (tm) has changed all of that. It's such a small planet!"

On the other side of the "small planet", George Bush and Saddam Hussein met face-to-face for the first time. After a tense greeting,

they started sharing notes about their experiences as Windows 95 beta-testers. Soon the two lifelong enemies were laughing and chatting like old friends. In a startling display of candor, Hussein said "If I hadn't been so frustrated with the beta, I'd have backed off from Kuwait much sooner." Bush laughed and commiserated with Hussein, saying, "Well, Saddam, I *told* you it'd be released eventually, all you had to do was wait. Hey! Let's play some FreeCell!"

Oil prices dropped as OPEC transferred their accounting software to the new platform. Loggers in the United States' Pacific Northwest turned their axes in for spades after seeing a Microsoft Video of spotted owls using Windows 95. In an economic shocker, the Peso reversed its downward spiral due to huge Windows 95 sales in Acapulco and Mexico City.

On the health front, Hildegard Wicca, a housewife in Boston, MA, reported that Windows 95 has removed her facial warts. "I sat down in front of the computer, pressed 'Start', and felt something odd on my face. When I looked in a mirror, my warts were gone!" Even more amazing is the story of Mark Cense, the Los Alamos man who was reported last week as having an incurable, fatal form of cancer. His doctors were amazed yesterday when, after simply buying Windows 95 at the local Computer Universe store, his cancer went into remission.

When asked for a comment on these almost miraculous events, Microsoft's Bill Gates, recently declared to be the richest man in the United States, replied "If you think *this* is good, just wait until you see Windows 97!"

Reports that China's release of dissident Harry Wu was contingent on his returning with "as many copies of Windows 95 as he can carry" are unconfirmed at this time.

SEATTLE (AP) -- Researchers are scrambling to isolate a particularly virulent strain of virus following nationwide outbreaks over the past few days that have felled scores of computer users. The virus -- termed Winfluenza late-95 -- was first reported on August 24 at a clinic near Redmond, Washington. Scientists are stumped, however, by its near simultaneous appearance across most of the United States, particularly around large population centers. Dr. Srinivasa Upasani of the Center for Disease Control in Atlanta noted that "the population most particularly at risk would appear to be relatively naive computer users, particularly those unduly susceptible to media influence and hyperbole". Symptoms reportedly include severe headache, muscle ache, blurred vision, increased blood pressure, and in severe cases, lacerations incurred during uncontrollable muscle spasms that typically result in destruction of the victims personal computer.

Emergency rooms, which received a flood of stricken individuals over the weekend, report that victims tend to be incoherent and unable to control bodily functions. ER technician Nate Williams, who has dealt with a number of Winfluenza cases, observed, "those dudes are hurtin, I don't know what would do that to a person, but man I don't want no part of it"! Officials are following up on reports that the virus may have been purposely spread through infected software packages. Director Marlene Eison of the Federal Bureau of Investigation said, "we are working closely with local and state law enforcement officials to ascertain whether the Winfluenza virus was the work of a cult". Since the outbreaks began August 24, persistent rumors have linked

Winfluenza late-95 to an obscure cult in upper Washington that follow an enigmatic leader known only as Mr. Bill.

The office of the Washington State Attorney General has reportedly been investigating the cult since it became clear that Mr. Bill was bent on world domination. The cult allegedly employs hordes of caffeine-addicted laborers to craft a varying array of viruses and has been accused of using mind control to recruit gullible followers. Microsoff spokesperson, Mick Jagger, refused to comment.

Subject: Microsoft Motors

**Top (N) ways things would be different if Microsoft built cars
- drumroll, please...**

- ◆ **A particular model year of car wouldn't be available until *after* that year, instead of before.**
- ◆ **Every time they repainted the lines on the road, you'd have to buy a new car.**
- ◆ **Occasionally your car would just die for no reason, you'd have to restart it. For some strange reason, you would just accept this.**
- ◆ **You could only have one person at a time in your car, unless you bought car '95 or car NT, but then you'd have to buy more seats.**
- ◆ **You would be constantly pressured to upgrade your car. Wait a sec, it's that way NOW!**

- ◆ Sun Motorsystems would make a car that was solar powered, twice as reliable, five times as fast, but will only run on 5% of the roads.
- ◆ The oil, alternator, gas, engine warning lights would be replaced with a single "General Car Fault" warning light.
- ◆ People would get excited about the *new* features in Microsoft cars, forgetting completely that they had been available in other brands for years.
- ◆ We would still be waiting on the *6000 sux 58* model to come out.
- ◆ We'd all have to switch to Microsoft Gas (tm).
- ◆ Lee Iacocca would be hired-on as Bill G.'s chauffeur.
- ◆ The US government would be *getting* subsidies from an auto maker, instead of giving them.
- ◆ New seats will force everyone to have the same size rear end. The size would be licensed with royalties due to Microsoft.
- ◆ Ford, General Motors and Chrysler would all be complaining because Microsoft was putting a radio in all its models.

Derek Buchler is a computer manager-administrator in the private sector. An early WindoWatch contributor, we're delighted to welcome him back. Several of these gems appeared briefly on the various nets which we are reprinting for the benefit of our readers.

Stirring the Programming Pot:

Computer Programming Without Spaghetti

Copyright 1995 by *Peter Neuendorffer*

A good computer program must meet a specified need(s), and perform in a predictable and dependable fashion. As a programmer starting a new project, I spend several days thinking about the problem at hand. I think much less about how I am going to construct the software, as opposed to what I want it to accomplish with it. Slowly, I try to envision the outlines of my finished project in my head, often scribbling notes on a napkin in a coffee shop.

There are many design tools which play out for making lists or word games, but if I don't have an overall vision of the project, I do not proceed. There are times when I will jump into a programming project by furiously typing from start to finish, pulling an all-nighter and ending up with a conglomeration of incantations that purport to do a task. This style of writing can work as long as the author -me- doesn't drop dead, quit the business, or have a sudden memory loss.

Such a tangled mass of programming is affectionately called *spaghetti code*. It is analogous to an electrician stringing wires every which way in a dangerous and tangled heap. All is well until changes are needed, or someone else must maintain the system. Side-effects, where one

section impinges upon or *trashes* another region, crop up, sometimes not until weeks, months, or years after completion.

When coding programs, programmers use a higher level language that shields them from the nuts and bolts of the machine. The machine is merely the medium, and must not be the reason for the program. Higher level languages are an outside layer, where the Basic Input Output layer that does the work is not addressed directly.

The BIOS is machine dependent - different for different makes of computers. DOS and Windows are designed to provide services to the programmer to accomplish small tasks. The tasks, such as sorting, searching, counting, comparing of words are combined in a logical fashion to accomplish the purpose of the program.

Computer languages are called *higher level* not because they are better, but because they are closer to normal English than machine code. No one in their right mind would code a large program in machine code, which is barely removed from long strings of ones and zeros.

Two popular languages were developed for teaching purposes, BASIC, and PASCAL and they have stayed on as popular programming languages. C, the language of choice among professionals (I use Pascal) allows the programmer to do fancy low-level manipulation, and still have the structure of the statements in an English-like fashion, or syntax.

A computer program is a series of data processing cycles. Some operation or processing is done on Input data, producing processed

Output data. Because the instructions may be stored in a program, the processing can be performed without the person present who wrote the program. When designing a program I often ask "If I fall down a hole and drop dead, will the program still be able to do x,y,z?" By presenting the decisions, in effect bringing forward some of the processing to the user of my program, I make my program more flexible. The way I present these choices, as well as the gateway to put data into the program (Input) and the results (Output) is of central importance.

The presentation of the data is the interface of the program. Windows programming provides a common interface. Many things about a Windows program, such as the style of the menus, are conventions, or things that everybody has agreed upon. We have the convention in social relations of saying "Have a nice day", upon leaving someone, for example.

It has been said that a well-designed program works the first time. This is wishful thinking. One of the benefits of the faster PC is that programs can be designed by running them and making changes. Although the program may have been freed of syntax -grammar-errors, a program can compile into machine language and still not accomplish it's intended purpose.

These logical errors can be devilishly hard to find. Imagine giving the instruction to someone "Take the New York train to Maine." This is a logically consistent and valid grammar. But the action it commands is impossible, and therefore nonsensical.

Programs may have a variety of differing routines - collections of

statements to process information at a sub level. They might be instructions executed one after another -procedurally. For example, "Get up! Turn off the Alarm Clock! Smoke cigarette! Get dressed." Each of these verbs "get up", "turn off" could invoke lengthy procedures that have their own code. To us, "smoke cigarette" seems self-evident. But try writing a list of all the things you do to accomplish smoking a cigarette. This is what the programmer is up against. The computer does what you tell it to do, if anything at all, and has no problem accessing the wrong data if that is what you tell it to do.

A second structure could be branching. This is performing different activities based upon the result of a condition. The computer, when making a comparison to see *IF* something is true, is actually merely comparing the values of two numbers to see if they are the same or different. An example of *IF* would be "If it is raining, then wear a raincoat, otherwise (it is not raining) wear a sweater."

A third type of structure could be Looping. Doing something over and over until the situation changes. "Skip rope 2000 times." For a computer, this is doing something until a certain number equals, or exceeds a another number. If you are counting the loops, a common disastrous error is to forget to add one to the counter each time the loop iterates. This leads to the common "freeze" where the user is locked out of doing anything. The loop is endless.

Still another type of structure for instructions is the recursion. This is a curious method where half-way through a procedure, the procedure invokes itself again. This is used for problems which may be halved and where each half of the problem is done again and again.

These types of structures are used to make algorithms. Algorithms are a finite set of steps used to accomplish a particular task. When designing your program, you can describe these using Pseudocode. Pseudocode is your own English-like language. In effect, a recipe for making a cake could be written in Pseudocode to see how it works. The ingredients are the data, the preparation represents the Initialization, and the steps for making the cake are the instructions.

You break the project into small detachable modules, such as "make batter", "make icing", "cook cake", and "ice the cake." You could put this overall structure into a drawing of boxes, that are set up in a hierarchy like a family tree. This is a program structure chart.

To get organized, you can set up Input/Process/Output sheets that lists the tasks involved in accomplishing a module. Several tasks per sheet are used. Then you list the data that goes into each task, the Input, and what is produced, and then Output. You don't worry too much about how you will accomplish these, just what the tasks are. Each task you break down further, having a separate sheet for each. This is called top-down design.

When working with Windows programming, it is possible to set this up directly so you see the sections of your program in their design. This is called stubbing. The program has all the Windows ready but each doesn't actually do anything. They could have dummy labels saying "This is where we make the batter" or "This is where we ice the cake." You can then flesh out the code so that each task is in its proper place in relation to all the others.

It is very tempting in programming to have a set of switches that the whole program "sees" called *globals*. That way the entire program can use them. When they are true-false switches, they are called control variables, or Booleans. But the tradeoff is that you may forget what you have set them to in subsection II.A.i somewhere. As this group grows and grows, the logic of your program is handed over to these switches, and the English-like look of the program is subverted. I like to use these globals a lot, but unexpected results can crop up, called side effects.

Planning a project is very important. An architect does not build a house without making plans. But programmers, myself included, eager to hack their way into the symbolic world, are often too eager to dispense with the design work. Some programs seem to write themselves. But these turn out to be ones that have been carefully planned, with self-documenting data with meaningful names, and a logical structure that logically follows the problem at hand.

Halfway through writing this article, I realized that I do not spend much time filling out design charts and forms. However, I do a lot of this unconsciously when I think about my new project, or when I set up the names and structures for my data. Since you can name your data variables anything you want, it is a good idea to give them meaningful names. Cake ingredients is a much better name than "x".

Although the compiler program doesn't care about the names you use for your data or routines, -and if it works, it works! However, you will certainly care when you go back to the source six months later. If you can't understand what on earth the program that you wrote yourself is doing, you might as well throw out the project entirely.

Much of programming involves passing along "magic" routines and even whole systems from one application to another, but this must be done in an orderly fashion. The programmer should insert copious comments in English reminding him/her what the program does. The extra trouble is well worth it. Today's brilliant solution can easily be tomorrow's antiquated curiosity.

Peter Neuendorffer is a Windows programmer. His home page URL is <http://www.channell.com/users/petern>. Peter's latest program is a text searcher [abool20.zip](#) which can be downloaded from his page. He and Alice are [WindoWatch](#) regular contributors.

A WindoWatch feature

IDIOTS-REDUX © 1995 by Bob Miller

We have yet another installment of the continuing efforts of computer magazine writers to attempt to prove that they know as much about computers as your local Shoe Store salesman does. This is a shorter version than usual not because the authors have gotten any better (they haven't) but because I've been too busy to read through the pile of magazines I have. Perhaps, I can catch up next month.

PC Mag. June 27 page 272

De-fragment your hard disk before re-creating your permanent swap file to make sure you can create as large a swap file as possible.

'Scuse, please, but 50MB permanent swap files are NOT a good thing. Most people are much better off with a 4MB Permanent Swap File.

From our Idiots Hall of Fame Charter Member - Dvorak. Same issue, on page 89.

“Plug-and-play. I'll believe it when I see it.”

Try making your eyes as open as the space between your ears. Several million people think it works fine. Yes, he wrote it before 95 was

released - but long after the beta copies were showing that it worked fine.

Same Column as Above:

Today, 256 colors is ludicrous and 34,000 colors should be the default.

Leaving aside the simple fact that no card ever built shows 34,000 colors - 32768 or 65536 but not 34,000, more than 256 on the average office system is downright silly. Perhaps Dvorak's word processor or spreadsheet program needs thousands of colors - mine run quite fine with 256. Indeed, most office machines only need 16 colors for efficient computing.

Byte, July, Page 188

It is not easy to remove. Not only is it in WIN.INI, but it also loads in AUTOEXEC.BAT.

Gee, I thought editing Autoexec.bat was something the average Byte reader was capable of doing - even with their editor of choice (EDLIN). I guess I overestimated the ability of those readers.

InfoWorld, August 28, Page 3.

- quoting a Lotus executive who was commenting on SmartSuite not being available on August 24 when Win95 was released. . .

“Seven million units sold... are the guys lining up at CompUSA at midnight. I’m not saying those people aren’t important to us, but, over the long scheme of things, the amount of time we’re talking about is not strategically significant.”

I wonder just what is “strategically significant” to this birdbrain. Office already has an overwhelming percentage of the Windows market. Conceding several months of sales of 95 ready applications to them is not likely to increase Lotus’s tiny percentage of that market very much. And, of course, most of those seven million sales went to OEM’s who will be installing it onto new machines. I wonder which Suite product those users will be buying? I wonder how many of them can later be persuaded to spend hundreds of dollars for a competing product when the one they have will do more than they ever ask?

Same issue.

Graphite Designs last week unveiled WinClassic, a Windows 95 utility that emulates the Windows 3.1 user interface.

Now there is a real viable product! People will just have to run out and spend bunches of money on a utility to move backwards. Besides, SHELL=PROGMAN.EXE does the same thing for free.

Still from the same issue -page 62. This was written by a lawyer..

The UCC is a set of laws governing business transactions that has been adopted in nearly identical form by all 50 states.

I’m sure our readers in Louisiana will be interested to learn that. I have to wonder what kind of lawyer can be unaware of the fact that Louisiana still follows French law - not English.

From an older - June 12 issue on page 90.

Microsoft must make OS/2 versions of its applications suite.

And Sega must make cartridges that also fit into Nintendo's. And Nike should allow Michael Jordan to wear Reeboks. How silly can you get?

Wall Street Journal, June 21. -Discussing BBN and its sale of internet services to AT&T “now they have 12,000 feet on the street who can recommend them. Under the contract, AT&T's 12,000 person sales force.....

Now I know that AT&T is a firm supporting the American Disability Act and goes out of its way to hire handicapped people but I seriously doubt that they really have 12,000 salespeople each of whom has only one foot.

Windows Magazine, August, Page 246.

Discussing a Boca modem from the review...Its performance is significantly lower. Over many of the phone lines tested, the device yielded poor results. It has trouble connecting, often doing so at low speeds. Its last place throughput performance score is likely the result of poor compression implementation as well as error correction.

- from the summary box.. The only right-out-of-the-box solution in this group, the Boca comes bundled with great extras like a serial cable and port.

Perhaps the summary box writer and the review writer aren't speaking to each other? Or does an external modem that comes with a serial cable, -this is unusual? - outweigh the terrible performance?

Same issue, page 210

Here is how the new pop-out menu of control panel settings, as described above, actually looks on the Start menu and is followed by an illustration of its appearance.

*Perhaps this writer works differently than I do, but I really see a **very** limited usefulness for shortcuts to Date-Time, Joystick, Keyboard and Regional Settings - among many others of highly limited utility! Do you know anyone who changes his Regional settings so often that he needs a shortcut to them? Or the Keyboard? Get real.*

From the ad pages.

Ad for Hurricane. Hurricane's RAM doubling feature gives you unlimited resources-making out of memory messages a thing of the past.

Ad for Long File Names -a \$30 program: If you try to mix Win95/Windows 3.1 systems and applications across a network or share files with floppies, you stand a good chance of trashing all your new Windows 95 long file names.

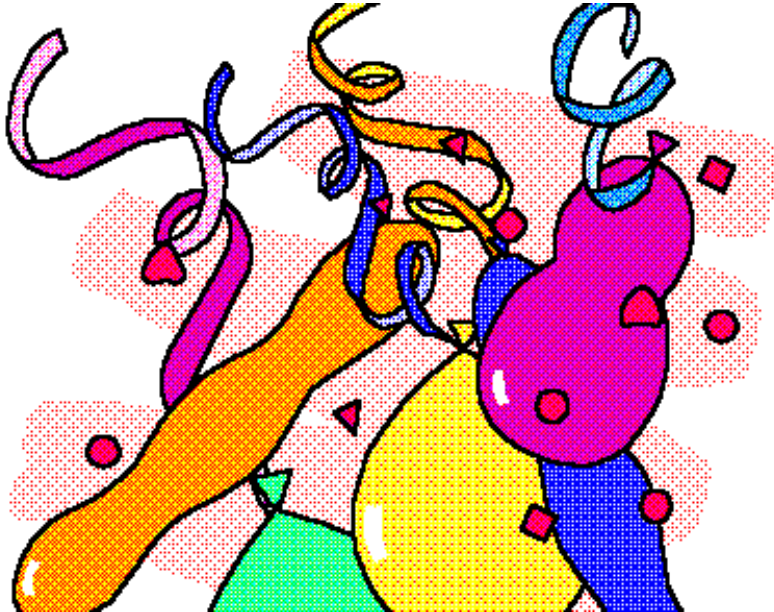
Ad for NEC monitors. Ready for Windows 95.

It hardly seems necessary to comment on the absolute stupidity of these ads. The NEC ad is stupid. Every SVGA monitor ever built is “ready for Windows 95. The other two are outright lies

.

Idiots Redux is the invention of [Bob Miller](#) who has a huge collection of Conference Host assignments from both RIME and Ilink. His newest is the Ilink Windows95 conference . A very knowledgeable Windows writer, Bob is the head of a Mental Health Agency and can be found at [He and Stanley](#) are regular [WindoWatch](#) contributors.

We're having a Welcome to WindoWatch Party for Robin and Stan!



STAN KANNER

ROBIN MABRY

WW

Stan Kanner attended the State University of New York at Brockport. He and his family started homesteading in rural West Virginia in 1975. They lived in a cabin in the woods with no electricity or gas. In 1987 he received degree in Wholistic Health from University of Charleston (WV.)and shortly thereafter tooled up to teach Behavior Disordered and Emotionally Disturbed children. While getting his graduate degree, a Masters from West Virginia University in Behavior Disorders, he was engaged in a home business, building pc clones. After seeing the problems associated with home-schooling his daughter in high school, he got the idea for CompuHigh. CompuHigh went on line in 1994. Kanner is presently living and working in Israel.

Robin Mabry-Hubbard has worked as a mainframe programmer-systems analyst, software project manager and user support/training group manager. Robin also taught at local universities teaching programming, computer system design, and statistics and other business classes like accounting, management, and economics. She has an undergraduate degree in Economics from the University of Missouri at Columbia, a Masters in Finance from St. Louis University and a BS in Computer Information Systems from Maryville University (St. Louis). She is the originator and maintainer of a great Win95 Tip Sheet (FAQ) found at <http://walden.mo.net/~rymabry/index.html>

What is a Winsock?

-Or: Why Can't They Call it Internet Connection Software?

Copyright 1995 by Robin Mabry

When I started college 20 years ago, computers were huge mystical things and programmers, their special attendants, tried to cajole these beasts to do our bidding. Fortunate for me, the University of Missouri's Business School had the foresight to rule it necessary that all Business School graduates learn the basics of programming. Most Business school students dreaded their sentence of punching out COBOL instructions on little cards, carefully ordering them, and then dropping them into the reader. These students hoped that (1) a card wouldn't jam; (2) the timeshare computer would not be so busy as to make you wait hours for an answer (3) error messages would make sense and (4) counted the days until the end of the semester. I confess that I loved it - obtuse errors, mystique, - all of it!

Notwithstanding, at the time, computer skills were not synonymous with power and fortune so I pursued an Economics degree hoping to land a great job with a Fortune 500 company. This I did; and then came downsizing and desktop computers. Twenty years later, the mystique of computers has all but disappeared except on the last frontier, the Internet. What fun would it be if Internet connection software was simply referred to as that? Instead, we continue to have

mystical terms like tcp/ip, PPP, SLIP and of particular interest to windows users, the *WINSOCK*!

Access from here (your computer) to there (the Internet) requires that your computer send information, data, (okay, stuff !) in a format that any other computer on the Internet can understand. Since the Internet is simply a collection of millions and millions of computers connected together, it makes sense they would have to agree on a common communications method and language. This is called a protocol.

Centuries ago, in computer years, the folks who first decided they wanted to talk to each others' computers reached agreement on this standard protocol or networking language. So the rest of us would consider it to be really complicated cutting edge stuff they called it TCP/IP. Just Internet Language would have been simpler but they probably figured they could get more money if they said, "I know TCP/IP" instead. To make a long story short, TCP/IP is a communications protocol which allows us to send scribbles and such all over the world using the Internet.

Your computer's communications program, called a client, speaks only simple computer languages like C++ or Basic. Unfortunately the Internet does not! So your client or computer program, needs a universal translator. Since the universal translators from Star Trek (TM) are trademarked and closely protected by Paramount it was necessary for windows program developers to come up with their own. Ta Da! WINSOCK. Win SOCK ? What kind of name is that??? Its short for Windows Socket.

You still don't get it?

Well think of it like this. The computers on the Internet are connected through a series of communications pipelines. Each pipeline screws into a socket at one end then connects to another socket on the other end. Data stuff is then sent through these pipes. It's all connected together like Tinker Toys - the wheels are the various computers and the sticks are communications pipelines. Each one of those sticks connects into a hole or socket. Your program, or client, sends information to the TCP/IP universal translator WINSOCK that sends it over a modem to another computer or the server. The server then connects into the Internet.

There are different flavors of TCP/IP that can be used depending upon the communications hardware. Most of us will use a modem and therefore will use either SLIP or PPP and your WINSOCK will translate accordingly.

What is the difference? For all practical purposes, nothing. PPP is better simply because it was more thought out and better designed. However, many Internet Access Providers only offer SLIP.

So it is desktop CLIENT program to WINSOCK over MODEM to SERVER computer to another computer(s) on the INTERNET, - and visa versa for receiving data.

Clear? No? Want more information? Online sources include:

WINSOCK FAQ

<http://mars.superlink.net/user/mook/winfaq.html>

This article contains several sections.

Section 1 covers the basics of Winsock. Here you'll find out what Winsock is and how you can use Winsock applications.

Section 2 covers the Winsock-related resources available on the Internet and Usenet.

Section 3 covers common questions concerning TCP/IP stacks and communications.

Section 4 covers World Wide Web browsers (Netscape, NCSA Mosaic, etc.).

Section 5 covers Usenet news readers (News Express, Free Agent, WinVN, etc.).

Section 6 covers IRC, Talk, and Voice software (WinTalk, Iphone, mIRC, WSIRC, etc.).

Finally, there are several appendices. These include related resources and tutorials which are outside the scope of the FAQ proper.

WINSOCK TROUBLESHOOTING REFERENCE

<http://www.webcom.com/~llarrow/trouble.html>

INSTALLING A WINSOCK CLIENT

<http://acy1.digex.net:80/~lejeune/>

WINSOCK CONNECTIONS

<http://sage.cc.purdue.edu/~xniu/winsock.html>

Now for the good stuff. Where to find WINSOCK clients. There are a variety of WINSOCK clients including email, news readers for USENET news groups, Telnet (for remote Terminal to "networked" mainframe), world wide web browsers, utilities to see if someone is online like Finger and search tools like Archie and Gopher. The most comprehensive WINSOCK site for windows3.x, windowsNT and Windows95 is maintained by "The BeasT Man" <beast@papa.indstate.edu>. If it's windows and Internet related, including stuff like "keep track of time online" utilities, it can be found at TheBeasT Man's FTP site:

FTP://papa.indstate.edu/winsock-l/Windows

Up to higher level directory

.message		485 bytes Sun Aug 06 01:14:00 1995
00_index.txt	1 K	Sun Aug 06 02:31:00 1995 Plain text
Daemons/		Tue Aug 29 23:24:00 1995 Directory
Develop/		Thu Aug 17 23:21:00 1995 Directory
FTP/		Wed Sep 14 16:03:00 1994 Directory
Finger/		Sun Aug 06 02:31:00 1995 Directory
Graphics/		Wed Sep 13 14:56:00 1995 Directory
IRC/		Tue Sep 12 18:20:00 1995 Directory
Mail/		Mon Sep 04 23:39:00 1995 Directory
Misc-Winsock/		Tue Sep 12 18:29:00 1995 Directory
Misc_Utils/		Sat Aug 19 01:21:00 1995 Directory
Mud/		Sat Aug 19 20:38:00 1995 Directory
News/		Fri Aug 25 23:06:00 1995 Directory
Perl/		Sun Aug 06 20:42:00 1995 Directory
Ping/		Sun Aug 06 02:31:00 1995 Directory
SNMP/		Tue Aug 29 17:27:00 1995 Directory

Talk/	Thu Sep 07 00:43:00 1995 Directory
Telnet/	Wed Sep 13 15:01:00 1995 Directory
Time/	Sun Aug 06 02:31:00 1995 Directory
ToolBars/	Fri Sep 08 18:49:00 1995 Directory
WWW-Browsers/	Sun Sep 10 16:16:00 1995 Directory
Whois/	Sun Aug 06 03:13:00 1995 Directory
WinDis/	Sun Aug 06 02:31:00 1995 Directory
Wsk-Apps/	

MIRROR SITES You Could Try And Connect To At:

- (1) <ftp.sunet.se/pub/pc/windows/winsock-indstate> (Sweden)
- (2) <ftp.iquest.com/pub/windows/papa> (USA)
- (3) <ftp.infomagic.com/pub/mirrors/PC-Networking/WinSock-l> (USA)
- (4) <ftp.nuri.net/pub/winsock-l> (Korea)
- (5) <ftp.csie.nctu.edu.tw/pub/winsock> (Taiwan)
- (6) <ftp.riken.go.jp/pub/pc/winsock-l> (Japan)
- (7) <ftp.mira.net.au/winsock-l> (Australia)
- (8) <ftp.uni-koeln.de/pc/mirrors/winsock-l> (Germany)

This fine gentleman also distributes by email, daily digest of updates of winsock related software:

To subscribe to WINSOCK-L-ANNOUNCE, send a message to
list-admin@papa.indstate.edu
 with a line similar to the following in the BODY of the message
 SUBSCRIBE WINSOCK-L-ANNOUNCE
 OWNER: The BeasT Man .. (BeasT@papa.indstate.edu)

What would I recommend for the average desktop user:

email client

EUDORA (FREE AGENT if you just want to send/receive)

news reader client

FREE AGENT (does offline & online; NETSCAPE is online but is easier)

WWW browser, gopher & FTP client

NETSCAPE

Some users may also want to download a graphics file editor like LVIEW and a windows screen capture utility like SnapShot. If you are a windows95 user, I highly recommend using the win95 WINSOCK along with two nice Freeware products: RoboDUN and RECONNECT. The first program is a scripter for the win95 WINSOCK that automatically enters your login, password, etc instead of re-entering each line in the post-dial terminal screen. RECONNECT is a neat little utility that will automatically reconnect the win95 WINSOCK to your Internet Provider instead of you having to click "YES - RECONNECT" each time.

Till the next time.

Before You Plunge:

Windows® 95 - Some Considerations for Potential Users

©1995 *Paul Kinnaly*

As much of this issue of *WindoWatch* is devoted to commentary on Windows® 95 and related issues and software, I'd like to mention a few points regarding this new Operating System that have become very apparent to me during the past several months that I've used it.

First and foremost, do not blindly accept Microsoft's assurances as to the hardware needed to run it. The '95 box tells you it will run on a 386 with 4 meg of RAM. This is not quite a lie, but it isn't quite the truth either. Windows95's speed and flexibility seems to be greatly influenced by four main factors: CPU type, available RAM, video bus, and disk speed. Generally, most users find that a 486DX66 with 16meg of RAM, a local bus, VLB or PCI, video card, and fast IDE hard disk will run Windows95 very nicely. In spite of claims that a 386SX20 with 4 meg of RAM, an unaccelerated 256K video card, and a slow drive will *load* Windows95, *running* it on such a system is extremely painful.

So what does the newest Windows require? No real consensus has been established yet. Although the major hard copy magazines have just begun the testing of the final release, early results seem to indicate that virtually any 486, SX or DX, which has 8 meg of RAM will achieve reasonably comparable results under Windows95 when

compared to Windows 3.1/3.11 or Windows for Workgroups. Depending upon your hardware, certain parts of the operation might vary slightly, but overall performance will be roughly equal.

Anyone who participates in the RIME or Ilink Windows conferences on their BBS or in the Windows-related news groups on the Internet or CompuServe and AOL forums will have noticed that even those who were true experts on Windows 3.1/WfWG are still climbing slowly through this new operating system. While many features are familiar and similar, many have changed significantly.

For example, tweaking the performance in '95 is drastically different from Win3.1. Perhaps the greatest difficulty for new users is understanding the impact Windows95 has on their AUTOEXEC.BAT and CONFIG.SYS files. Under many circumstances, they cease to exist. A Windows 3.1 user might have drivers for a mouse, CD-ROM, SmartDrive, a memory manager like QEMM, Netroom, EMM386, and many other drivers all of which loaded via these DOS setup files. *If* Windows95 has new protected mode drivers for your CD, and it does have many, none of these notations need to exist in either the AUTOEXEC.BAT and CONFIG.SYS any longer. It is common to find Windows95 users who have no CONFIG.SYS whatsoever and whose AUTOEXEC.BAT is reduced to a one line path statement. There seems to be a temptation to return many of these vanished notations under Windows95. Don't do it! At least not at first. While these drivers may be necessary in your AUTOEXEC.DOS and CONFIG.DOS files used when Win95 boots in DOS mode, they probably are not necessary in normal Win95 sessions, and may in fact, slow things down. While some users have reported gains from using third-party memory managers, even within Windows95, my advice to

most would be to forego this route until new users have become familiar with what Win95 itself can handle.

Many potential Windows95 users ask, “*How much disk space do I need?*” It’s an understandable question; we all know that disk space fills very rapidly and one can never have too much. However, there are so many variables and options when installing Windows95, that there is no quick and easy answer. The operating system is big, - that’s a certainty! If the greater size justifies increased performance and not merely the equivalent of what used to be in Windows and in DOS I believe there is a solid reason to opt for the full installation.

Should you choose to preserve your old DOS and Windows capabilities with the dual-boot option, it won’t delete any of the older files to free up space on your system. My personal suggestion to a potential new user would depend upon the size and number of hard disks available. With the rapidly plummeting prices of 1 gig, and larger drives, I feel the *ideal* is to be able to devote a partition of at least 120mb or a separate disk of about that size devoted entirely to Windows95 and its related files.

Why that much? There are two very important considerations behind this suggestion. First, Windows95 uses a dynamically sized swap file; and as the system’s needs change, so does the size of the swap file. Depending upon your available memory and the programs you are running simultaneously, the swap file might grow to 20 megs or more. Having that much free disk space on your Windows drive can help your system run at its best potential.

Secondly, you will find that more and more new software stores at least some of its files in \windows\system or in common directories. Office 95, for example, added dozens of files to my C: drive, even though Office itself was installed elsewhere. So the space needed for *Windows95* although actually for other programs, but stored with Windows, will grow continually. Giving it about 120mb or more could spare you crunch problems later on.

One feature of Windows95 that many folks relish is the requirement Microsoft has imposed, that to gain the Win95 logo, third party software must contain an *uninstall* capability. That's a big plus when house cleaning a crowded hard disk. Anyone who has tried to track down the orphaned files of long forgotten programs has learned this lesson well. But - like most new things - there is a catch.

When uninstallable software is added to your system, you mustn't "play with it". Let me give you an example: You install a new program, the visionary VisiCalc95. It comes with a Win95 logo, so it is uninstallable. The setup routine, however, doesn't permit a lot of user interaction. The software, for reasons known only to its programmers, automatically installs itself in what seems to be the new standard to C:\Program Files. It then proceeds to add a new folder to your Start menu - including entries for README, WHAT'S NEW, CONVERSION NOTES, HELP, CONVERSION HELP, etc. - and may even plop a shortcut down on your desktop. You don't want it where it is, but moving it to another drive or directory is tough. If you try to do that, you edit your start menu to get rid of all that extraneous stuff. You might also move the shortcut for the main program to your already existing Spreadsheets folder. Great. You use the program for a couple of months but when you get Lotus I-B-M, you fall in love

with it and decide to scrap VisiCalc95. No sweat! Simply go to the Control Panel, select Add/Delete Software, and you can uninstall VisiCalc. Right? Maybe - but probably not!

So, you changed things about. You moved shortcuts around, you got rid of start menu entries. Nonetheless, the odds are that the uninstall script will bomb you out. If it does, getting rid of the files that VisiCalc installed will be very difficult, - same old - same old! Removing all references to the application from the Registry will be even harder! You see, Win95 doesn't rely on .INI files anymore; most all the settings that would have been stored in the .INIs in earlier versions of Windows are now in the Registry and sometimes referenced in both places. I would *not* recommend that a novice explore those depths! Therefore, the lesson from Uninstalling is to be very careful when installing !

During the install of any application under Windows 95, think carefully about the options presented, particularly that of where the program is to be installed. As most software will add some additional files to your Windows directory, avoid - if possible - putting new software on that drive. But foremost, remember that if you might decide to uninstall the software at a later date, moving shortcuts, changing folders, and similar customization *may* prevent effective use of Windows 95's uninstall abilities.

Finally, I'd caution that, just because it's the "latest and greatest" doesn't mean it is the best for you. Windows95 can offer some useful improvements to many users right now - and has the greater potential to offer many more enhancements in future months and years. In fact, you may be wiser to stick with a smoothly running Windows 3.1 or

Windows for Workgroups setup for now. This would be particularly true if your CPU, video card, or hard drives are older and slower than today's standard. This is a certainty if you only have 4 meg of memory. For such users, saving the \$89 towards more memory, if the system is otherwise capable, or a whole new system which would probably include Windows95 as its default would make far better sense. Windows95 is here today, but there'll be a Windows96, and probably a Windows97 as well.

*Paul Kinnaly has the dubious title of Production Editor of **WindoWatch**. His talents far exceed the tasks of proofing and editing copy. He is a Management Analyst with the Boston Office of the Veterans Administration.*

Change Of Address

Copyright 1995 by *John M. Campbell*

Microsoft Windows 95 will be on the street by the time this edition of *WindoWatch* appears, and countless copies of the successor to Win 3.x will be in the hands of users anxious to upgrade. Perhaps the most common installation question will be whether to allow '95 to overwrite the old Windows, or to install it to a new directory. Choosing the first option will destroy the Windows 3.x system, making it impossible to retreat back to the old and familiar interface that may have taken countless hours to fine tune and tweak. Choosing to install '95 to a new directory will preserve the existing Windows, but will require reinstalling almost every Win 3.x application under '95 - not a prospect that most people would relish. What to do?

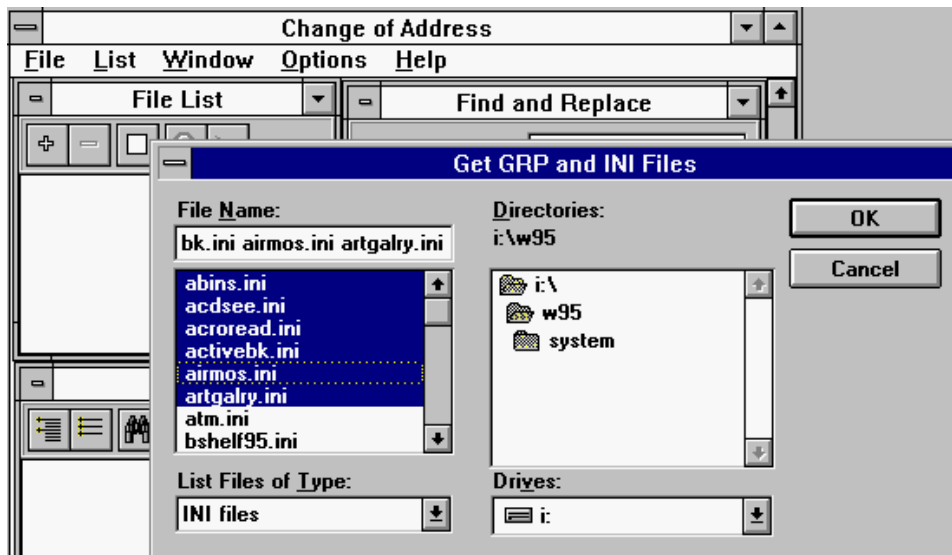
I believe it was Jeff Marchi who first proposed a good solution to the problem of preserving a 3.x Windows installation, while still having all Windows apps available for use in '95. Jeff's solution involved copying the Windows 3.x directory, and its subdirectories, to a new location under a different name. Then, the user would manually change all INI files to point to that directory. For example, if C:\WINDOWS was copied to C:\WINOLD, all of the INI files (in the WINOLD directory) that had lines pointing to C:\WINDOWS would be edited to substitute C:\WINOLD. Windows 95 would then be installed over WINOLD.

Jeff's solution does work, but it involves a lot of searching and editing of INI files if one has a multitude of Windows applications. Of course, most text editors have a search and replace feature, but the user still

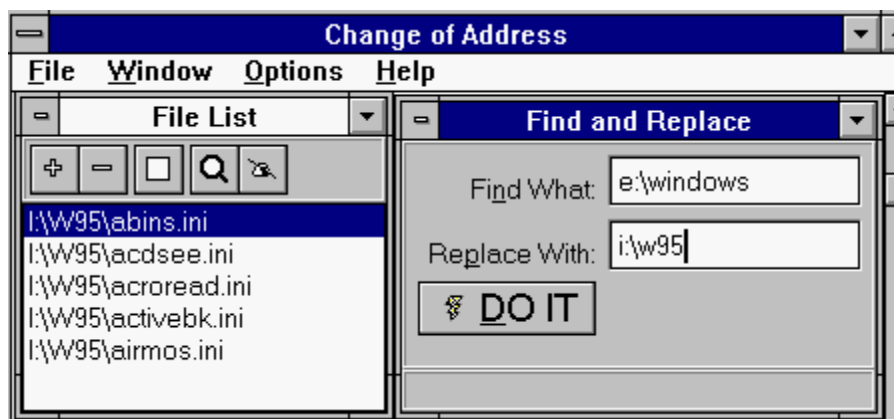
must look at every INI file. If only there was an easier way to automate the editing, I thought.

Then, I saw the featured utility Change of Address (COA) in the June 13, 1995 issue of PC Magazine. COA was developed to ease the task of moving Windows applications to a different drive or directory, by changing address strings in INI, GRP and Registration Database entries. The utility features a browser that makes it easy to choose which entries to change, as well as INI and GRP file editors, in case the user prefers to make changes manually. I quickly realized that COA was made to order for the task at hand.

Here is how I used COA to prepare my system for the Windows 95 Preview Edition, which I installed on Partition I of my second hard drive. First, I copied E:\WINDOWS and all its subdirectories to I:\W95. Then, I edited my path statement in AUTOEXEC.BAT to point to I:\W95. It was now time to use COA. *(If you decide to follow this procedure, be sure to change the drive and directory names I use in the following explanation to those you will be using.)*



COA loads with three windows visible; *File List*, *Find and Replace*, and *Registration Database Viewer*. Clicking the "+" icon located below the File List Window brings up a standard dialog box labeled "Get GRP and INI Files." We aren't concerned with GRP files, since all of the Windows 3.x apps will remain where they were. But a number of INI files have lines that point to Windows itself. These lines must be edited.



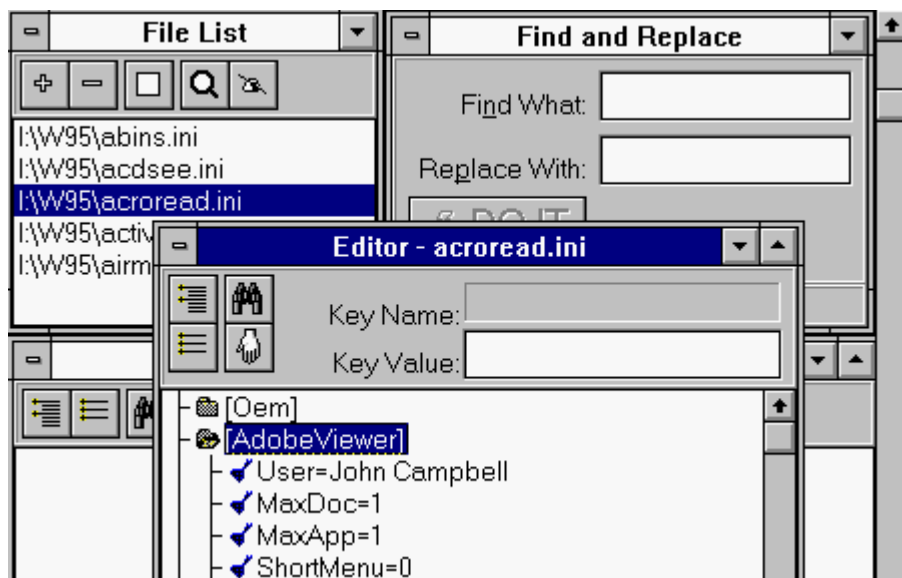
At this point, you would choose the "I:\W95" directory. A list of all INI and GRP files will appear in the File Name window of the Dialog Box. Choose "INI Files Only" in the File Type field. You may Shift-Click on all of the files, or only on those you know contain a reference that needs to be changed. Now, click on "OK." All of the chosen INI files will appear in COA's File List Window. Next, move over to the Find and Replace Window, and enter "E:\WINDOWS" in the Find What: field. Move down to the Replace With: field and specify "I:\W95." Click the "DO IT" icon.

That's it! COA will search for all occurrences of "E:\WINDOWS"

in every INI file, and change the reference to "I\W95." And if any Registration entries contain a reference to "E:\WINDOWS," those will be changed too.

You are now ready to install Windows 95 over the I\W95 copy of Windows 3.x. Have fun!

I didn't mention several other features COA offers. Remember that the program was written to ease moving Windows apps to different directories. COA has both INI and GRP file editors. Any of these type files can be brought into the appropriate editor and modified as needed.



Also, the Windows Registration Database can be imported into a special window, where it appears in tree form. Any branch can be expanded and edited. To edit a line, just drag it into the Find What: box under Find and Replace. You can then replace the line with a

new string, as you did with the INI files. Be careful, though. Every occurrence of the selected string in the Registration Database will be replaced - not just the line you started with!

I obtained COA Version 1.0 as COA.ZIP (272625 bytes) from the Utilities Section of the Ziffnet TIPS Forum. (The filename may be slightly different now, if a later version is available.) COA can also be found on Channel 1 as COA.ZIP - Conference 57, and on other BBSes that make PC Magazine utilities available for download. If a BBS separates PC Magazine utilities into monthly files, look for June, 1995.

John M. Campbell is a regular [WindoWatch](#) contributing writer. He the manager of the Elkins office of the W.V. Unemployment Compensation Board.

An Essential Utility for Windows95: FDFORMAT

Copyright 1995 by Frank McGowan

DI a!? ayyyyyyyyy yyyyyyyyyRyyyyyyyyyyyyyyyyyy -95; my withdrawal pains from losing Win 3.1 have been excruciating! While it's undoubtedly true that you can't teach an old dog new tricks, this old dog is willing and motivated to learn, - as long as the effort seems worthwhile. As you can probably tell, I'm still pretty skeptical about the newest OS. I suppose I'll get over it, and learn to love Win 95, -- one of these days.

In truth, I should be grateful to Microsoft. As one who works in computer training, the coming of Window95 with its new challenges, obviously opens up a field ripe with opportunity. Guess I d better grit my teeth and climb back onto that wild horse.

It didn't do much for my dyspepsia, however, to discover that I couldn't make backup copies of my Windows 95 distribution disks. There s nothing quite so upsetting as the message "This Disk Can't be Copied". For a few moments, I assumed I had a problem with the 3.5 disk drive, so it *was* a small relief to realize that the Windows 95 disks were formatted to hold over 1.7 meg, rather than the usual 1.44. I grumbled, and worse, about how inconsiderate it was of Microsoft to use a non-standard formatting routine (DMF) *and* not

provide the proper utility with their new operating system. This huge hole in their package put all of their customers at risk of losing the ability to reinstall the system, in case of disaster, assuming the rescue disk failed. I put the original disks back in the box, and put the box in a safe place, hoping that nothing would corrupt them.

Then along came a copy of a nifty little freeware program called FDFORMAT, the answer to the prayers of all who have upgraded to Win 95 and intend to upgrade their major Microsoft applications, such as Word and Excel.

Created by a troika of benevolent programmers named Christian Hochstatter, J. Armengaud, and P. Summers (sorry, I don't have the full names of the other members of the team), FDFORMAT transforms a 1.44 disk into a 1.7 meg disk; and then its companion program, FDREAD, performs the disk copy. Voila! Backup disks! Okay, it wasn't quite that straightforward. The documentation was virtually non-existent, save for one README file supplied by a benefactor named R. A. Faucett, who provided the proper command for formatting a diskette. R. A., you may have saved my sanity!

After unzipping the distribution file, I had to muddle about figuring out what all the little icons mean. It should be obvious, but wasn't to me. Even though R. A. told me in the README file that Fdcpy17a refers to disks in the A drive and Fdcpy17b.... well, I'd been having a tough day.

Not so obvious is that you have to have already put the disk in the drive before double-clicking the Fdcpy17a icon. Old habits? Or, even more important, that you need to format a bunch of diskettes -

(thirteen actually) to the new 1.7 meg capacity so they re ready to receive the data after you've read the Win 95 diskette into memory. You do this by invoking the FDFORMAT program in DOS mode, and specifying the following command:

FDFORMAT A: /T:80 /N:21 /C:4 /D:16 /M:240

The program script that shows up when you start the copy process implies that you can simply put any 1.44 diskette in, and it will be properly formatted. Even though I'd already formatted the diskettes, I gave it a try with an old 1.44, and although I could not reformat an already used diskette others can *if* the old disk is clean and free of errors. Quoting from R.A. himself

“ This will yield the following results from FDFORMAT after the disk is formatted:

OEM-Entry	CH-FOR16
Total sectors on disk:	3360
Sectors per track:	21
Heads:	2
Bytes per sector:	512
Hidden sectors:	0
Boot-sectors:	1
Number of FATs:	2
Sectors per FAT:	3
Total clusters on disk:	838

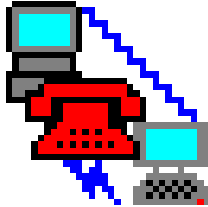
1716224 total bytes on disk
1716224 bytes available

He goes on to say, “The key is the /M:240 parameter. This sets the Media Descriptor Byte to F0 (hex). This allows FDFORMAT to successfully use 4 sectors per cluster on a floppy disk. DOS normally supports only 1 or 2 sectors per cluster as the FDFORMAT documentation explains. Without this parameter, and using 4 sectors per cluster (/C:4), FDFORMAT will incorrectly set the Media Descriptor Byte to F8 (hex) and the disk will NOT be properly read by DOS.” Thanks RA !

I inserted the newly-formatted 1.7 meg diskette and pressed ENTER. My heart skipped a beat when the message “No valid drive. This drive cannot be formatted” popped up on the screen. I waited a bit, and breathed more easily when the files started to be copied onto the diskette. Of course, it was with considerable trepidation that I put in Win95 disk #1 and pressed ENTER in the first place. - I was betting 89.95 the diskette wouldn’t be wiped out.

In all, it took about an hour to get through the formatting and copying, but considering that my system is now backed up, I consider it time well spent. Besides, I was able to keep an eye on the O.J. trial in the meantime, almost as mindless a pursuit as performing thirteen disk copies. My hat’s off to the folks who came up with this ingenious program. I have to wonder if they had any idea how popular it is about to become?

Frank McGowan is a teacher, a trainer and a scientific writer. He is a regular WindoWatch contributor. Questions about his articles can be directed to him at 76342.3036@compuserve.com



Reflections of a ModemJunkie

copyright 1995 by *Leonard Grossman*

**This Month's focus: The real problem with Windows 95.
A revolutionary approach.**

Last week I got a real shock. I happened to look at a notice from my bank. The details aren't important but it was really scary. I've never paid more than \$4,000.00 for a car. I bought my computer in a pawn shop. I make a decent salary. How can things be that bad? I began to take stock. The process isn't over but some things are becoming clear. I don't do anything unreasonable or more to the point, I just try to do too many reasonable things. So, getting back to the bank balance, something's gotta stop. How do I get off of this train?

Windows 95 is reasonable. Only about \$89. Why not get it and be right on the cutting edge? What if I need a little more RAM at only 40 or 50 bucks a meg? A bigger hard drive? Everyone has heard the mantra: "Storage is cheap these days." Remember when a 40 meg drive cost over \$200 bucks. I can probably get a gigabyte for that

today. At that little computer shop in down the street I can get a 486 motherboard with CPU and one of those cute little fans for under a hundred bucks. So why not jump in?

Why not? Indeed! Because it never ends. Because it is so seductively reasonable. It's not just computers. Its been going on for years, from fins in the '50s to full access to the Internet. Its just all so reasonable, -- and we have to have it now. Whatever *it* is, somehow *it* always costs just a little bit more. Many of us have to stop somewhere and Win95 is my line in the sand. Thus far and no farther... *at least for now* !!

Please don't get me wrong. I wouldn't buy a new machine today without Win95 on it. But before upgrading the operating system (OS) on your current machine, I suggest asking yourself a few questions:

Do you have trouble operating Windows 3.1?

Do you really multitask?

Why do you need it?

The principle advantage of Win 95 is that the interface is easier to learn--if you don't already know how to operate a computer. If you successfully downloaded this magazine that probably is not an issue. In fact, you will have to unlearn a few tricks and habits to get comfortable with Win95.

It won't be hard. You may even like the interface. But it won't really be easier for you than your current OS. On the other hand, if you are about to learn a completely new application, it may in fact be easier to

learn under Win95, just as my learning curve on internet applications was greatly speeded up by the use of the Windows interface. Finally, if you are buying a computer for a someone completely unfamiliar with computers it may well be worth the jump. But this is about you and me, not about tyros and neophytes.

The second purported advantage is the improved ability to multitask. Those in the know say Win 95 can't compare with Windows NT or OS/2-Warp when it comes to *real* multitasking. For the sake of argument, though, lets agree that it multitasks better than the existing Windows operating systems. Bottom line question: How much multitasking do you really do? Is it a quick look at a spread sheet while in your word processor? Do you play solitaire while waiting for your e-mail on the internet? (I caught my daughter doing that last night.) If that's all you are doing, Windows for Workgroups is quite sufficient. On the other hand, if you are seriously into heavy multitasking and really like the Windows interface, Win95 may be the likely answer for you.

Conservation of *resources* while multitasking is one of the hyped advantages of Win95. That's really the test for whether you really multitask. Its true, at least it seemed so to me, that the various Internet tools worked better with a number of open and running applications under 32 bit Win95. But they also work fine under W4WG. Therefore, it seems to me that if you rarely run out of resources under Window 3.x, you won't need Win95.

I concede that WordPerfect for Windows seemed a little less starved under the new operating system. But how much time is really saved? How many lock ups prevented? Even on my pawn shop special -- not

much--not many.

Of course, you can use true 32 bit applications. How many do you have now? How many do you expect to buy in the immediate future? But here's the trap. If you think you need Win95, then you'll want to run out and buy the 32 bit version of every application you use. Will your checkbook balance be any better at 32 bits? In truth, each upgrade won't cost that much. Most of them will be reasonable, just like Win95 itself. And, of course, it's all so reasonable. Only there are so many reasonable things!

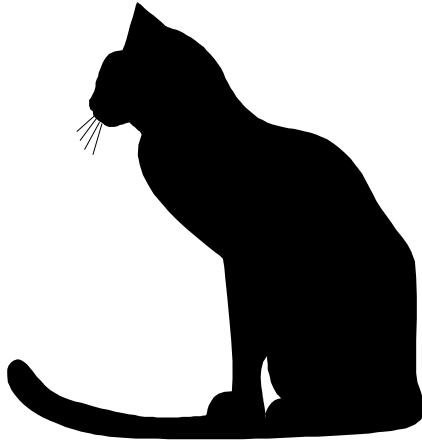
What can you do with Win95 that you can't do now? Do you really need to do it? I resisted Windows altogether for years. It was only when I found something that I couldn't do under DOS did I make the leap. The advent of Windows clients for internet access combined with repeated failure at the Unix command line, convinced me to make the move. I am glad I did, but I'm also glad I held off.

So, when something comes along that I can't do under Windows for Work Groups, I'll take a good hard look at it and decide if it's even something worth doing. Only then will I make the leap. And in the meantime I won't have that MSN (MicroSoft Network) icon staring me in the face, tempting me to log on every time I boot up. You see, I did bring this month's column back to communications, after all.

Join the revolution!! Stop doing reasonable things!!

Leonard Grossman is a lawyer for the Department of Labor. He is a regular WindoWatch contributor and can be reached at leonard.grossman@syslink.mcs.com

The Cat's Out of The Bag!



© 1995 by *Stanley*
The twenty pound black and
white furry Windows expert!

**Bob Miller's
Stanley Does
Windows**

**Purrfectly Yours
by Stanley**

How do I keep Windows 95 from asking me for a password every time it starts?

Control Panel, Networks. Make sure that it says "Use Windows Logon". Then, Control Panel, Passwords and be certain to select "all users of this machine use the same".

Help!!!! All my Start menu items have vanished! What did I do?

You ran a 16 bit defrag program. Only 32 bit disk tools should be used in Windows 95. Time to reinstall and read the instructions this time.

In Win 3.1 and WFWG, I could change my permanent swap file size. Where is that option in 95?

I'd tell you - but you might actually go and use it. Don't. Win95 manages its swap file dynamically. You are much better off leaving it alone.

I use the same programs every day. I used to have a Program Manager Group with just these three programs in it. What do I do now? It is a pain to have to search for them every time.

Explorer, Windows, Start Menu - or right click on START and then open. File, New, Shortcut. Follow the prompts. Your favorite programs will appear right on the Start menu. You can also put icons of them on the desktop but this is a better way.

I like Win95 but my kids use the machine all day to play DOS games. I wrote some batch files for them so they can start them easily but the machine boots to Windows. Can I make it boot to DOS instead?

Sure. Remove the H,S & R attributes from MS-DOS.SYS. It's just an ASCII file now. Open it in Notepad and add (or change) the line to read BOOTGUI=0. Your machine will now boot to DOS. All your batch files will run fine. To start Win95, just type "WIN".

I saw your answer last month to somebody who wanted to run Win95 on a clearly inadequate system. Mine isn't that ancient. Can I run it on a 386SX-16?

Yes. You can also enter your family car in the Indy 500. Don't run 95 on a 386SX anything. Or a DX under 33mz. Or in less than 8 megs of RAM. Ever. I wouldn't wish such on a dog - and, if you know me, you would realize that there is very little that I wouldn't wish upon most dogs!

- Purrfectly yours 'til next month.

Stanley.

Bob Miller really does have a Stanley! Stanley is a very busy and energetic individual but is always available to perplexed Win95 users. With Bob's help he hosts the Ilink Win95 and the Ilink Windows conferences to name merely a few.

Compuhigh

Copyright 1995 by Stanley Kanner

Education and the Internet! Schools for the 21st century..

While rushing about to out do one another, these are buzz words we've heard from almost every Board of Education throughout the country. The acquisition of technology! But what is really going on? Does the rhetoric match behavior and, in fact, how much is the Internet really being used in grades K-12? Unfortunately, not much!

Many school systems have Internet access - but few teachers use it! There are isolated school districts which do have some projects going on, but, for the most part, these are for small groups of students, and are largely experimental.

Given the above, we decided to go for broke. Why fiddle around with little projects when it's possible to create an entire high school on the Internet. That means courses, teachers, high school diplomas, - all of it and we did!

In North America, there are over one million homeschoolers. These students are perfect for an Internet high school. They need a way to

take courses they can't get at home, a way to interact with teachers and other students, and to be able to socialize and not feel isolated.

We entered into a partnership with The Clonlara School in Ann Arbor, Michigan. The Clonlara School is an alternative school that has a program set up for homeschoolers to work independently and still obtain a regular high school diploma. This was how the Clonlara School Compuhigh was born.

The next step was to look at different commercial networks and select one to be our online site. We decided to go with Delphi... the smallest of the large! They gave us the access and flexibility we wanted, and were much looser and less suit and tie.

Converting seven Delphi forums into a main school lobby and classrooms, we set up six basic courses that we felt homeschoolers would have a hard time getting independently and would be interesting for homeschoolers to take. We started out with English (writing), Algebra, Earth Science, World Geography, Small Business development, and American Government. This year we have dropped Small Business, and added Algebra II, Geometry and Physics.

The classrooms themselves are not done in real time. Our thinking is that real time sessions are expensive, and take away the time flexibility of both the student and teacher. The forums themselves are set up as classrooms with postings acting as blackboards, lecture podium, and for the student, questions and discussion forums. We also rely heavily on email between students and teachers.

We use a very good Bot program called "Dlite" which was developed specifically for the Delphi network. The Bot enables the student to have a parallel Compuhigh off-line, and lets the students do all their work without the meter ticking on the commercial network. In fact the average online session only lasts about two minutes. This fits in very nicely with Delphi's five hours for ten dollars price scale. It also allows the student free time to do research and explore the Internet.

In future columns, you will hear more about some of the international directions we are taking, and other computer related educational issues on and off the Internet. This quick sketch of the Compuhigh project is a bare bones outline which we'll flesh out as our column develops.

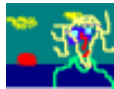
**Please feel free to direct any questions about Compuhigh to;
Stankan@mail.netvision.net.il**

Editorial Note:

Computers are not yet in the appliance category that Herb Chong and I discussed several years ago, even though they are rapidly becoming cheap and very obtainable. In some school districts the desk top computer is neither widely available or widely used by individual children. Many parents are very dissatisfied that their children are not being better prepared in either the basics or the electronic world where they will be expected to compete. As a result they have withdrawn their children from the public school systems. There are many lessons to be learned from the homeschoolers, parents and teachers, and the online mentors! It is to that end that we welcome Stan to the WindoWatch list of regular contributors. lbl

Multi-Alice

Copyright 1995 *Peter Neuendorffer*



The UPS man arrived with a large package for Alice, the noted Broadway director and my friend. She promised me that the next day we would try out the new multimedia software at dawn. She was staying with me at the ocean as part of her vacation to the Isles Of Shoals. Our cottage has a large picture window with a spectacular ocean view for sunrise, wave, and seagull watching.

She got me up thirty minutes before dawn and began to set up her equipment as I dozed in front of the picture window. I was jarred by the sounds of a symphony orchestra suspended over the lighthouse, with a large mouse directing from a promontory. The clouds turned a ghastly day glo green, a surprising color. Alice was furiously clicking her computer mouse in the background. Suddenly there were two suns, one of which was making faces and sticking out it's tongue. A flock of orange seagulls alighted in red tidal pools and darted after singing fish. Lightning began to play upon the horizon of a now cloudless sky.

"Multimedia Actual Reality!" screamed Alice with glee. I ran outside,

to escape what was an obvious computer generated projection upon the plate glass window. But there were actually two suns, a symphony orchestra on the lighthouse, the green clouds, and singing fish. As in the famous Soap Opera last episode, I now awoke from my dream.

Now that I was conscious, I realized it was still before dawn. The sun had not risen yet, and Alice was fiddling with her multimedia controls.

"This will be multimedia actual reality," Alice whispered, and I settled down to wait for the sunrise, watching the now dimly-lit waves roll in and break upon the rocks. A giant blue heron perched on the bell buoy to wait as well. A sudden power outage cut short Alice's show, so we all had to settle for the real thing, which was pretty good all by itself.

Peter Neuendorffer is a Windows programmer. You can download his work on the World Wide Web <http://www.channel1.com/users/petern>"

The Chinese Game of Strategy and Chance!

Copyright 1995 by Jerome Laulicht

Berrie Bloem's digitized traditional strategy and tactics game of MahJongg v1.1a, delivers the promise of his earlier shareware version. The software offers excellent on-line help for players at all levels with unusually clean programming. We have yet to encounter a single error running a highly complicated game and very sophisticated program under Windows95. It all adds up to a tour de force for this tiny programming team.

No small part of their success was in formulating and programming the decision rules for the three *robot* players who are your opponents. The complex game-playing screen is uncluttered and functional. Even those people with limited experience with Windows programs will catch onto it quickly. The Help file is almost a model for Windows programs! It is well-organized and written in lucid English. With the search engine you almost invariably are given precisely what you need to know in the midst of a game. The introduction for MahJongg novices is first-rate. It is almost possible to be happy that your opponents don't have this resource until you remember that their help is already built into their programming code.

The shareware program available for evaluation, provides an excellent basis for learning or playing. The commercial version adds significant features and contains real improvements. It has all the characteristics of real MahJongg including the elaborate scoring system that might well be unique. "This game of Chinese origin demands complexity in

tactics and strategy which takes it beyond most games used for gambling." All that is missing is the spice of human interaction, a Chinese setting, and the pains and pleasures of gambling. How do you gamble when all your opponents are programming components?

Anyone who has ever played this popular game will love its rapid pace and the easily controlled speed options. Strategies which look impossible to understand become clearer and easier to learn using speed control. There are understandable instructions and quick tips available for most decisions, along with a detailed scoring table which is displayed after each game.

I had only the vaguest ideas about Chinese MahJongg when I first looked at the program. I knew it was an ancient group strategy game and popular for gambling. I had played the various and simple matching tile games called MahJongg. Actually I tried this one during a work break only because it was on the hard disk. What piqued my curiosity when I scanned the instructions were the clear signs of complexity--very different from the gambling games I knew. My attitude toward the game is in flux but its mixture of interest and frustration, strategy and luck is growing on me.

The demands for a strategy which must be quickly revised during the play, poses a challenge. Unlike playing with real people, I can pause to consider options, find facts, and even sneak a peek at the other *players'* hands. Also intriguing is the fact that I have not yet been able to decipher the changing strategies of my ferocious opponents. Yet to win, I must make both correct and lucky moves while remembering their discards to keep them from winning first. Perhaps I have given the game added zest by naming the opponents after three

of my ferociously bright grandchildren rather than my huge and often sleepy German Shepherds.

Real MahJongg with the original rules is not for everyone. Given that it has survived so long as a form of amusement must be that it *is* interesting and fun, and for some, down right addictive. That it has come to western nations from a quite a different culture makes it more difficult and intriguing. A few things should be made clear. Ignore anything you know or think you know about the tile matching games which are called MahJongg should you decide to try out this program. There is no meaningful comparison. Also put aside the image of a rather mysterious oriental game played by middle-aged women who have too little to do or by elderly retired men whose major goal is gambling. This venerable game of strategy requires mental rather than physical dexterity.

Learning the Game

A program cannot be fun or hold your interest unless you are willing to learn substantially about its nuances. Complex games demand some patience, time and motivation . Perhaps this is a hallmark of games which are fun for big kids as well as for complex computer applications. This is absolutely true for MahJongg novices who need to consult *Help* frequently, especially during the early games they play. This is not anything approaching a tutorial but instead points to where you can get needed information and suggests simple learning procedures. If you want more information about the game, see an encyclopedia or the bibliography provided by the Bloems. The trick for a novices like me is to learn the game with minimal frustration. Enjoying learning and problem solving is a bonus which

you can accomplish using MahJongg. This is even more important than the difficulty of the material to learn since most give up on non-essential learning if it's too difficult. So take advantage of my stumbles and proceed like this to minimize annoyance.

- You need to have icons for both the game and the Help file.**
- Stare at the opening screen of the game for a few minutes just to get a vague mental image and delay the urge to play.**
- You will probably benefit from using the Auto Play option a few times before and after reading.**
- Call up the Help file alone and you get a quite functional screen which gives you immediate access to almost everything,--the table of contents, the search engine, an excellent glossary, even the game, etc.**

This screen gives you a glimmer of their concern for teaching the game to novices. It tells you that "before you dive into the game, you should read at least the following topics. These topics will tell you all you need to know to get started." You are then sent to the "absolute beginner's guide", an excellent idea when done so skillfully and one which more programs should emulate. It is "intended to lead you step by step into MahJongg.

From some reactions to their first release, they learned that an easier introductory section was needed to get people up and running with the game. The purpose is also to help you to come to grips with the game faster."

The Topics are:

- +If you are completely new to MahJongg**
- +Object of the Game**
- +Minimum Rules to get playing**
- +Minimum mouse and keyboard commands**
- +Explanation of screen**

The surprise is how well they fulfill their promise. It is written clearly and done so well that I only need to emphasize that you read these pages before and while playing a half dozen rounds or so. You will barely understand the game at first but you can grasp the mechanics of play. Then scan the instructions once again because they will become much clearer. This on-line help (there is no printed manual) is excellent for starting newcomers at square one and teaching both the essentials of the game and the use of the program.

As you play more hands, gradually take advantage of all the options which make it simpler and easier for you to learn to play with understanding. This is your informal tutorial. It is best to start with choosing to see the hands of the other three players and do it for as long as it helps you, and then asking for quick tips on what tiles to discard. Go to the options menu on the playing screen for these and consult help to find out what they do for you.

After you have developed some insight about the game or the software it's time to go back to the instructions for the more demanding strategies. You are now ready to understand the scoring and use this knowledge as a key basis for choosing and altering your strategy and

learning tactics by making moves. You're also ready to try speeding up the game by giving all players less time for decisions. Speed up impacts only upon you. The programmed others will not be affected by such demands. More experienced players might try changing some of the rules and/or changing the score values for any of the hands or game events. You can always consult the on-line help for discussions and examples of each of these options. Simply scan the material first to get a general sense of it, figuring you will have to go back when you first run across these situations in your play. Search on words like tactics and scoring and get an idea of the range of topics covered in *Help*.

Once you can play the game using a few of these options and can easily adjust your tactics to them, you are ready for real people as opponents.

The Bloems promise to develop a network version of MahJongg. Will it become an interesting alternative to the network games of virtual reality violence that are so popular on the networks. Since gambling might be frowned upon, virtual money or credits could be used and hopefully no hackers would alter either the scores or credit tallies kept so accurately on these great counting machines..

**MahJongg for Windows Version 1.01A- The REAL Game \$29.95 US
Elaine & Berrie Bloem,
69 Allée des Plaqueminiers
Île Verte
06560 Valbonne, France
100545,2530@ compuserve.com**

Hello? Is This Tech Support?

Copyright 1995 by *Ben M. Schorr*

What has happened to technical support in the 90s? I can remember when the WordPerfect Corporation, in its pre-Novell life, was the single largest user of 800 telephone numbers in the country. Did you ever need tech support on a WordPerfect product? You would call an 800 number, and within minutes a friendly person from Utah would answer your question - no charge - and then wish you a pleasant day!

Now when you call, at best it's a long distance call, and at worst a 900 number at \$2/minute plus, or a \$25 per incident charge. Some companies have so many tech support calls that they have their own DJ's on line, *LIVE!*

Did you ever sit on hold with Microsoft's Tech Support? It's something that more than 12,000 people do each day - thanks to Win95. There, you can hear a live DJ play music and cheerfully update you on the wait times and the number of callers queued up for the various support departments.

Imagine *your* frustration! To go through that kind of waiting only to be told that the problem is with your video card, operating system, word processor, or sound card - when it was the %^&*# !! sound card people who insisted that you call Microsoft!

THE BLIND LEADING THE BLIND

Have you called Packard Bell for technical support lately? We do quite a bit of service on Packard Bell machines and occasionally have

a question we need to ask of the vendor. By now you'd think we'd know better.

One of our first experiences was about three years ago when we had a client with a CMOS battery failure in a Packard Bell 386. Does that sound simple enough? The client was located forty-five minutes away so we thought we'd call Packard Bell and find out what kind of battery we needed to pick up to replace the bad one.

I got a technician on the line, provided him the model number of the unit and after a few moments of research he told me it took battery A. I don't really remember his exact answer or the details, but that was the gist of it.

The next morning we were ready to pick up the battery and go out to the client, but there was still some confusion as to what type of battery he had identified, so we called back. A different tech answered; so we gave him the model number and, after brief research, he told us that it took battery B. We weren't positive about what the first tech had said, but we WERE positive that it wasn't the same answer.

Now, thoroughly concerned, we called back a third time to confirm; this time we got a third tech. We explained the situation and he confidently proclaimed that, in fact, that model of Packard Bell machine used Battery C. He was so convincing that we picked up one of the "C" batteries and arrived on the client's site an hour later. As you might be expecting, after opening the case of the unit, we discovered that all three of the techs were wrong! In fact the unit took a *fourth* type of battery.

On a separate matter one of our technicians recently spent twenty minutes on the phone explaining their system *to* their tech. Who's

supporting whom here?

If you think that's bad, we recently picked up a new client which is a medium sized Los Angeles bank . They've been paying \$200/hour to several different large service companies trying to get their IBM PS/2 286 to connect into a mainframe/mini using PCLink. In the months of effort, they have had absolutely no connection. They've had the cabling checked and rechecked, even reRUN and they're sure it works fine. Still, no connection. I'm not that familiar with PCLink, but I offered to take a look at it for them.

After arriving at the site my first thought was that perhaps the serial port on the PC was dead. So I fired up CheckIt Pro with a loopback plug and tested it. It worked like a champ. I checked PCLink's configuration to make sure that all was correct. "9600 baud, COM1" looked good to me. One more check of the back of the machine brought about an interesting discovery though. The cable was plugged into LPT1.

LPT1 was, in fact, the only port on the back of the machine that was pin-compatible with the cable and apparently the \$200/hour blue suits didn't think to check and see which port that really was. Since PCLink, at least their version of it, doesn't support parallel connects, they weren't going to get very far with that setup. A \$2 adapter fixed the pin compatibility problem and within minutes they had a live connection that was fully functional. The amazing thing is that after weeks of trying, none of these expensive professionals were able to come up with that simple solution!

The point of this story, in fact this whole column, is that for whatever the reasons it seems as though the quality of technical support is sliding fast. *End-users are enduring long waits and high costs to get*

wrong answers. I have dozens more stories of vendors and high priced service companies steering end-users wrong; I mean *blatantly* wrong!

What's behind all of this? Have systems become so complicated and technological progress been so rapid that even those charged with supporting them can't keep up with accurate information? Do support companies not care about quality support anymore? Or are they just trying to gouge consumers?

Things have been complicated further by the fact that users are, on the average, more savvy than they used to be. Often they know just enough to get themselves into trouble. I have one client who calls me every two weeks...right after he has tried to install a new operating system, environment, memory manager or other significant programs onto his system.

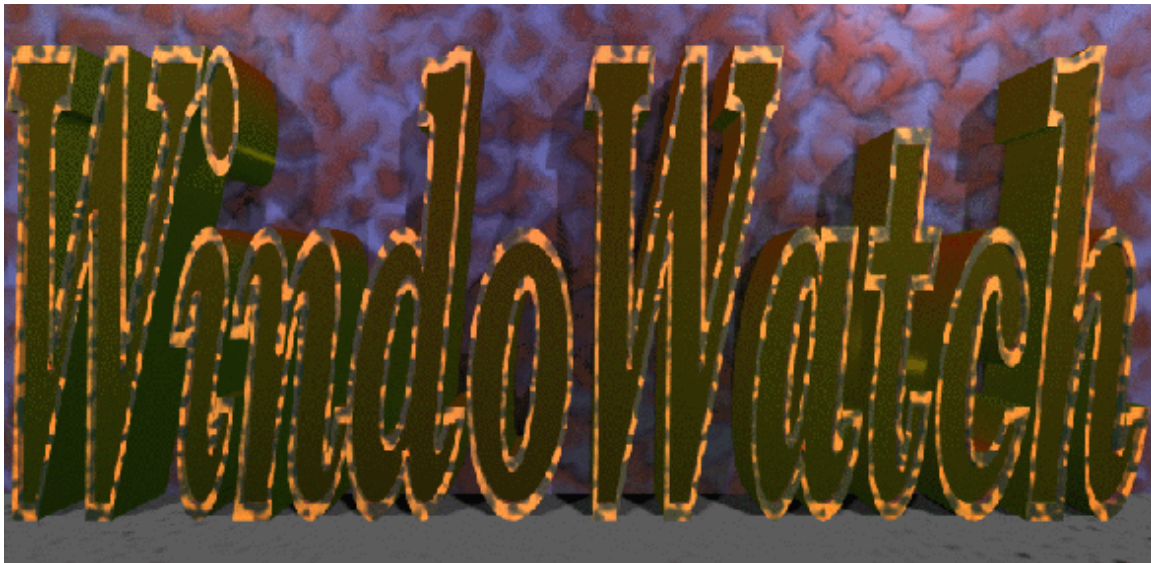
Certainly we make mistakes on occasion, too, but I like to think that if we made mistakes like those I've described, that we would either quickly catch it, or admit the error and accept responsibility. All too often it seems as though companies are making mistakes and then denying any responsibility.

So what's the solution to this mess? Users are getting more and more disgruntled and the industry's reputation is slipping fast. What kind of remedies do you think are appropriate? If you have any notions or suggestions, E-Mail them to me at ben.schorr@bcsbbs.com, and in future columns we'll discuss these ideas, and perhaps get a response or two from a couple of the major industry players.

Ben Schorr is a computer consultant in Los Angeles. He hosts the *Ilink Consultants* conference and is active on many more. He is a *WindoWatch* regular. He can be reached at ben.schorr@bcsbbs.com

Herb Chong's Computer Art Gallery

Herb Chong created this bmpfile to be used as a possible WindoWatch home page logo. We resized it for browser use and as a graphic for the magazine. This was saved as a 256 color bmp and to our surprise Acrobat's Distiller reproduced it very well.



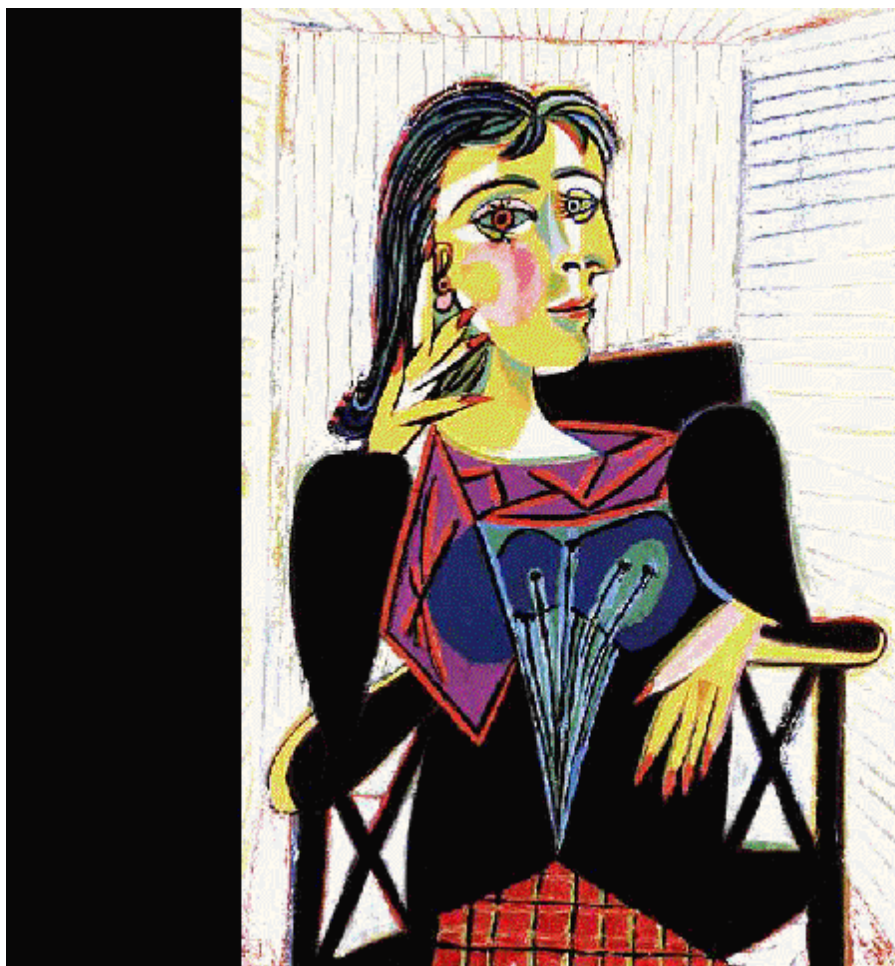
I started playing and saved the original bmpfile to a 16 color bmp and this is what I got. I think a happy accident. lbl



In the middle of Herb's burst of creativity WindoWatch got a marvelous piece of software to evaluate. Notwithstanding the rule of this gallery that all of the images be computer designed, I had to show off two of the lovely offerings that are in this package from Trident Software Inc. of Arlington, Va. Review next month. lbl



MIRÓ, Joan. "Hirondelle/Amour." (winter 1933-34) Oil on canvas, 6' 6 1/2" x 8' 1 1/2". The Museum of Modern Art, New York. Gift of Nelson A. Rockefeller. Photograph © 1993 The Museum of Modern Art, New York.



PICASSO, Pablo Ruiz.
"Portrait of Dora Maar."
1937. Oil on canvas,
92 x 65 cm.
Musée Picasso, Paris.
© PHOTO R.M.N.