

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

108th MONTHLY ISSUE

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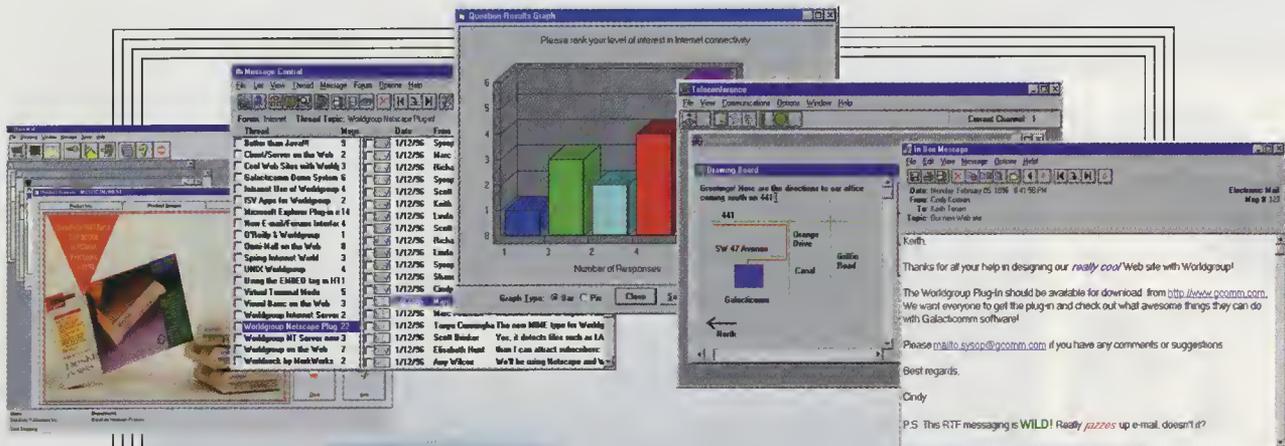
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BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

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Kathy Meyers/Jack Kramer

All signs point

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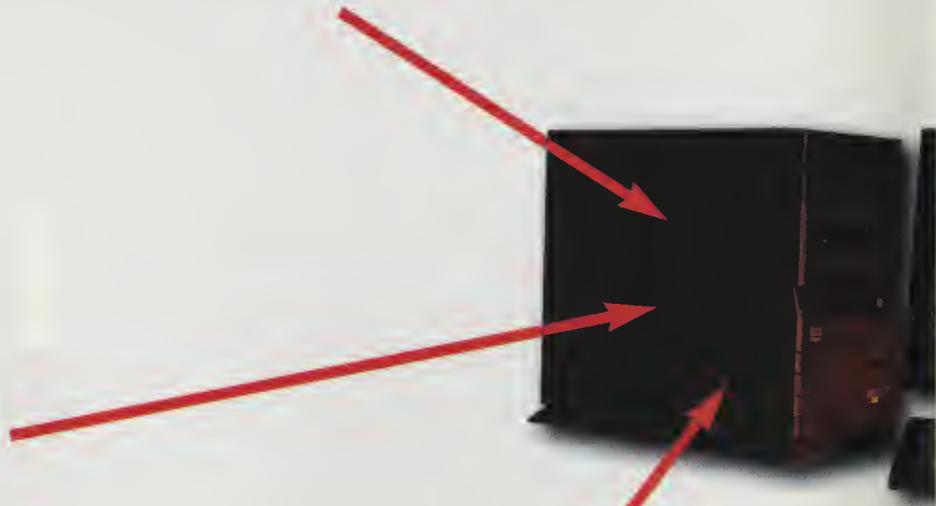
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EDITOR'S NOTES

BANDWIDTH ARITHMETIC AND MYTHOLOGY

We are currently in an intense tool-building phase in global networking that I find profoundly exciting. I expect utter marvels in information and individual empowerment, personal computer software, and even in the very heart of communications technology.

But there are boring parts. One of them is the "bandwidth question" (yawn). I wrote bandwidth off as a problem years ago. There is no such thing as a connection "too fast." But in every conversation I've engaged in over the past year, any conceptualization of a new application or software program - video, voice, or whatever - was inevitably met with a comment from someone noting essentially that the lack of bandwidth made the idea impractical. Worse, I've watched creative minds wither in the face of this non-argument as if it had merit. Further, there is a lot of discussion about bandwidth as a function of Internet growth at the backbone level. So, a brief word on the topic...

Bandwidth, for any purpose in the context of the Internet and data communications, is a legal and economic problem - not a technical problem. It has ever been so. It is so now. I believe it will be so for the rest of my natural life span. The technology is already so far out ahead of need that it is virtually unmarketable. And the advances are appearing so rapidly that I would hesitantly predict that within 15 years we will be abandoning fiber optic cables in the ground because it is too expensive and too much trouble to keep track of where the two ends are terminated. Post divestiture 1984, the competitive long distance companies went on such a flurry of cable laying that it would be hard to find a piece of real estate to stand on without standing on top of some of it now. The need for cable was

based on a bandwidth roughly equivalent to 32,000 simultaneous conversations per line. And we are now faced with bandwidth capacities measured in millions of simultaneous conversations per line. We've "glassed" the country. I fervently hope we don't find out from Corning at some point that the stuff is toxic, radioactive, or carcinogenic. We simply couldn't ever get it all cleaned up - we'd have to move to another continent.

Let's talk a bit of history. Most of us online feel familiar with the concept of the increase in modem speeds over the past twenty years. In the late seventies, 110 bps modems were somewhat available using a variety of schemes none of which really were interoperable. The 300 baud modems standardized on the Bell 103a standard and were generally interoperable. Dennis Hayes actually was one of the first winners in the personal computer market by developing a 300 bps modem that you could control through the serial port from the keyboard with AT commands.

The short form of the course is that 300 bps grew to 1200 bps, to 2400 bps, to 9600 bps, to 14.4 kbps, to 19.2 kbps to 28.8 kbps. I won't bore you with the details of quadrature phase modulation or constellation theory, but note that at several points along the way there were knowledgeable people available to note that we had reached the limits of information theory and physics. We weren't, of course. We were just in the lull before the next big breakthrough.

The point is, we spent BILLIONS of dollars funding the advance of a stupid technology we never did need technically. The entire evolution of the MODulator /DEMODulator was a fool's errand from conception to the very latest products. The very concept of converting digital bits and bytes to analog tonal signals for transmission over an audio medium is totally retro. We might as well convert digital signals to smoke signals and issue everyone on the Internet electronic wet blankets.

It was never impressive that we could transmit data at 1200, 2400, 9600, 14400 or 28,800 bits per second. It WAS impressive that we could do so using VOICE GRADE TELEPHONE LINES.

Why? Because everyone HAD voice grade telephone lines. They were UNIVERSALLY available. There were a variety of other lines available as well. The 56 kbps digital line was trivially available from the telephone company BEFORE DIVESTITURE IN 1984. But the telcos who had a guaranteed monopoly on telephone service priced them stratospherically and sold them to businesses that had little other choice. The concept of selling them at a reasonable price based on the cost of providing them never even came up in conversation. In fact, there were some VERY SERIOUS efforts by telephone companies to outlaw the use of modems over voice grade telephone lines and force people to use the stratospherically priced data line offerings for any data communications. Few remember the battles with Southwestern Bell Telephone over this matter but in the early '80's there were actually some bulletin boards who pulled the plug rather than engage in the battle. It was real. According to the telephone company at that time, you shouldn't use modems on voice grade telephone lines. You were some how "cheating" them if you did.

The concept of 56 kbps links to the early bulletin board community was a preposterously fast connection. But the price was preposterously as well. And they weren't universally available. You could connect two points with them. But then you had two points. And all the people who might connect to your online service of course had VOICE GRADE TELEPHONE LINES. So the modem was developed specifically to work around the recalcitrance of telephone companies and this universal access issue. It was never developed to optimize data communications per se. It was developed to use the least common denominator available to make the connection.

Today, bandwidth remains an infrastructure issue held hostage by telephone companies. And with regards to the Internet, it has actually broken the issue into two largely separate issues: backbone bandwidth and access bandwidth.

BACKBONE BANDWIDTH

Backbone bandwidth refers to the carrying capacity of the top level links connecting various metropolitan areas across the continent. Let's again visit a bit of history here. The ARPANET, which operated until 1990, consisted entirely of 56 kbps lines linking 16 cities across the United States. The National Science Foundation backbone first conceived in 1986 was a much faster backbone tied together with 1.544 Mbps T1 lines. It was fully operational by 1988. And it provided a quantum leap in backbone capacity - the equivalent of 27.5 of the 56 kbps lines.

There was enormous controversy over the switching technology to increase the NSFnet backbone to T3 speeds of 45 Mbps - as late as 1993. In fact, for several years, the switches that Advanced Network and Services used didn't really switch data packets fast enough to actually achieve 45 Mbps links. But by late 1993, the T3 network was more or less working - again at an increase factor of ANOTHER 29. The result was that from 1988 to 1993, a period of five years, the bandwidth speed of the national backbone had increased by a factor of 803 - close to 3 orders of magnitude.

Today, the Internet consists of a dozen or eighteen national backbones operated by private companies - all interconnected in a few cities such as San Francisco, Chicago, Washington DC, New York, Los Angeles, Dallas, and Houston. These backbones are almost all T3 backbones operating at 45 Mbps. But instead of one backbone network, we now have perhaps eighteen of these - with more being built. So we not only have more BANDWIDTH, but also an increase in CAPACITY by a factor of 18. Note that BANDWIDTH and CAPACITY are NOT the same metric, and are only loosely coupled to each other.

In March, MCI announced that they had increased the speed of their entire backbone to 155 Mbps - nearly another fourfold increase. AT&T has announced entry into the Internet Service Provider business, adding another backbone. It is doubtful they will want to become known for having the weeny backbone

with regards to bandwidth. SprintLink is another player at the backbone level working on higher speeds. And all agree that a 500 Mbps backbone is likely early next year. The question is who will be there first - not whether it will be done. So from 1993 to 1997, we are looking at another increase in BANDWIDTH by an order of magnitude from 45 Mbps to 500 Mbps - as well as the prolific increase in CAPACITY represented by various companies introducing their own backbones.

If we ONLY encounter an order of magnitude increase in the next three years, by 1999 the 5 Gigabit backbone should be common. I rather look for an increase in the pace.

Today's switching equipment for fiber optic transmissions has a limit of about 2.5 billion clicks a second. Fujitsu claims it will have a 10 billion bit switch by the end of the year. This is not lab stuff. That is, they will have one on the market that anyone with dollars or yen can purchase and have delivered - in a box.

Is the 10 Gigabit backbone then the limit of what COULD be done? Hardly. On February 29, 1996, at the international Conference on Optical Fiber Communications in San Jose California, not one but THREE different lab groups demonstrated TERABIT switches. Fujitsu actually transmitted data 90 miles on a single fiber optic strand, with NO repeaters and NO amplifiers at the 1 TERABIT speed. A Terabit is a THOUSAND GIGABITS or one TRILLION bits per second. ATT/Bell Labs and the Japanese Communications Conglomerate NTT ALSO announced Terabit technologies. All used essentially the same technique. They made optical switches color-smart. They transmitted a number of "channels" of light down the same pipe at different wavelengths - essentially colors - to multiply the capacity of the pipe.

How fast IS a Terabit per second? Well you could carry 22,000 of the 45 Mbps T3 lines in a single fiber optic cable at that speed. That's **FOUR orders of magnitude - times 2.2**. It is equivalent to 6400 of MCI's 155 Mbps backbone lines.

So is Terabit bandwidth the limit? Probably not. The limiting factor on fiber optic communications is actually the electronics. The holy grail of switch-

ing technology is to eliminate electronics and switch/amplify light with light. And we already have lab demonstrations of light switches that actually work on light itself - no electronics.



So for the next ten or fifteen years, the technology is so far out ahead of the NEED or desire for bandwidth, that it is entirely moot at the backbone level. We will not hit any technological ceilings anytime in the foreseeable future.

So why does the Internet seem barely operational most days? TCP/IP is actually a pretty clunky packet technology. It predates the X.25 packet networks used by CompuServe and Telenet many years ago. It won by being open, essentially free, and ultimately ubiquitous. Vinton Cerf used to wear a t-shirt proclaiming **IP IN EVERYTHING** and apparently he did. It is not very elegant and under load there is some packet loss. But the software simply retransmits missing packets and this is NOT why the net seems clunky. Most of the problems have to do with servers.

A distributed database of Domain Name Servers, for example, is run on modest equipment - some on barely more than a PC. There are ten "root" servers serving the whole country and a high percentage of DNS queries are received by these. Routing table capacity in routers is short. Nobody really foresaw the need for larger memory spaces or larger server machines. You could easily replace the major DNS servers with larger hardware - if anyone cared to do so and would pay for it.

Finally, most of what you see on the Internet is simply overwhelmed web servers. Somebody puts up a Rush Limbaugh necktie web site and CNN does a mention of it. A million people go look and the little computer the web site runs on just can't do the work. The Internet is fine. The necktie site was overwhelmed. And whenever and wherever possible, never admit that YOUR server is strained - blame it on the network.

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Letters to the Editor

Boardwatch Magazine
8500 W Bowles Ave Suite 210
Littleton Co 80123

LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, *Boardwatch Magazine*, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)933-2939 or by e-mail to letters@boardwatch.com

Dear Jack,

Having recently subscribed to Boardwatch (I'm a long-time newsstand reader), I want to drop you a few lines...

First of all, thanks for a great read each month. Boardwatch is one of the few magazines that I consistently follow, and I especially enjoy the Letters to the Editor section. I've learned a lot from it, your responses to the more technical questions are priceless.

I've been a SysOp/Co-SysOp for over 6 years, and became a 'Web-head' about 6 months ago when local Internet access became available (\$30/month). I do a lot of Web browsing, but I get the biggest thrill out of telnetting to the various bbs's (via local phone call) that I use to pay GTE big bucks for.

Which brings me to the main point of this letter... how about adding a monthly Telnetable BBS listing to the magazine?

Chuck Saylor
csay100@mail.gpbx.net

Chuck:

We have published a list of bulletin boards accessible by telnet. I'm uncertain it warrants a regular listing, but we'll continue to follow this area in future issues.

Jack Rickard



FEBRUARY 1996 EDITOR'S NOTES

Jack,

Absolutely "dead-on" editorial.

In particular the comment regarding the income tax and government "enslavement" in context of the editorial theme is just too true. Indeed the point is too true in virtual any governmental/private interaction.

I'm able to enjoy your comments and outstanding magazine through my associates' personal subscription (he lets me borrow the issues reluctantly since I tend to keep them!).

I subscribe to 14 publications pertaining to general and more technical aspects of the computer business, your's will be the 15th. Parenthetically, I subscribe to several pubs only for the benefit of John Dvorak's wisdom - another bonus for subscribing to *Boardwatch*.

Gary W. Gaston
Gaston Microcomputer Services
10324.3002@compuserve.com

Gary:

I'd prefer to be first, but I guess fifteenth is better than off the list completely. I've myself been a fan of Mr. Dvorak since the early eighties when he graced the final page of InfoWorld. It is with some particular personal satisfaction that we offer him as the final word in each Boardwatch issue today.

We're most pleased to have you join us as well.

Jack Rickard

January Issue



Hi Jack,

Just received the January issue of Boardwatch yesterday. I like the new tagline! I thought it was different at first glance and it was confirmed when I read Dianne's letter. Loved your response! Let it be so - ha! Personally I like Boardwatch's direction. I do have a suggestion for Dianne, though. She may want to check out SysOp News. I don't know their location or telephone number, but if she stops complaining for a few minutes, I'm sure she'll find the time to research their number.

I also liked your ideas about video, scenery, etc, over the Internet. It actually reminded me of "Back to the Future"; they had a similar wall-size flatscreen video as one of their futuristic props, where you could select your landscape. Arnold's "Total Recall" also had the same sort of prop. I think we'll see that sort of concoction in a few years.

The real reason I'm writing is regarding Durant Imboden and your "big boards" section. BTW, I didn't realize I was pictured

in his MSN column this month, until I started receiving mail about it! But that's another story.

I frequent the "Forum Manager's Only" forum on MSN, and always come across informative and well written messages from Durant, regarding all sorts of things. It's great to see him invest so much time in helping others. I'm sure I'd learn more from him if I spent time in his Writing forum. He seems like such an intelligent man, and quite well written. I do hope you'll put him to use even if you pull the plug on your BB section!

Regarding your views on MSN "just going away"... I think they're quite unorganized right now, and I do think they'll be here for quite awhile. But our company isn't putting all our eggs in one basket. PlanetOut will be live on America Online and the Web soon (<http://www.planetout.com>). We're also in negotiations with other services (which should be announced next month). I think gay/lesbian/bi/transgender people will find us to be a great new community with a lot to offer.

I've come a long way since the days of the CoCo. Thanks for helping!

Darren Nye
PlanetOut/msn Producer
darren@planetout.com

Darren:

Microsoft Network is currently rumored to sport some 1 million subscribers, so I guess it isn't going away for economic reasons. More likely, its role in the universe is changing as the entire concept of a dedicated online service a la CompuServe or America Online changes. I found it interesting to note that the CompuServe portion of HR Block was a financial loser in 1995 for the first time in many years, and that further they are spinning off CompuServe as a separate stock.

The point of an MSN column is fading, but we want to keep Mr. Imboden. I'm not certain just what he will be covering, but we've rather come to enjoy his writing and knowledge of the online community.

Jack Rickard

**EXCALIBUR BBS "THE QUIET SERVER"
JAN/96 ISSUE**

Jim Thompson's article on Excalibur BBS the "Quiet Client/Server" in your January issue of Boardwatch was greatly appreciated. I'm not a sysop, just a client of Mortimer BBS that uses a Excalibur server and was also mentioned in the article (it is Flipsock that was invented by Mortimer programmers for the Internet) I've use Mortimer Online BBS for almost a year now and have found the sysop (pay attention some of you nasty sysops out there) quite helpful. And the Excalibur server is like Jim Thompson described, multi-tasking allowed and very hard to make it go down (tho' I did go down with it thanks to a virus that I picked up on a file that I downloaded from an ordinary BBS.

The graphics are great and works so well with Netscape. I run it using Windows '95, and it works exceptionally well. Excalibur supports the "right button" tasking (downloading and saving files with a click of the right mouse button.) Mortimer sysop, Dean put a notice on the BBS informing everyone about the Excalibur client server being mentioned on Boardwatch, but he failed to mention that Mortimer was also mentioned (shame on you Dean!) My subscription is running out, but your bet your bottom dollar that I will re-subscribe to a Excalibur BBS board like Excalibur.

P.S.: Excalibur also has a program installed so you can call other Excalibur BBS' all over the world using the Internet. Check it out.

A satisfied customer...

Daisy
daisy@mortimer.com

Daisy:

I find it interesting that it keeps coming back to the people, not the technology. You laud the software, but beneath, it would seem to be the sysop that makes it work for you.

Jack Rickard



Hi Jack,

Our own little dog in the manger is one of the few local telcos in the US still privately owned. Recently they opened their doors as "the" local ISP. I won't bore you with examples of their misleading and insulting advertising (read misinformation) campaign. Their prices started out at \$20/month minimum giving me advantage (at \$4/month.) They soon decided to bring their minimum down to a real world \$5/month.

They have deep pockets and employees to spare. Things that cost me major money, they get (by comparison) for free. eg. Bulk mail costs me printing, postage, lists and stuffing. Since they mail bills every month, all they need is to print and stuff a bit of

paper and every potential local customer gets their message.

Well, I couldn't beat `em so I decided to join `em. That way at least, I could eliminate the cost I currently pay to use an ISP in California.

Or so I thought...

As soon as I inquired about using them as ISP - they disabled telnet and FTP (from the command line.) Reason: "security risk"...? Now the only way I can figure to make FTP or telnet work (from their connection) is by using a Web Browser. :(

99.8% of their customers are using the Microsoft Web so I guess they figured there really wasn't any need to support any command line operations. I don't do Windows and have yet to figure how to make an online service reliably run unattended (under Windows)...

My theory is simple. They have never experienced either competition or cooperation. They have absolutely no concept of either one. The only option they see for themselves is to put me out of business entirely. (if possible)

For all the bad I see in the new telcom bill there may be something there I need. I could consider becoming a local telco myself, demand the use of their facilities and proceed to provide local telephone service for myself and for my existing customer base. <chuckle>

Dave Maddux
sysop@maxnet.com
Maxnet BBS (334-943-7530)
Foley, AL

Dave:

The ability to compete means the ability to compete. It does not assure victory. You have to do that part. Complaining about the advantages the competition has will win you nothing. You have to focus on the advantages YOU have or can develop if you want to win.

The obvious advantage over telephone companies is that you can develop, deploy, and begin marketing a service before a telephone company can actually convene a meeting about it and get all the employee/players in the same room to talk about it. I know telephone companies somewhat intimately, and it always amazes me the fear they generate among BBS operators and small entrepreneurs. They do have resources. They do have leverage. They do have lots of clout. But the resolution of their aiming apparatus causes them to lose entire STATES in the noise level.

If you do decide to become a telephone company, your largest problems will be managing growth and scalability. You could easily pretend that the existing telephone company doesn't even exist, and for five years it would

be true enough in anything you do - if you are free under the regulatory structure to offer service.

Jack Rickard.



HTML AUTHORIZING TOOLS

Jack,

First of let me take the time to compliment you on a wonderful magazine. I owe all the credit of me getting started in the online community to your first sample magazine you sent me, two years ago, and I have not stopped reading since.

My question is what software would you recommend for creating world wide web pages. I really don't need to do anything fancy but I would like it to do all the basics (inline pictures, WYSIWYG, and online forms) I have been looking around and I just can't seem to get one that works.

Thanks for your time and effort and keep up the good work

Christopher Thiebaut
sysop@t1sbbs.com
TLS BBS
(608) 935 7620

Christopher:

The program I use to create World Wide Web pages is Microsoft Word 7.0. There are a number of emerging HTML authoring programs and I know I'll hear howls from all the proponents and marketeers, but I haven't really found anything I'm comfortable with at this point. And I don't think the reason is raging Luddism.

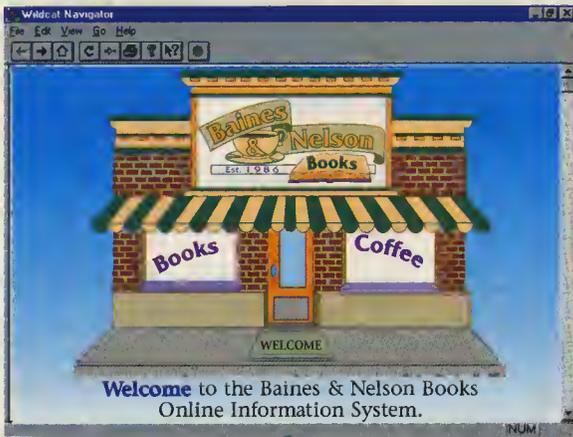
HTML is a bit of a mess right now, though an encouraging mess. Netscape continues to innovate, Microsoft is adding their two bits worth, and actual standards development includes some interesting advances - most particularly style sheets. But the web is almost alive with new techniques and since you can view source code for virtually any page, the techniques migrate throughout the web in a most dynamic living manner. We are communally developing better screens for conveying information online.

This is quite a change in the online community and one not recognized, in my opinion, for its importance. In the past, if you saw something striking online, it "belonged" to the developer or author and it was not really easy to see "how" they did it. On the web, anyone can "view source" from any browser and just look.

I'm amused to see a half dozen books on the market and several authoring tools all claiming to be HTML 3.0 compliant. There is no HTML 3.0 and the committee seems to be moving toward adoption of various elements in a more piecemeal fashion than originally foreseen. There very possibly never

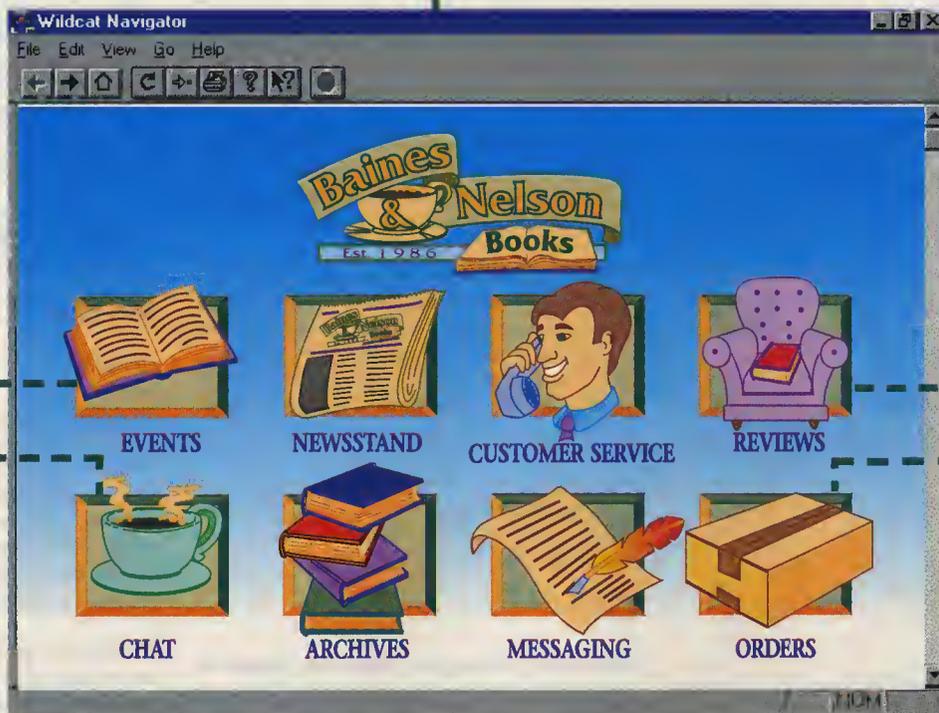
Why settle for a you can have the

Open up to a new chapter in online systems: Wildcat! 5 for Windows 95/NT



Customers can check an event schedule for book signings and other happenings using a custom system designed with wcCODE.

A moderated tele-conference system lets Baines and Nelson hold online question and answer sessions with local and celebrity authors.

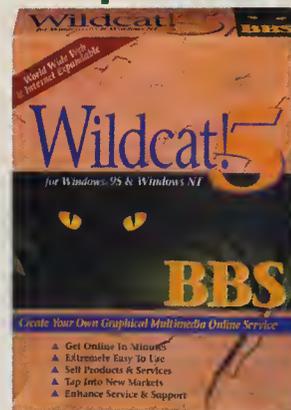


Baines & Nelson created its own book reviews and links to book publisher Web pages right from Wildcat!

Customers can check Baines & Nelson's inventory and order products using the Wildcat! ODBC add-on.

Are you considering the World Wide Web for your online needs? Consider this. A web site is great for viewing documents, but your own online service can give you more. Messaging. File management. Interactive teleconferencing. Data security. Your own online community where members want to visit and come back again and again. But where do you turn to get your own online service?

Turn to the company that's been creating online software not for 10 months or 10 weeks, but 10 years: Mustang Software. Then open up to a new chapter in online systems with the power of Wildcat! 5 for Windows 95/NT. It's a 32-bit online information system that combines the browsing ease of the Web with the powerful features of a bulletin board: the ultimate information server. Wildcat! has the power to provide an online solution for nearly any type of business wanting to get on the information superhighway. See how our fictitious bookstore, Baines & Nelson, uses Wildcat! 5 to create its online presence.



Wildcat! gives your members access to information through modem, LAN, WAN, and the Internet.

few pages when whole book!



With Wildcat! Baines & Nelson's customers can send and receive e-mail quickly and easily.

Message Conferences

Wildcat!'s message conferences are similar to forums found on the larger online services like CompuServe. Each conference can have its own message base, files, bulletins, questionnaires, display screens and menus.

File Management

You can make documents, spreadsheets, databases and other files available through Wildcat!'s file management system. Searching and retrieving are as easy as pointing and clicking on an icon.

Security

Wildcat! gives you the power to define exactly which files, messages, and menu options your members can access. It's ideal for supporting different departments, offices, and even entire companies.



Search Baines & Nelson's archives with the Wildcat! file management system.

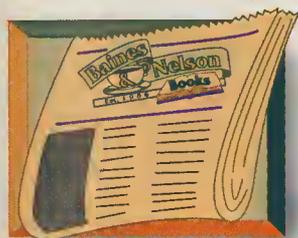
Free Wildcat! Navigator

The free Wildcat! Navigator gives your members access to services through modem, LAN and the Internet. Its point and click operation lets members browse your online service by selecting hypertext regions and icons.

World Wide Web Interface

The key to Wildcat!'s ease of navigation is its use of hypertext markup language (HTML).

This is the same language used to create pages



Using the included HTML editor, Baines & Nelson easily creates news pages and bulletins to keep their customers up to date on bookstore news.

on the World Wide Web. Future versions of Wildcat! will include support for full-motion video

and Virtual Reality. With the Internet Connectivity Package, members will even be able to navigate the World Wide Web through your Wildcat! system.



Baines & Nelson expanded its customer service lines to include 24-hour contact via e-mail and real-time access through Wildcat!'s chat system.

Teleconference/Chat

Wildcat!'s real-time teleconferencing provides an exciting way for members to interact one-on-one or in groups. Moderated chats give members an organized forum for group discussions or question and answer sessions.

Polls/Questionnaires

One of the best ways of gathering information is through Wildcat!'s questionnaire interface. It's powerful and flexible enough to quickly gather demographic and marketing information and even process online orders.

So why settle for a few pages? With a world of connectivity and powerful options at its disposal, Wildcat! is truly the online solution for your business. To experience the Baines and Nelson Book Store for yourself, download the Wildcat! Navigator from Mustang Online. You can reach us at telnet://bbs.mustang.com, http://bbs.mustang.com, ftp://bbs.mustang.com, or through modem at 805-873-2400. If you'd like to discover how Wildcat! is creating online solutions for companies, call our Solutions Office at 1-800-807-2874 for a free consultation.

Wildcat! 5 Add-ons:

- Internet Connectivity Package
- Internet Service Provider Package
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- wcCODE Development Language
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WILL be a version 3.0, and it is a sign of the times online that numerous products are actually claiming compliance with a standard that does not and probably will not exist.

The bottom line is that HTML is dynamic and developing. I'm encouraging our graphics group to actually learn the modest code requirements to layout WWW screens by hand using a text editor. In doing so, they can learn new techniques as they appear on the net and incorporate them into the Boardwatch presentation online. If you adopt an authoring tool, you have also adopted the version of HTML they think most accurately reflects reality at the time of release. And in not learning to read the relatively simple tags used by HTML, you cannot easily look at someone else's documents and determine how they did what they did.

Warmest Regards;

Jack Rickard



<SIGH> MISOGYNY AGAIN?

to Jack Rickard,

I like to read the articles in Boardwatch first, then the letters and columns. Every issue I've read has solved some computer question I was wondering about- this time, whether I could hook up a web-camera for my sister's wedding in Africa (still too difficult right now), what BBS software I should investigate (Excalibur) and if Win95 computers could be group-connected to the net (WinGate).

But over my morning coffee, I started on the letters and read "Sexism, *Boardwatch* Dec 95" <mithrow@clark.net> and your reply. I don't particularly care what the initial debate was about, but more the words. FemiNazis? It's sounds like a rather nasty new virus.

I am female and work with computers. I do a lot of other things as well, wear make-up when I have to meet clients but prefer not to, wear chunky heels, bodysuits and skirts more often than jeans though. I was planning to major in mathematics at university, but have taken a couple of years off to keep working with the internet in Singapore where I'm living at the moment.

I only got onto the net about eight months ago, but I've been playing around with computers since I was about eight, our first being an Apple II. I learned to program in Basic, then happily migrated to Windows and gleefully managed to create passwords that prevented anybody else from using the computer without paying me a toll (cookies generally worked) My father, who has always supported my craze for computers, bought me a laptop when I was fourteen which I played Civilization on during classes at boarding school.

Now I am about to set up a LAN for the first time, having only managed them before, set up a internet server for different OS and hardware, and get the whole thing running in under a month for a new internet cafe here in Singapore (without a ccafe- just computers).

I'm planning the month after to create a BBS with a MOO on it for local users to access.

My experiences have been largely pleasant. My first introduction to misogyny from nerds, was a friend's older brother who refused to give me a list of BBS because I was female and wouldn't know how to dial up to them. I was scared off the online world by his derisive comments and stayed off until last year.

That's where I'm coming from. Now let me tell you what it's like being female and playing with computers and why it's harder.

1. Computer shopping.

Prepare to have salesmen and women ignore you for the men around, to speak automatically to any male friends you might be hardware shopping with. Ask them questions and either be answered with a shrug or slow-you-must-listen-realllll-careful explanations. I'm lucky to have found one shop where the manager knows I'm competent and is actually helpful.

2. Online Chat

Never, ever use a female name. My real name is Dale which is pretty neutral, but I generally stick with Murmur. As soon as you admit to being female, that can be used against you in any flaming or debate. The oddest, most telling part, is that by default, everyone is assumed to be male.

3. Older computer nerds.

By this I mean anyone in a management IT position or over thirty (slightly hippy I know). Dilbert with the trials of his stressed out female colleague is very amusing and accurate. An older nerd assumes that a female is not interested in hardware, I/O ports or anything vaguely internal. Instead, a female is there to answer customer questions, do some software programming and design interfaces. The 'pretty' things.

I don't particularly relish groping around with a computer's insides. My dad brought home a 286 from work for me to unplug and play with, but I've been mostly interested in sorting out software on it to make it into a specialized typing box. I know my way about inside a computer, but I go inside to fix it so it works, not to play.

4. Media

I agree with your earlier comments in the letters page that writers should be employed on the basis that they can write well, not who they are (unless they're Newt who sort of

escapes me- he's a very American fascination) Still, it is hard going the long run without women to look up to. I would personally like to see more about women in computers- how do they relate to them? what do they think of the internet? I know most users are male- but it's no longer a 90/10 thing, more 70% to 30%. Starting out with computers when no-one on television or print plays with them is harder- most science fiction and fantasy which I read does not deal with women and computers. There need to be more Trillions around.

5. Peer pressure

Where I used to work, at another internet cafe, the staff were pretty fifty-fifty, though the place was run by five male nerds (all over thirty, who tended to trivialize me in favour of the other senior male employee. I would give him the proposals in the end because it was easier though he knew less about computers and the net.) Of the women there, some were in computer science and enjoyed it. The others though didn't like computers. The liked WorldChat over IRC because of its virtual interface, and refused to learn mIRC because creating scripts was 'too difficult'. These were intelligent women, and up to the point where it became obviously technical, coped as well as the men with the computers.

It simply isn't suitable in Singapore at least for a woman to enjoy playing with the technical parts of a computer. Over and over, the women would defer to the men who had learnt a couple of stupid dos tricks to set up things for them. When the men weren't there, they would sigh and have a go themselves, making sure they didn't seem like they were enjoying it. One employee was finishing her engineering master's, and because she was female, the guys when they heard would be amazed. That it was something remarkable, a female in engineering, was really horrible to see. There were two other engineering male students who did not get gasps of surprise.

This is a very long email and is not intended for print at all, but just for you to read. Try asking some women you know what it's like working in a mostly male field. The archaic notion that we don't like computers because of DOS commands such as 'execute' is like saying women don't like sport or sex, simply because men and women want to pretend we're more delicate than that. When I tell people I work with computers, I get a lot of questions. I can't answer many of them, but I do know why. Because I love playing with computers; it's not working, it's playing.

Please read some more about women and the difficulties we/they face. Microserfs by Douglas Coupland was one of the funniest, truest cyber-grrrrl books I've read, with Karla voicing a lot of my thoughts. There's always Alice Walker, Sherri S. Tepper's Gate to Women's Country, Katherine Mansfield, Virginia Woolf- The Yellow Wallpaper is a

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horrible short story about gentleness imprisonment. Talk to some women who are afraid to use computers, especially older mid-40s women who've been raised to fear them. Women in their twenties in IT- I would really like to know how they see the internet, computer users and so forth.

It is harder to get the same respect for your abilities as a female with computers. Feminism is sadly a dirty word now, but I think from your emotional response to the letter, you're not making an objective judgement. Please read more about women's experiences and talk to some before you completely ignore anything feminist'. I think it would make an interesting article, and as the editor of Boardwatch, your opinion influences a lot of people.

Dale Edmonds
whale@pobox.com
http://www.pobox.com/~whale

Dale:

One of the few thoughtful missives I've received on the topic - and you do raise some interesting points. I guess I remain unaware of some of the realities.

On point, the FemiNazi response was appropriately directed to the originator, but shouldn't be assumed universally. Basically, we had a call for some token women writers to make our table of contents more politically correct and acceptable to a group that assumes any lack of female representation is ipso facto evidence of sexism. I would make the counter that any requirement for token representation is actually sexism, and I rather jealously guard Boardwatch from the forces of evil so that (in my mind) it can fill the bill you describe in your first paragraph.

That is not to say that more editorial coverage of networks and online communication from a female perspective, if such differs in interesting ways, is out of the question. Actually we have had a few women contributors and perhaps two regular columnists who have variously come and gone. One was with us for over a year, but I thought it had gotten away from the point of view of a professional woman online and gone too far toward the smarmy stereotype with sewing and cats and so forth.

We receive about three column proposals per day at Boardwatch. Obviously most don't work out for one reason or another or else we would be 700 pages by now. Virtually all of them are from male writers. I don't know why that is, other than the usual distribution. I don't personally feel it is anything I am responsible to correct. As I said in the response, if we come across something interesting by a female who wants to write regularly, she'll probably make it. And if not, not. We don't have any "editorial mix" we look to create other than the occasional "we should have a column on audio/voice over the net" type of thing.

I am surprised at your experiences. In the mid-eighties I moved from the good old boys club in Aerospace over to the data processing side of the house at Martin Marietta. The mix of programming professionals then and there was about 50/50 and I assumed the battle of the sexes had been worked out more or less as we had fairly highly placed managers of the female persuasion. Online, because of the harassment issue, as you point out there has been a lot of cross-dressing, which is easy enough to do. A lot of Bubba Smith's are actually more of a Barbara than a Bubba but whatever. I always thought it was just to fend off the Chester Molester types that seem to plague most chat areas.

As to computer stores, I've learned not to seek intellectual soul mates among the "sales professionals" at the local computer stores. But I will offer one observation that I never see any comment on. When a man and a woman, in company, are greeted by a lone man, the lone man almost ALWAYS addresses the male of the pair first. I think this is strongly cultural and nearly subliminal but in any interaction where this custom is NOT observed, sparks will fly with no one really knowing why. Similarly, if a man and woman are greeted by a woman, she will nearly always address the female first. I suspect this has to do with early human campfire rituals and mate/pairing procedure more than a statement on professional competency of women in data processing fields but it runs quite strongly through most cultures.

Any time you have a gross distribution imbalance as we do have online, there are bound to be assumptions made that reflect that predominance of one sex or another. I have found the field of computers in general, and online specifically, to be inherently non-gender oriented. I do little in the way of heavy lifting and I find none of the "macho" culture in computers that you see among firefighters, policemen, baseball players, construction workers, etc. So I assume the computer field is more open to women than most male dominated fields of endeavor.

The bottom line Dale is that I've never encountered much conflict with women professionals in the world of computers, and I have had some extensive dealings with them. There have been women BBS operators for 15 years or so. But when some wayward hag with 15 minutes of experience online and a chip on her shoulder launches the Attack Five because there aren't enough babes online and it is somehow my fault, it is true that I react somewhat shortly and without a tremendous amount of sympathy.

On the specifics of a column in Boardwatch, it is not a bad idea, and if I do encounter someone with good thinking and writing apparatus that wants to address the topic, it will probably happen. Clearly I don't have a thorough grasp of what you view from your desk, so it might prove interesting.

Warmest Regards;

Jack Rickard

CENSORSHIP AT THE LIBRARY

Dear sir/ma'am,

I would like to take this opportunity to make yourself aware of a recent occurrence here at my local public library in Greenville, South Carolina. I felt perhaps you might have an interest in it, as it deals with the topic of censorship on an online system operated by a public library.

I posted a copy of the message which follows this letter to you in the GENERAL public forum area on GreMLIN (Greenville Metropolitan Library & Information Network). The sysop, Daniel Williams, deleted it. I reposted it, and he deleted it a second time. I posted it yet again, and he deleted it a third time, and then restricted my access to the public forum discussion areas on GreMLIN.

If you get an opportunity, please read the copy of the posting which follows, and see if you can understand why the librarian in charge of GreMLIN felt it to be worthy of censoring, as well as worth the restricting of access to the public forums to a taxpayer who did nothing more than dare to speak out and voice his opinions and question the reasoning and basis of the GreMLIN staff, as well as criticize their newly-created policies which callers are now bound by on GreMLIN.

I feel that the sysop's actions are unwarranted, and that such mindless censorship is deserving of being brought to the media's attention. I thank you for your time, and for any attention you might could bring to the matter at hand.

Respectfully yours,

Charles Mosteller
cmostell@gremlin.greenville
.lib.sc.us
P.O. Box 181
Tigerville, South Carolina
(864)895-1058

Charles:

I'll not reprint the letter you sent to the forum as it is tedious and boring beyond all human capacity to endure. It's only saving characteristic was that it was unnaturally lengthy. I will note that on arising each morning, I quickly drop to both knees in abject adoration and gratitude to my Lord and maker that I am not called on to mediate every dispute between an online caller and forum moderator in this wide and varied land. It is indeed a blessing.

That said, I do understand your frustration. I don't think there is one among us who has not felt, at some time or another, to be unfairly singled out and unfairly dealt with by some moderator/sysop somewhere. It has happened to me on numerous occasions. Some moderators adopt a kind of godlike view of themselves and it can be both frus-

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Chatting on a BBS used to be limiting, to say the least. You couldn't control it. You couldn't customize it. Worst of all, you could only chat with a tiny portion of the population.

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trating and nauseating to endure. Others are so "open minded" that the conference becomes riddled with detritus and trash to the point where as Yogi Berra says; "Nobody goes there any more - it's too crowded."

Fortunately, we don't have to. At least for now. At this time, there are literally hundreds of thousands of public discussions operating under every level of philosophy from the most open "free speech" forums where absolutely anything goes to the most closed mailing lists that operate as published digests of the best messages received by the moderator with only a tiny percentage even being passed - and everything in between. You can find the conference with a level of moderation and control most to your personal tastes. And if for some reason you are unable to locate one, or if it is at all inconvenient for you to do so, I have some extremely good news. It's not all that hard for you to start one of your very own and run it however you like. This is the heart of what drives the online community today and precisely why there are so many discussion groups, mailing lists, echomail conferences, bulletin boards, and online forums in existence. One more won't hurt anybody.

Most of my ranting and raving about government censorship and control, and the forces that would drive us to three or four large commercial services revolve around this concept of small varied communities, each free to be what they are and most particularly to be different from each other. There is no tyranny where there is choice, and typically no choice where there is tyranny.

Good luck.

Jack Rickard



ALIENATING ANOTHER FEMALE SUBSCRIBER

I had my first opportunity to read the January 1996 issue of **Boardwatch** today. It has been my primary resource for a number of years now, and has helped me to successfully operate Prevention Resource Center BBS (PRC BBS) for three years. PRC BBS provides national news briefs, grant and funding info, libraries of files, and other information and communications for alcohol, tobacco, and other drug prevention professionals in the state of Illinois.

I know that female BBS sysops are a small group among the larger group of BBS sysops in the nation, but I've always felt respected and comfortable in this male-dominated field. Sysops help and support other sysops, and listen to each other since we're all in this together. For the first time in three years, I feel hurt, disrespected, and alienated because of your reply to the Letter to the Editor titled, "Sexism: **Boardwatch** Dec 95."

Women are a small portion of your market, but calling us "FemiNazis" and being "pleased" to lose us as customers just

because we say "Ouch" when something that is said in your magazine hurts, insults, or is disrespectful to us, is bad business and not very humane.

Perhaps you felt angry at the writer's use of the labels "sexist" or "misogynist," which she attached to the Newt Gingrich article. However, your choosing to take the low road and throw insults at female subscribers is counter-productive to meeting the needs of as many of your customers as possible. Just because you haven't received an onslaught of letters from women and men who may also have been disturbed by "terms and tones" in the publication, doesn't mean that people who are concerned are limited to a "small universe of two" (or even three since I've written).

My first inclination was cancel my subscription. My second inclination was to write a letter that throws back more insults at you because I am hurt and angry, but that would make me a hypocrite by taking the low road myself. Instead, I hope this letter helps to open you up to an awareness that your readership is getting more diverse (and hopefully more women are becoming sysops and forum managers and getting more telecommunications savvy). We all need BoardWatch, Jack, and want it to "speak to us," to be useful to us, to meet our needs, to help us feel part of the online community.

Please find a way to accomplish this, and let your readers help to make it so if that would help. Thanks for listening.

Valerie Michele Hoskins
pursuit@prevline.health.org
President, Pursuit Enterprises
System Operator, Prevention Resource
Center BBS (PRC BBS)
Union City, NJ

Ms Hoskins:

Let it be so. But I think you've painted me rather unfairly here. If my reply to a single reader (or even two) is universally read as a reply to an entire group, in this case females, then I have no control over who I reply to ever. My use of the term FemiNazi was quite deliberate, and I apply it specifically to those women who have a chip on their political shoulder and are ever ready to attack in the name of some mythical "sisterhood" and who insist they represent all women - thereby assuming the mantle of protector and champion bound to call on all little fat misogynistic editors to get some women in the table of contents or else. I find it hard to believe that so many have taken this to include themselves, simply because they are also women.

To extend that reply to all women, or even all women who operate bulletin boards or online services, IS sexist, but more importantly warps and misrepresents my intent. This is clearly a case of if the shoe fits, wear it. And if it doesn't, don't. Boardwatch readership is predominantly male, but we do

have women readers and always have had. I welcome them, and not just for their \$36, but for their contributions and work toward a collective future of online plenty.

As it so happens, the original thread began with a message from a woman who is not a Boardwatch reader, isn't even online, but rather saw the magazine in a colleague's office and took umbrage at something or other in the magazine. She actually used HIS e-mail account to send in the letter taking me to task in a most surly and impolitic fashion. And the entire imbroglio grows with each issue in a way I find entirely fascinating and I'm quite inclined to allow it its natural course ad infinitum just to see how crazy this will actually get before dying of its own clumsy weight.

But in the process, it was not my intent to make you personally feel any less a part of this small college of Boardwatch readers, any less accomplished in the paving of this online community courtyard, or any less respected within these pages than John C. Dvorak himself. And I profusely apologize if that was the effect. It was not my intent.

My intent was, and is, to give the small minded, petty, and to me ignoble feminists who react to every utterance with a knee-jerk attack, a properly and appropriately dismissive response.

Jack Rickard



EDITOR "ROTUNDUS"

Jack,

Like so many others let me congratulate you on a superb publication. Having visited your web site a few times I was pleasantly surprised to receive a complementary copy of your magazine. Thank-you very much. I'm definitely going to subscribe now.

I was actually down to the last key-stroke on your online subscription form when I realized that my credit card info wouldn't be encrypted, and I balked. I agree with you—re the hype on credit card fraud on the Internet, but somehow when it's your own card — I just couldn't bring myself to ignore the warning screen.

I've been buying your magazine at the newsstand for about a year now, and I actually consider it more a correspondence course than a magazine. I definitely learn something new every month. Of all the computer oriented magazines I read monthly yours takes the prize for most useful content.

One thing I did notice recently - you are no longer "editor rotundus" but merely Jack Rickard — should we be buying shares of Nordic Track or what!

Thanks Again
Ian Malcolmson
75051.237@compuserve.com

Ian:

While I don't agree with your concerns regarding credit cards, I certainly understand them. We provide a toll free 800 number for subscribers at 800-933-6038 of course as well.

I'm not sure how Editor Rotundus went away. It was a bit of a tongue-in-cheek jab at some Editor Emeritus pomposity I saw somewhere. But I'm still 220 pounds and rotund if not terribly jocular. If you'll send me your \$36, I'll try to get it back in print.

Jack Rickard



PRODUCT SUPPORT BULLETIN BOARDS

"No respect" to coin a phrase from Rodney Dangerfield. I operate a small but effective BBS that supports the software my company sells. It is easy to use by our end users. It is sometimes hard to get them to try it, so we have started shipping a custom version of BananaCom with every other product.

I read your magazine every month, looking for tidbits to help make my board better. Most of the articles and features are for profit or hobby BBS. The BBS's that are a free service to support a companies sales and customer service seem to be forgotten.

Even if a company maintains a web site, ftp, compuserve or aol forum they still seem to have BBS's. Graphics are great but they slow down business. I believe text base BBS will be here, at least in this venue, for a long time to come.

David Greenman
d_greenman@creative.bbs.net

David:

I agree that online product support is a valuable function. We have, in the past, several times published lists of bulletin boards that act in this role. But I guess I think most product support functions are moving rather strongly to the World Wide Web these days. I DON'T see much of a future at all for a text-based standalone dialup product support bulletin board. If you don't have a web site up now, run don't walk to the nearest web store and get yourself one.

You miss the point of the graphics. It is not that they are great. It's that they allow you to service customers without first running them through a course in historic arcanery of the online community - or sending them Bananna Com. The Web interface allows non-technoids to play. That's the point.

Jack Rickard



PERSONAL MAILING LISTS

Dear Jack;

I have been a subscriber of your magazine for a nearly a year! I am very impressed with the depth of knowledge each article presents. Every copy of Boardwatch is saved and stored in my computer library and I always find that I constantly refer to them for information from time to time.

Can you please tell me what software (other than listserve) I can use that would permit me to maintain an email address book and also be able to send email to groups in the address book?

I run a Novell 3.12 network and have tried Mercury's MLM but I am having problems configuring it correctly. The messages I try to send get stuck in the e-mail queue and do not get transmitted.

Thank you,
Shola Oyewole
soyewole@apta.com
webmaster - www.apta.com

Shola:

I am now using Microsoft Exchange as my sole e-mail program. It supports multiple address books, is VERY convenient to use to "capture" e-mail addresses, and offers a feature they call Personal Distribution Lists. Using these, you can create a message and send it to a single "group" name and it will be distributed to all e-mail addresses listed as members of that group. You can perform most other operations such as forwarding, carbon copying, etc. to a group just as you would to an individual address. It is not too bad in the editing functions allowing you to add and delete members from the group.

We discussed Microsoft Exchange in our November issue on Windows95 and the Internet. From what you describe, it would more than adequately do what you need to do.

Jack Rickard



EDITOR'S NOTES (FEBRUARY ISSUE)

Dear Jack,

Last week, I received Boardwatch (January 1996 issue), and now I have the last issue of your great magazine (February 1996 issue). Whole last year I was waiting for some problems with the **Boardwatch** magazine. Nothing. I don't like thanks... Unfortunately I must thank you now, for your last EDITOR'S NOTES.

I was living, some years of my life, in totalitarian system. I know, what is a government control, regulations etc. Therefore, if I can, I thank you for your article about CompuServe, the German government and the alt.sex newsgroups.

I am SYSOP of the little BBS and I am waiting for cheaper and better software (BBS & INTERNET) like others... I would like to be ISP without lines, money, free time ...etc.... The dreams are so beautiful. Excuse me for my English, but I am able better communicate in Czech. Are you ready?

Thanks again,

Stefan Trulik
trulik@lokalka.cz
BECO Link Ltd.
Czech Republic

Stefan:

I'm ready for the dreams....not so ready to communicate in Czech... But thanks for the note. And good luck in establishing an online service in the Czech Republic.

Jack Rickard



IGNORANCE AND TRUTH

Hello Jack,

What a strange turn of events with this Telecom Bill and CDA. I was shocked to hear of its passage. It is so depressing to see the on-line world being legislated by the ignorant and short sighted. There is still little knowledge in the general public in regards to just how devastating an effect this bill could have on what is to come in this ever expanding area. This ignorance, and I don't mean that in a disparaging manner, and my concerns about informing people about the online world, is what brought me to write to you. I am a street patrol officer here in the Los Angeles area and am known as the resident computer geek at the station. A fellow Officer recently asked me about the availability of drug making information on the net. I told him that there were quite a few pages on the web that dealt with illegal drugs and advocated legalization of drugs. Some I have visited myself so that I could "hear" both sides of the legalization arguments (since the "War" on drugs affects me on the street level as well).

He then asked me if I could print out some examples of drug recipes and such since he was going to present a D.A.R.E. (anti-drug education) meeting with local school parents. At first I did not give it a thought, such things are on the net and are just as available in many bookstores and libraries. Then I imagined the reaction of middle school parents to such a presentation. I could just see hysterical parents running home and disconnecting modems. This kind of thing would just feed into the CDA/censorship monster big time. On the other hand it is true that such information is available and I really felt that "hiding" it would not be the honest course of action either. I did explain to the officer that such drug information was also available from a variety of non-net sources and that the net

itself was not rampant with such information. If you want it you go look for it, just like the library.

Well I still haven't printed anything out yet and with the passage of the CDA I have my doubts. I would be so disappointed if such information was brought to these people in such an out of context manner. In a way I am more concerned with the loss of their concern for freedom of speech than any possible drug making boom.

In closing I would like to thank you for an honest and interesting magazine. Checking my pile of Boardwatch's I see I've been trying to keep up with you since the July 93 issue. Hope to see you at ONEBBSCON as well.

Mike
rosenber@kaiwan.com

Mike:

Your letter illustrates the problem in a most odd manner. In any society where there can be "infocrimes" we wind up with this wandering infection that simply does not end.

It is simply not acceptable that we designate certain types of information as a crime. There are laws now that exist solely to make it illegal to manufacture certain controlled drug substances. Well and good enough. Now WHY would we ever make it illegal to distribute information on how to manufacture drugs? If it is already illegal to do so, what harm is there in making the information available, and on the other hand, what GOOD comes of passing ANOTHER law to prevent trafficking in information? Do you honestly think that anyone who would break a law against manufacture, which is a felony with severe penalties, would then observe a law making it illegal to offer information about it, which is considered much more minor in both nature and penalty?

This is part of an utterly insane legislative process where we pass a law that is broadly ignored by the criminal population, so we pass more laws on less harmful behaviors because the first law was not effective. In this way, we can criminalize larger portions of our population? Make laws applicable to people we CAN arrest? It is mindless.

The problem with information is that it is infectious. Now we have a law enforcement official in an ethical dilemma over whether HE should then provide information about the information. What about your friend in the department? Information about information about information? Where does it stop? ANY time we pass any law dealing with information as a criminal act, we open a Pandora's box of such gargantuan proportions that our only options are to simply not enforce it at all and pretend they don't exist, or horribly mutilate the lives of random individuals on a hopelessly random basis, with the implicit understanding that we are ALL guilty all of the time - just not caught

yet. There is nothing wrong with information about drugs. There is NOTHING wrong with information about manufacturing nuclear weapons, bombs, horrible sex crimes. There is in fact no situation where there can be anything wrong with INFORMATION. PERIOD. Laws can only apply to human behavior. Information can't BE illegal.

The CDA is a perfect example. We have passed the law, and now pending judicial review, we are all going to just pretend it doesn't exist - right up through the U.S. Department of Justice. If it survives review, I'm sure we'll just use it "selectively" against those we "need to control."

If it all becomes too much for you Mike, I would suggest this. Take a day off, stop chasing "deadbeat Dads", tax evaders, contempt of court citations, and infocriminals, and just on your own time go see if you can solve a murder or a rape or perhaps bust a drug dealer. I know your department won't support you on this one. You'll be working alone. But maybe one guy can make a difference in at least a small way. Don't be discouraged if we can't change the world. The objective is to demonstrate that the world can't change US.

Hope to meet you in person at ONE ISPCON.

Jack Rickard



what's on my mind...

First, I like your web site a lot, tho I don't usually have the patience to wait for background images and that yellow type is too weeny to be able to see until the background comes up—can you do something about that?

Second, I read **Boardwatch** every month, and I like your recent direction toward the Web...Having run a BBS off and on for the past five years, I think the Web is the future; over the next six weeks we will be closing our BBS, and with O'Reilly's Web Site and WebBoard, hope to be able to duplicate the best of our BBS features while making them much more accessible to the general public (i.e. we've been paying for an 800 number for people to access our bbs, now we'll be paying far less for an ISDN line (hooked into a nearby T1 line) for far more people to be able to access our service. We'll be using Ascend Pipeline 50—as described in your current issue, with WebSite and WebBoard hooked up to a 486/66w/16mb ram—we'll let you know how it works out.

Third, I'm a little tired of the AOL bashing that you and many others engage in (e.g. aohell in the current issue. So what if it's big and sometimes obnoxious. The AOL bashing reminds me of nothing so much as kids who latch onto a rock band and then disavow it entirely when the band goes platinum (duh, they must've sold out...).

I've used AOL for a couple years now; don't use it for much anymore (tho we do still have a library there), but why should we "more sophisticated" Internet and BBS users complain because there is a service which allows "newbies" to learn the possibilities inherent in getting online? How does anyone expect to grow, to attract more people, if there aren't services which make it easy for new folks to join in? I honestly don't think most of us who spend hours and days and weeks designing web sites want to limit them to hardcore Unix users...

Fourth, you've got to get a new art director (no offense to current one), but **Boardwatch** has to be the most poorly-designed slick magazine I've ever seen. Can't figure out where anything is; nothing seems to make sense—in an art context that is.

Finally, love the magazine (at least the content); will subscribe here online in about a minute. Keep up keeping us informed...

Michael Mariotte
nirsnet@igc.apc.org
Nuclear Information and Resource Service

Michael:

If you don't like the online presentation, the editorial, the graphic design, and the layout, I'm a little unclear as to why you would subscribe, but we welcome you nonetheless.

I find it curious you are "shutting down" the BBS and "putting up" a web site. Sounds like a software upgrade to an existing service to me. We used to do that every year, (sometimes twice a year) without thinking of it as so drastic a change.

Jack Rickard



DEJA JA VU VU

I do enjoy your 'zeen mosh goshey bigtime indeedy! It seems like I find my self re-reading stuff that appeared in last months issue...I wish that would not happen since I have sooo much reading to do I can't afford to waste the time and effort. The Editor's Notes on AOHELL was to me, remarkably revealing, and apparently quite fair...in a word: piercing. I was proud of myself to have gotten to the ftp AOHELL file for download via AOL.

After reading the insightful review I just figured.. "pass". But it's cool to have your guide to such intriguing (bad boy) type doo hickeyes and interesting paths.

J.D
BrosRyan@aol.com

J.D.

I'm pleased we're hitting the mark in your direction. Thanks for writing.

Jack Rickard

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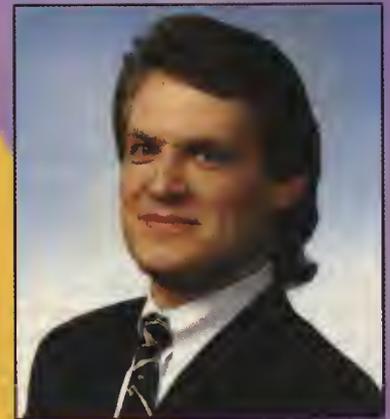
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MISC.THOUGHTS

Jack,

With every issue I add another item to the list of things I plan to write to you about, here goes.

Internet access in rural areas; Here in North Eastern North Carolina no one would talk to us unless we guaranteed 500 users and our first born male child. Finally we found an ISP in another state who would work with us at some high but tolerable prices. When the nearest ISP got wind of this they come through with a 56K line. Presumably our area was on their future POP's list and it took out of state competition to get them off the dime. My suggestion to rural folks is that there is probably a provider nearby who is thinking about a POP in your area as soon as he thinks the margin is right. He won't risk losing that business to someone else so pool your resources and stand something up, it will only hurt for a little while. This year Campus MCI came to the local college and is offering a second ISP choice to the community.

Meanwhile I stood up yet another Web advertising company and it's creating quite a buzz. My clients and I registered many of the area towns as domain names to create a regional info & commerce resource, going for free plug - check out <http://www.icw-net.com> - end of plug.

I think that strategy could work elsewhere and if the regional web presence was created on a rented server in conjunction with efforts to get local access it could help get the buzz needed for an ISP to lay the pipe.

Domain registration litigation; A few weeks ago I got a call from a "billion dollar company" with a "bevy of lawyers". They claimed that one of my domain names was their registered trademark. I believe I could have defended it based on trademark guidelines related to use of place names but I had neither the money nor the time to mess with it so we came to a quick and equitable settlement which may, more or less, compensate me for the time spent renaming all the references to that domain. If I had seen it coming I suppose I could have trademarked "myname.com" but it wasn't worth it.

Best of jack issue; Add my name to the list of folks suggesting you do a special issue on your editorials and letters. I especially enjoy your thoughts on things outside of technology like political correctness and pornography.

Online decency laws; There is a lot of cluelessness out there. When I tell people I am opposed to the various online restrictions being discussed they think I am defending pornography. It turns out that most folks don't understand their freedom well enough to realize that any threat to free expression

is a dangerous thing. So I skip over the fundamental freedom aspect and try to explain how the Net is so hard to control that if the regulation is implemented the real glory of the medium will be choked off and it will quickly resemble television, (rife with sex and violence and little substance). We can't make them understand what every American should know perhaps we should address the practical implications of restricting access to the Net.

Thanx

Dave Silva
cypress@interpath.com

Dave:

*Some excellent points. David Hakala is just now working on a rather intense look at rural delivery of Internet access for a future issue of **Boardwatch**. I think it is an important topic and one offering a lot of opportunity for entrepreneurs.*

Jack Rickard



ISP PROVIDER QUESTIONNAIRE

Jack...first of all let me tell you how much I enjoyed my first issue of **Boardwatch** Magazine. It was an enjoyable couple of hours that I spent perusing through it this weekend. I especially enjoyed the letters to the editor and your candid remarks. Way to go, about time that someone stood up for the "small guys" out here. From my vantage point as a General Manager for a local ISP group here in Bentonville, Arkansas, it's a dog eat dog world out there with more fly by night ISP provider's encroaching on our local area here in Northwest Arkansas than one could ever believe! I guess it's due to the fact that so much emphasis is being put on the almighty buck and how many of them one can pack away before people discover that they are not getting what they're paying for. I would venture to say that of the original 5 outside the area providers that have come to glean this territory, 3 have since faded away, leaving a bad taste in the mouths of those that have been duped. It gives a bad reputation to those of us in the business who WANT to provide good, quality, customer service to the communities we live in. As General Manager of ISPNet of Benton County, I want to make sure that my customers are given the satisfaction of knowing that they are the number 1 priority I have every day. If something is not right, I want it fixed. In my estimation, there is no question or concern that should be considered as inconsequential. After all, these people ARE my business, and they deserve all the customer support I can give them.

Hopefully, there are other ISP providers out there that feel the same way as I do, and, will continue to help build a good reputation and go that extra mile for their

customers in this much sought after service of these times. Thanks for letting me express my opinion. I would like to obtain a copy of your questionnaire to fill out regarding ISP Providers. I feel that our Company needs to be listed in your book of ISP Providers. We're in the business to serve, and I think that message should be conveyed to your readers.

Thanks Jack, I look forward to next month's issue of **Boardwatch**.

Bobbe Allen
General Mgr. ISPNet of Benton County
rlallen@rog.ar.ispnet.com

Bobbe:

Way ahead of you big guy. You're IN the very first issue. But I think your letter points up an important issue. The technology of the Internet is not sufficiently mature at this time to be plug-and-play. It requires some customer support. And it is my belief that small operators such as yourself are most equipped to provide it at this time. There are stories of truly heroic efforts by ISPs to assist new Internauts in getting up and running on the Internet. There are also ISPs who simply hung up a shingle for a quick buck, and they quickly come and go. I said four years ago that the only two groups in the world that could possibly deliver the customer service for Internet access to the masses were the existing commercial services and the BBS operators. It appears to be so.

Jack Rickard



WEB MASTER DUTIES

Jack:

Allow me to introduce myself. I am currently a Database Administrator (Oracle 7) for a rapidly growing healthcare company here on the East coast. I have been offered the new position of WebMaster at the company. Now, I am somewhat unfamiliar with the WWW but do possess all the tools to manage the position (UNIX, TCP/IP, CGi scripting, HTML, etc..) The company already has the infrastructure in place, so I probably wouldn't be involved in that aspect. My concern is that the position at my company would just be a "traffic cop" and maybe some Web development with the real responsibilities going to the Systems group.

My question is: What do you see as the major responsibilities of a WebMaster, and what "qualities" should a superior WebMaster possess?

Thanking you for your input,
Sincerely,

Tom Ziem
tziem@oxhp.com

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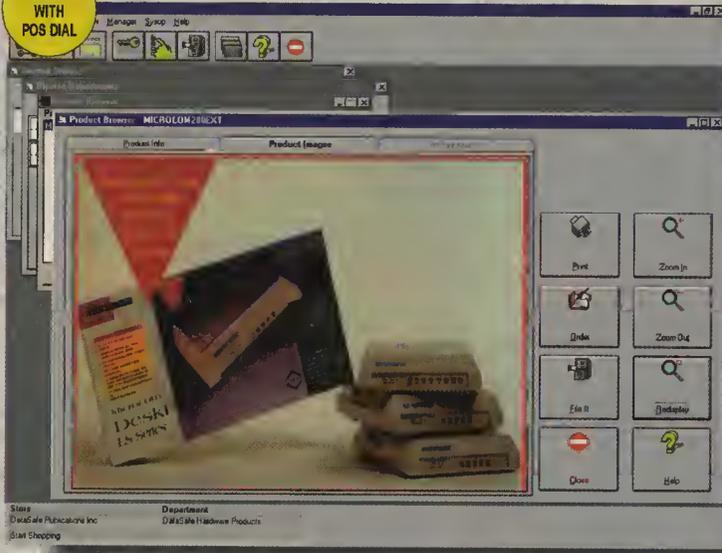
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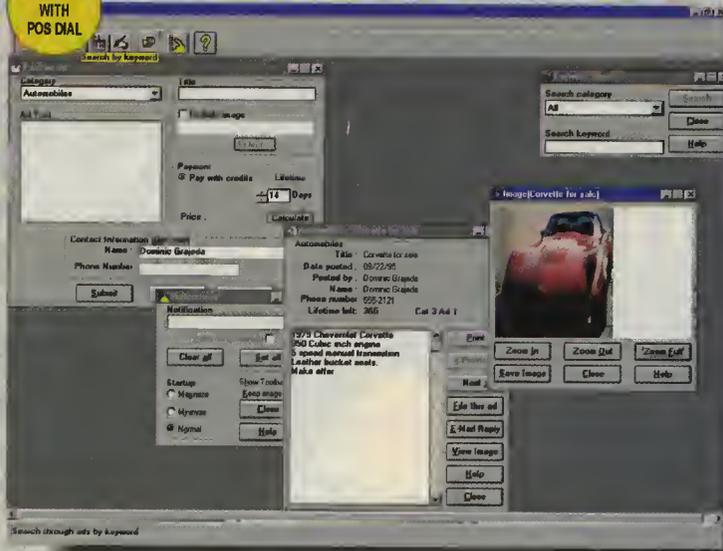
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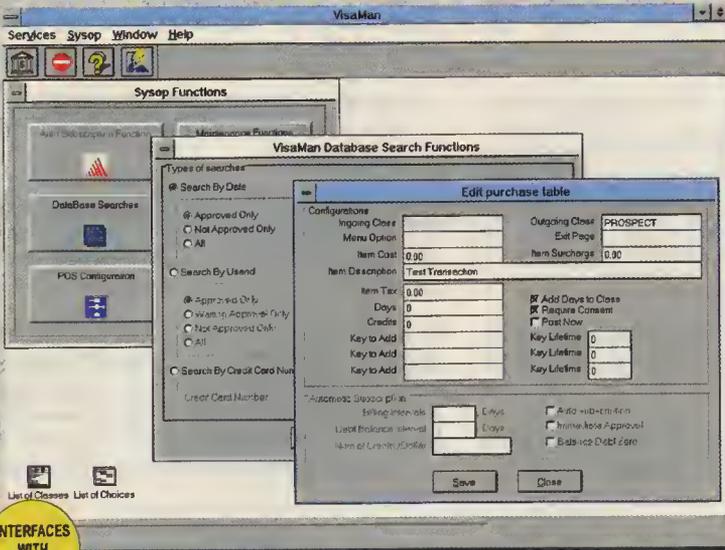
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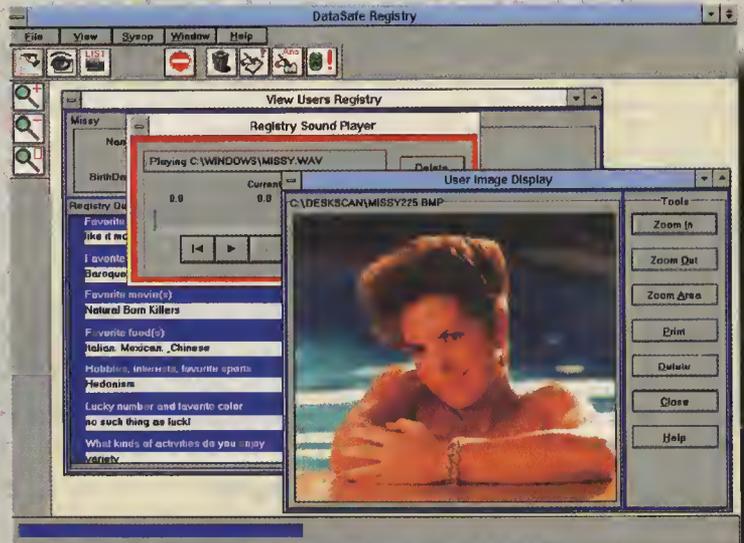
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Includes ANSI and ASCII versions!

Tom:

The position of webmeister within the corporation may be slightly different from the position of Internet Service Provider within the corporation, though strongly related. A lot of companies are putting up web sites these days. Some are to have a presence on the Internet, and some are really more for internal use. We've seen the company manual for health care benefits and the list of participating physicians, for example, be the sole Web application within a company.

But what we are seeing is that most companies very poorly estimate the cost and level of effort of a World Wide Web site. Putting up a server is trivial and inexpensive. You can buy a turnkey server, top of the line from Sun, with all the software, for less than \$50,000. Oddly, you can use a PC and free software about as effectively for \$3000. And it is no mystery that a couple people have to be on staff to "run it."

Web page development, the actual design of screens using the HyperText Markup Language (HTML) is really a graphics design job and most companies do see this as a major part of the effort.

What they DON'T see is the application programming development costs. Web servers don't really DO anything. BBS software was virtually an operating system that did a tremendous amount of the work of actually DOING anything online. Web servers serve. They spew HTML documents on demand. Within minutes of having one up with a few HTML documents, you will start getting requests for the web server to DO things. They will want the names of the people accessing the server. Or they will want to tie it into the sales geeks contact database. Or they will want to make product information available. Or they will want to use it to look up phone numbers. There are a zillion things you can do online and all of them ultimately involve some sort of database access somewhere.

Newsflash. Web servers don't do databases - no matter what vendor claims you hear. HTML is almost ANTI-database. So you will inevitably become the heart of a CUSTOM APPLICATION PROGRAMMING GROUP that NOBODY wants to pay for. CGI scripts are indeed part of it. Don't trivialize the notion. You can wind up with a massive program all written in PERL that really wants to be a custom database program.

Gary Funk is our webmeister. He does little HTML design. We're not even sure how the server works and it doesn't matter, we've found we can change server software on a whim and no one can even detect it. But the little Visual Basic programs, database access functions, and new things we just HAVE to do on the web site are essentially ENDLESS. So my advice would be that if you are tasked with setting up a Web site, plan from the beginning on

developing a pretty serious custom programming shop from the get go. And be very selective about what TOOLS you buy into for development. The costs of the machine, the web server, and to a lesser degree, even the HTML design will be LOST IN THE ROUNDING ERRORS OF YOUR BUDGET compared to the ongoing costs of writing little programs to do whatever the next neat thing some manager sees on the net.

As to tools, we like Visual Basic. Do not overlook a small company called Durand Communications with their MindWire. They have not learned how to talk about it yet, but it is basically a database interface for the Web. Netscape is now introducing SuiteSpot. And Oracle insists they can play in this game.

So I see Webmeister as custom application programming shop manager - at least in the corporate arena.

I wouldn't mind hearing from other webmeisters on where I am wrong on this topic.

Jack Rickard

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WWWBOARD

Dear Mike Erwin:

I just wanted to say that I appreciate your column in the February 1996 Boardwatch that directed me to the wwwboard script. I had been prepared to brace for the dreaded task of coding a full-blown BBS that happened to be web-compatible, using C and an SQL engine. This little script saved me a bundle of time and lets me concentrate on the real purpose of my site: the content.

I enjoy reading your column, and find it invaluable for someone like me who is just entering the world of the web. Keep the good stuff comin'!

If you want to see how I've used wwwboard, check it out at <http://dowling.tcimet.net>. The current system is a demo, with real content to start flowing in about 1 week from now.

Clay Dowling
clay@dowling.tcimet.net

Hi Clay,

The thanks really needs to go to Matt Wright, for writing such a wonderful CGI script. He has done a wonderful job with it. As matter of fact in the newest version of WWWBoard he has added some wonderful admin features.

Thanks

Michael Erwin

◆ ◆ ◆

PEER TO PEER

Hello Jack,

I found your Dec. 1995 articles to be excellent.

By following your instructions, I easily enabled Win95 peer-to-peer networking between my work pc and home pc. I have been able to successfully perform file operations.

I have placed postings and I have looked all over the web for an answer to the following questions.

My first question is this: What application programs (Excel, MS Word, Wordperfect, Quattro-Pro, etc.) normally work over Windows95 peer-to-peer?

Secondly: We run a Novel 3.xx network at the office. We do not have any NT servers. My access from home is through a local ISP. While peer-to-peer networking between my home and my office pc, it possible for me to access my network disk drives from my home pc?

thanks for your time,
mike
mike_moses@nbs.gov

Mike:

The heart of Win95 peer-to-peer access is of course to access files and folders on various disk drives. Application programs do so of course. Excel, Word, Wordperfect, any application that uses the Windows file system can access files across this network. You can save a file or load a file anywhere on the network in any directory you have rights to. Some applications go a bit beyond this with sharing of various things more directly, but the major applications simply access files, and do so across the LAN as well as to a local drive, albeit more slowly.

We have a Novell network at work. I can access all drives on these servers through the gateway service provided by the WindowsNT server also located at work. I don't know of a way to do anything similar from Windows95 at this time.

Jack Rickard

◆ ◆ ◆

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Telebits



WILDCAT! 5 NOW SHIPPING

The long-awaited *Wildcat! 5 BBSWeb* server for Windows 95/NT was released in March. Mustang Software's CEO Jim Harrer demonstrated the new WC5 Navigator client in our office, and it appears the 18-month wait has been worthwhile. Client-side modules are updated only once and are backwards compatible with earlier server-side option modules. WC5 Navigator also asks if I want to take the time to update a module instead of just taking over my session.

The client is currently a 16-bit app, but its interface is designed to look like a Win 95 app; Harrer says users won't have to learn a new interface when the 32-bit app is released later this year. In fact, WC5 Navigator and its option modules will become DLL plugins for 32-bit Web browsers, including Netscape and MS Internet Explorer. Furthermore, the second generation of the WC5 server app will run on top of any other Win 95/NT Web server, giving Webmasters their long-sought chat, conferencing and file library functions without junking their Netscape or Microsoft server configurations.

We just got the server software at deadline time; a hands-on test drive will appear in a future issue. But from the user's side, WC5 bodes well for Mustang Software Inc.: 6200 Lake Ming Road, Bakersfield CA 93306. (805)873-2500 voice or <http://www.mustang.com>



CHEETAH TEXT SEARCH ENGINE FOR WORLDGROUP

Full indexing of free-form text files and the ability to retrieve attached images along with text have made *Cheetah* a popular

search/retrieval software package among TBBS/TDBS sysops. *Cheetah* is extremely efficient, easy to use and allows complex Boolean searches. Search results are presented in hit-lists from which a user may select a file to read or download. Multiple files can be attached to a text indexed record; these may be viewed online or downloaded. Now Galacticomm Worldgroup sysops can add *Cheetah* to their systems for \$1,995. *Cheetah* for Worldgroup is a fully GUI plug-in interface for the Worldgroup client; the older ANSI/ASCII interface is also included for users who do not connect via the WG client. APDI: 68005 Coolridge Drive, Camp Springs MD 20748. (301)449-1400 voice or (301)449-1835 BBS; <http://www.apdi.net>

MINIATURE CARS ON THE WEB



Eric Waiter took a dreary, 64-page line-item catalog of 8000 model cars and transformed it into a fun shopping experience. The *EWA Cars Automobilia* site at <http://www.ewacars.com> features a database in which you can search by car make, model kit manufacturer or type of car (bus, fire engine, etc.). Results are lists of models in stock including descriptions, kit numbers and prices. Pictures are there but not linked to catalog entries, because Waiter doesn't have all the photos scanned yet. Look in the "\$100 contest" section for classics like the beauty shown here; identify one of the cars by make and model and you could win \$100 cash. Other text-only databases help collectors find books, videos and even CD-ROMs devoted to their favorite

gas-guzzlers. A pageful of links to racing, collectible and antique car sites, free UPS delivery on e-mail orders over \$20 and a FAQ for beginning model car collectors rounds out a useful and promising site. EWA & Miniature Cars USA Inc.: Box 188, 369 Springfield Ave., Berkeley Heights NJ 07922. (800)EWA-4454 or (908)665-7811 voice; (908)665-7814 fax; mail to: ewa@ewacars.com or mailto: 73424.1057@compuserve.com

DOMAIN NAME POLICIES CHALLENGED IN COURT

Maybe you will be able to keep your domain name without spending \$1000 or more for a trademark. *Network Solutions Inc.* (NSI), the private firm contracted by the National Science Foundation to administer the assignment and administration of U. S. domain names, has been sued in US District Court for the Eastern District of Virginia (see <http://www.patents.com/nsicpt.sht> for the full complaint) by *Roadrunner Computer Systems, Inc.*, a Sante Fe, New Mexico, ISP, in a challenge to NSI's "arbitrary and capricious" policies concerning resolution of trademark/domain name disputes (see <http://rs.internic.net/domain-info/internic-domain-4.html>). Among other things, Roadrunner seeks an order enjoining NSI from placing the [roadrunner.com](http://www.roadrunner.com) domain name on hold - effectively kicking Roadrunner and its 500 customers off the Net - pending resolution of an alleged "dispute" over ownership of the domain name.

Roadrunner registered its domain name in May, 1994, a year before another company (unnamed in the suit) registered the trademark "Road Runner" in connection with the sale of stuffed toys and Halloween costumes. Upon receiving proof of the trademark registration and a challenge to Roadrunner's use of [roadrunner.com](http://www.roadrunner.com), NSI advised Roadrunner that it had three choices: a) produce a prior trademark registration identical to [roadrunner.com](http://www.roadrunner.com) and post a bond to indemnify NSI against any suits that might be brought by the challenger; b) immediately give up [roadrunner.com](http://www.roadrunner.com) and "enjoy" NSI's help in making a 90-day transition to a new domain name; or c) retain ownership of [roadrunner.com](http://www.roadrunner.com) but lose the right to use it until Roadrunner and the challenger settled their "dispute." Note that the challenger has never claimed that Roadrunner infringes upon its

trademark; under law, if not under NSI's private, unilateral policy, there is no dispute between Roadrunner and the challenger!

Roadrunner's suit also requests an order requiring NSI to develop new policies which will provide for fair and even-handed treatment of domain name owners in trademark disputes; an order forbidding NSI from acting in an arbitrary or capricious manner in interpreting policies relating to domain name registrations; and requiring NSI to publish the outcome of all such interpretations.

Odd that the custodians of the Internet's most important public trust haven't done these things!

NSI "MISPLACES" DOMAINS

And if they don't take your domain name, they may lose it. Rick Hogue awoke one day to find his <http://www.prosperity.com> URL pointed to the home page of the Global Entrepreneurs Network. No e-mail addressed to prosperity.com users was arriving. GEN - a Web hosting service whose real URL is <http://www.entrepreneurs.net> - advised Hogue that they were moving to a new server and had asked NSI three weeks earlier to switch all 7,000 URLs in GEN's "virtual domain" database over to the new IP address. NSI did so but did not notify any of the domain holders it moved.

Hogue speculates that an e-mail address he left at GEN requesting product updates somehow got into the database of GEN's virtual domains. Still, he doesn't understand why NSI did not notify all of the domain holders it planned to move well before the action was taken. "When I asked the supervisor at InterNIC (NSI) about policies for changing URL information," Hogue says, "... he told me that he was 'NOT going to DEBATE policy' with me." Hogue was assured that his domain name would be redirected to the proper IP address that day; instead, it took three days.

Hogue's Web host, WinNET Communications at <http://www.win.net>, had its own horror story. Somehow, the IP address of WinNET's technical administrator's e-mail server was reassigned; for three days all technical questions and requests for domain names (WinNET's

essential business) were routed to a California server. The problem was discovered when the owner of that server complained to WinNET. NSI quickly fixed things, apparently because the problem was reported on one of the three days per week when NSI updates the domain name database. (Funny; I thought that was NSI's FULL TIME job; they must be spending Tuesdays and Thursdays helping trademark lawyers.)

TELEHOUSE OFFERS OVERSEAS BACKBONE LINKS



Many businesses want to reach overseas markets via the Internet, and ISPs need fast, reliable overseas connections to meet this demand. Telehouse America provides both the Ethernet connection and (optionally) quarters for an ISP's equipment at Telehouse's high-security New York facility. "The NY IIX at Telehouse has developed out of the current needs of the Internet providers for a cost effective, secure, neutral location for gateway and peering connections," according to the company. Telehouse America: (718)355-2559 voice; (718)355-2517 fax; mailto: mata_ka_tha@telehouse.com or <http://www.telehouse.com>

"CHOICENET" GIVES NET ACCESS INSTEAD OF TAKING IT AWAY

Unlike "deny access" filters, which allow access to any site or service not specifically designated as "off-limits" to a user or class of users, *ChoiceNet™* allows access *only* to specifically authorized services. ISPs and intranet managers can control what content or connectivity services every user gets with precision and certainty, instead of constantly closing barn doors after the horses have left. ChoiceNet™ is thus a much more reliable and easily managed method of staying on the right side of the Communications Decency Act than deny-access programs such as Surf-Watch. It's also ideal for restricting employees to sites they're paid to visit instead of porn and offtrack betting parlors, or for managing a multiple-service site for groups of users paying for

games, news and/or other classes of services. An eminently sensible server-based access-control system from **Livingston Enterprises**: 6920 Koll Center Parkway #200, Pleasanton CA 94566. (800)458-9966 or (510)426-0770 voice; (510)426-8951 fax; <mailto:info@livingston.com> or <http://www.livingston.com>

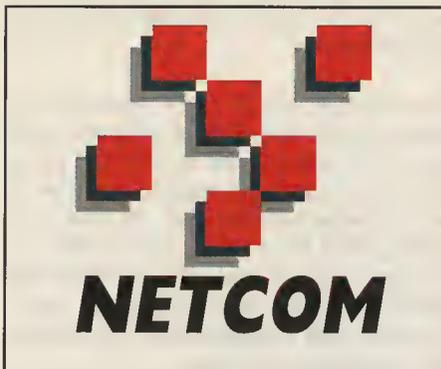
VOCALTEC PHONE-TO-NET GATEWAY

Pick up your phone and let the Internet be your long-distance carrier. That's the promise of **The Internet Phone™ Gateway**, a new server-based system coming from VocalTec in the second quarter of 1996. End-users can call a gateway server using a regular telephone (or a PC-based product such as the original Internet Phone™ program). The server then connects to another gateway via the Internet, bypassing long-distance charges. The second gateway server then dials out to a destination phone number (or another PC). Neither the caller nor the party called needs to be on the Internet, or even own a PC. Corporate IPhone gateway networks would save big bucks on interbranch calls, and it wouldn't be long before some enterprising souls roll out public gateway networks. Pricing has not yet been announced. VocalTec Inc.: 157 Veterans Drive, Northvale NJ 07647. (201)768-9400 voice; (201)668-8893 fax; <http://www.vocaltec.com>

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If you rent Web server space to businesses and individuals, **DinaWeb** can simplify the problems of letting customers maintain their own web pages. DinaWeb provides userid/password access control to specified directories. It also provides an online HTML editor so customers can create or load pages, modify them and immediately view the results. Supposedly, DinaWeb eliminates the need to give customers shell account or FTP access to one's server, but not quite. Customers' pages can include any GIF or JPG files located in their directories, but there's no obvious way a customer can upload such files to his/her directory without FTP write privileges. DinaWeb costs \$495 for a five-user license, and each additional user up to 1,000 costs \$40 each. EZENET Inc.: (416) 482-5250 voice; (416) 482-0707 fax; <mailto:kasra@ezenet.com> or <http://www.ezenet.com>

NETCOM MIMICS ONLINE SERVICES



While AOL, CIS and other proprietary online services rush to become ISPs, many ISPs are adding – proprietary services! It seems one must sell commodity-priced Internet access to play these days, but to differentiate oneself from the crowd requires content available only to *your* SLIP/PPP customers. Netcom, one of the biggest consumer ISPs, has added a personalized news-clipping service and plans to roll out investment portfolio management, research databases and other value-added services. Pretty soon ISPs and online services will clone each other, and we'll call them ISPOSS. Netcom On-Line Communication Services, Inc.: 3031 Tisch Way San Jose, CA 95128. (408)983-5950 or (800)353-6600 voice; (408)241-9145 fax; <mailto:info@netcom.com> or <http://www.netcom.com>

AT&T MIMICS MC DONALD'S

There's nothing more American (Telephone & Telegraph) than a good old-fashioned Grand Opening Celebration in a parking lot, complete with hot dogs, bunting and the local high school marching band. That's how AT&T launched its WorldNet Internet access service, at the corporate office in Bridgewater, New Jersey. Only the first 5,000 idiots who drove out there got disks with the WorldNet access software – 235 latecomers had to settle for balloons. Actually, *everyone* got a handful of air – AT&T is still a month behind in activating new accounts. As of March 29, you still can't download the software from <http://www.att.com> but you can order the elusive WorldNet disks or CD-ROM there.

HAYES EMERGES FROM BANKRUPTCY

Modem pioneer Dennis Hayes gets to keep his company as it emerges from

Chapter 11 bankruptcy. The court selected Hayes' reorganization plan over a competing plan submitted by Diamond Multimedia Systems Inc., which wanted to acquire Hayes and had offered \$28 million for the modem company. Hayes' plan calls for investments of \$35 million by Acma Ltd. and Northern Telecom, plus a \$70 million debt facility with the CIT Group/Credit Finance. Founder Hayes plans to take the company public "in the next few years" and says, "Hayes is taking the lead and setting the trend" again. Hayes Microcomputer Products Inc.: 5835 Peachtree Cors E, Norcross, GA 30092-3420. (404)840-9200 voice; <http://www.hayes.com>

INTERNET MADE EASY CD-ROM

New Internet users are often frustrated by the intricacies of getting connected the first time and locating sites of interest to them. The **Internet Made Easy** CD-ROM can help, with its "intelligent profiler" interface for Windows 3.x and 95. The frontend program asks users a series of questions about their personal interests, hardware/software setup and location. It then recommends one of several Internet access packages on the disc — CompuServe, Prodigy, Mosaic-In-A-Box, America Online, Netcom Netcruiser, and PSI Net using Superhighway Access. The selected provider's software is automatically configured for the user. Once online, the user can build a personal home page from a library of over 30,000 sites catalogued on the disc, creating links from a selection list built from the user's interests. Another module provides daily updates of new and changed sites. The CD-ROM costs \$29.95 from US Online Inc.: 2445 152nd Avenue NE, Redmond WA 98052-5573. (206)867-5103 voice; <http://www.usonline.com> ♦

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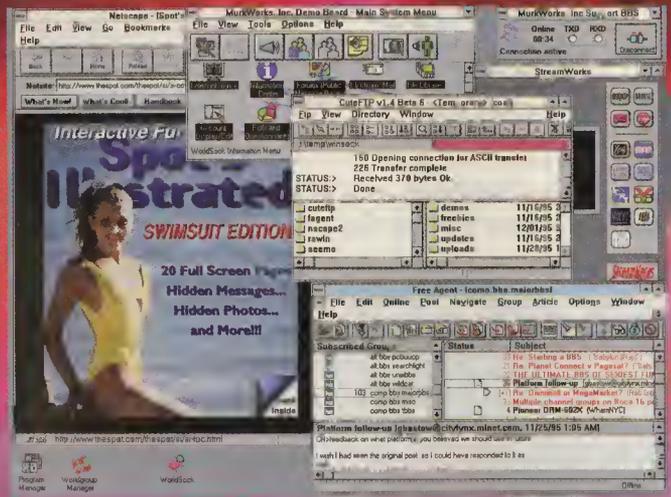
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TECHNOLOGY FRONT

by Jim Thompson
Western News Service

RIPMASTER

Just when you think you have seen everything, someone comes along and combines two existing technologies to make something that is completely new. Alan McNamee, President of Advanced Systems Research, has done this very thing.

The result is several new and exciting products. These include RIPMaster, The News Reader, The Data System, The Graphing System, House by Mouse, The Classified Ads System and RIPFlick Full Motion Video. By combining the stability and the flexibility of TBBS from eSoft, Inc., with the speed and graphics abilities of RIPscrip-2 from TeleGrafix Communications, Inc., McNamee has created a dazzling system that offers everything you would want in a graphical BBS system for use over direct dial phone lines or the Internet.

"All of these new products were designed with one prime goal in mind — complete adaptability. Speed was important but if the products could not be used to create a banking system, a newspaper or entertainment BBS or anything else, I feel their use would be severely limited. Complete systems can be created with these products that are designed for specific industries. They also fully support the entire spectrum of eSoft products and all third-party products for TBBS and TDBS," said Alan McNamee, President of Advanced Systems Research.

All of the products described here require TBBS and TDBS from eSoft, Inc. along with RIPterm (RIPscrip-2) from TeleGrafix Communications, Inc. TBBS is a multiline BBS system that runs under DOS. RIPscrip-2 is a graphical system that allows high resolution images and graphics along with WAV file playback to be incorporated into any existing BBS. A special terminal program (RIPterm) is required by the caller. (See *Boardwatch*, November, 1995 for a full review of RIP).

RIPMASTER

RIPMaster is a graphical BBS system that utilizes TBBS as the underlying operating system.

"RIPMaster provides a stunning set of technical advances which utilize the vast capabilities and strengths of RIP in ways never before allowed by TBBS while adding dozens of new types of operations and enhancements to existing TBBS operations," said McNamee.

RIPMaster adds a number of new functions to TBBS and extends the capabilities of this stable BBS platform. In addition to allowing the use of all 230 native TBBS menu commands and functions, RIPMaster adds new menu and function types and enhanced OPTDATA switches that allow you to modify and embellish the look and/or behavior of traditional TBBS operations. This means that those already running a TBBS system can add stunning graphics and photos with a minimal amount of effort. However, this limited effort does not mean a limited system. None of the new products from ASR force you into any type of form or format. The ultimate look of your system is entirely up to you. The only limit is your own imagination and creativity.

I used RIPMaster to create the new interface for Marlboro Racing News, the system that I run. We

were looking for a highly graphical interface that would be a showcase for the photos that we take at all the IndyCar events. The final design was worked on by many people and resulted in a copyrighted interface. But it could have been anything. In fact, as a test to demonstrate the flexibility of his system, Alan McNamee duplicated exactly the interface and menus used by America On Line. This was not a picture of the AOL system, but a fully functional online BBS. For

demonstration purposes, he also duplicated the MS-Windows desktop. Again, this was a fully operational system and not just a static graphic.

The functions and features of RIPMaster are so numerous that I don't have the space to detail them all. It includes automatic system resource updating, which means that callers will always have the latest system updates. RIPMaster checks the date and time of a users last call and automatically sends any need-



RIPMaster Energized Marlboro Racing News



Jim Thompson is Managing Editor of Western News Service in Los Angeles, California. He also manages the Marlboro Racing News BBS. CompuServe: 72777,2677, MCI Mail: 321-4127, mailto: jim.thompson@wnsnews.com

ed files that may have changed or been updated since that time.

There is a built-in "CompuServe" type Jump Word command system that allows users to go directly to any menu or function on the system. Users will find help always at hand thanks to the built-in Global Help System, the Global Commands System and the Context Sensitive help system. Help on an individual item on a menu can also be displayed when the caller's mouse cursor moves over an available item. The cursor changes from an arrow to a pointing finger and help or additional information about the corresponding item is displayed.

An analog ticking clock is provided that can be displayed anywhere and at any size on your menus.

For simple text file displays, RIPMaster includes a very nice text file reader which allows you to page up and down through the text or to download the entire file. You will also find WAV file playback support for any TBBS or RIPMaster command.

For the sysop, there is a host of functions. "All of RIPMaster's menus and controls are set up and modified online. The entire system is a point and click environment, allowing the sysop to set up or modify menu options while the system is running," notes McNamee. The sysop functions include a menu command editor which allows the sysop to create TBBS type menu functions directly on the system. There is also automatic 7-bit file transfer fallback for Internet connections.

McNamee has added a number of new TBBS type menu commands. These include the text file reader, system logoff with a yes/no prompt, a context sensitive help system, a go to or "jump" to the Main Menu function, a function allowing the user to enter the Jump Command system, WAV file playback, Remote Image playback, RIPfile playback, Online Text Editor, a function that allows the playback of a WAV file prior to the execution of any TBBS Type menu, a function that invokes a built-in screen saver, a function to display an image located on the caller's hard drive, and a function to display the global help menu.

Anyone currently running TBBS can easily see that McNamee has provided

them with a whole new set of tools for building a new interface for their system. The new TBBS menu commands integrate perfectly with TBBS and operate without problems.

It is also lightening fast. Incorporating an extremely efficient menu caching technique, menus load in .06 of a second on average. It is almost like magic to watch a menu that is comprised of various fonts, graphics and photos, display in the blink of an eye.

THE NEWS READER

RIPMaster is the core program which provides the basic functionality for a graphical system. The *News Reader* is an additional program that provides an environment for doing page layouts for the display of text files. With this program (which can be used in conjunction with RIPMaster or by itself on a TBBS system) you can create displays that duplicate anything on a printed page. You can display and flow text in multiple columns, incorporate graphics, logos or letterheads. With The News Reader you can literally duplicate any page layout and make it fully functional.

FRI **Marlboro Racing News**
The Official IndyCar News Service Friday, March 15, 1996

Zanardi Set the Pace in Friday Practice

By Marlboro Racing News

"I have to thank my engineer Morris Nunn," added Zanardi. "We made some changes between this morning and this afternoon and the car was quite a lot better this afternoon. That's why I went so quick. But I still need more time in the car to be as quick as the car is."

Zanardi was asked if he considered himself a favorite to win this weekend's inaugural Rio 400. "I don't consider myself a favorite," he replied. "I know I'm driving one of the best cars in the paddock for one of the best teams. During winter testing Jimmy Vasser has done an excellent job of setting up the chassis. We have a very good car and we have the Honda engine which seems to be the best one. Firestone is also supplying us with very good tires."

"I think we have a very competitive team and I think we will have a chance to win some races this year. But my job is to help Jimmy go after the championship."

Zanardi said he expects most drivers to improve their times tomorrow. "The circuit is definitely getting better," commented Zanardi. "Yesterday there was a lot of dust and not so much grip, but today was better. People will improve their cars and the circuit will be better tomorrow. I think tomorrow we'll see a lot of people in the 30s, so we have some 'C's' to continue..."

Stunning Page Layout with Live Links

The features in this program are so numerous that there is simply not enough room to explain them all. After entering the News Reader system, the caller is presented with a list of article headlines. This headline screen can contain just the actual headline or any other data that is a part of the item and contained in the associated database, such as a byline or a section name for the article. As with all of the ASR products, this screen and everything else within The News Reader can be configured to look any way the sysop wants.

A search facility allows for a keyword search through every word in all of the

articles. The list of files is then limited to only those items that contain the keyword that was entered as the search criteria. Further searches can be conducted to prune the list of items displayed.

A mouse click on any of the headlines brings up the associated article or item. This can be a text article, a series of photographs, a RIP screen or any combination of these elements. The choice is entirely up to the sysop. Once in the viewing area, the user can page through the material using the arrow keys. The arrow keys display the next or previous page of information or the next or previous story if one is at the beginning or end of the item. Clicking anywhere on the screen displays a menu bar which allows one to download the text of the story, move through the text, zoom by a factor of 2x or 3x or jump to a linked database (The Data System from ASR) for more information on the author.

In addition to the options for the normal user, clicking anywhere on the screen also brings up a menu of options for the sysop (providing, of course, that the person doing the clicking actually has sysop privileges on the system). These options include the ability to change the text fonts, adjusting the size, the style, the color, and the attributes of the font. The attributes include adding bold, italics, underlining, strikeout, right or center justification or even drop shadows to the text.

The sysop can also bring up a grid to assist in adjusting the precise location of the text on the screen. From here you can also edit The News Reader Style Sheets. These style sheet make up the heart of the system. Although extremely sophisticated in its abilities, running The News Reader is as simple as creating basic style sheets for your data.

The style sheet contains the basic framework for the display. This might be a screen with a letterhead or logo at the top and the address along the bottom with text displayed in the center section. It could be an exact duplicate of your company stationery, or a newspaper or newsletter layout. These frameworks are easily created in *RIPaint version 2.0* from TeleGrafix Communications, Inc.

Once the framework for the style sheet is created, you define the areas where the text is to be placed. Once created, a style sheet is always available for the

display of text. All you have to do is add a headline and import the desired text. Because the style sheets are downloaded to the user as a resource they are immediately available. The ultimate display of a story or item is extremely fast since all that needs to be transmitted to the caller is the raw text of the item.

The sysop also has the ability to edit information associated with a style sheet. This includes such things as the headline, the photos that will display along with the text, the byline and the text itself. One can edit the text and even bring up thumbnails of the available style sheets. These thumbnails allow one to instantly change to another style or format by simply clicking on the desired thumbnail.

As with all of ASR's new products, everything is configurable. The News Reader is easy to use and extremely fast.

THE DATA SYSTEM

The Data System adds an elegant and full-featured database system to ASR's RIPscrip-2 products. The Data System can operate independent of the other products or can be linked to The News Reader. The link allows one to jump directly to the database while reading a story in The News Reader and then jump back to the story. For example, if you were reading a *Boardwatch* article written by yours truly, by selecting the ListData option, you could call up background information, a bio and even a photo of me then jump right back to the article you were originally reading.

The system can contain as much data and as many photos as you want for any given record. You can also have up to 99 screens of information to display to the user. Additionally, Alan has provided the user with three types of searches in order to find data.

The "Search on Index" feature allows one to use any available index for sorting and finding information within the database. When selecting this type of search, a pick list with all available indexes is displayed to the user allowing him/her to sort the information based on the index criteria.

The "Keyword Search" allows one to search for any word in any field of the database. Following the search, only the records that satisfy the search criteria are then displayed to the user.

The "Criteria Search" takes you through a series of lists to narrow your search.

You begin by selecting the field. Alan has allowed the sysop to alias the actual field name so the user sees something that makes sense. For example in a database of biographies, one field might actually be named "B_DATE" but the user would see it listed as "Birth Date." Next you select the operator to be used against the selected field. The options here include equal to, less than, greater than, greater than or equal to, not equal to, contained in and sounds like. When conducting a search you can combine any of these criteria for any of the fields. This allows you, for example, to find only people who are over the age of 18, who do not smoke and who live in Los Angeles.

For a criteria search, it takes about three seconds to search a database with 1,000 records. For a keyword search you can search about 1,000 records per second.

THE GRAPHING SYSTEM

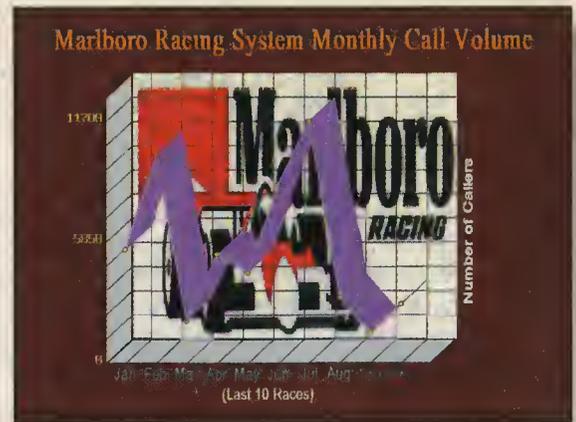
Alan has made creating 3-D graphs simple and painless. With The Graphing System, all you have to do is enter the basic data and three dimensional bar, line and pie charts are instantly created. You will be amazed at how easy it is to make spectacular full-color charts with this program.

"The Graphing System has an API so any other program that has a specific operation can modify the data elements of a chart and then instruct the system to reproduce it. This allows you to update graphs dynamically so they are always up-to-date. Best of all, there are no limitations. There are some 64-million variations of a chart that can be achieved, all of which can be changed directly or by another program," said McNamee.

The Graphing System is a TBBS "TPG" (Type 200) program. It does require both TBBS and TDBS.

HOUSE BY MOUSE

Looking for a real estate system? Do yourself a big favor by taking a close look at ASR's *House by Mouse* system. House by Mouse allows the caller to search for a property by price range, location, property type, number of bedrooms, number of bathrooms or any combination of this criteria. The results



DRAMATIC CHARTS AND GRAPHS CONSTANTLY UPDATED

of the search can be displayed individually or as a group.

When displayed individually, the caller can see a photo or photos of the property along with as much information on it as you want to provide. When displayed as a group, the caller is shown thumbnails of the properties that meet the entered criteria. You can zoom the thumbnails to full screen by clicking on them, or you can jump to the information screen to read all the details and see the photo or photos for that individual property. Again, it is fast and completely flexible.

THE CLASSIFIED AD SYSTEM

This system gives you the ability to create a full classified ad catalog with minimal effort. The catalog can contain product photos, descriptions and information. Callers can search for items by product name, product type, or by any of the information contained in the text descriptions.

RIPFLICK FULL MOTION VIDEO

This program provides a method of displaying full motion video, allowing you to do animation or to run short video clips. This bit of legerdemain is accomplished by downloading a sequence of still images to the caller. Once received, the images are displayed in order to create motion.

The effect of continuous motion is created by repeating the individual frames in an "endless loop." Of course, not all clips lend themselves to the "endless look" method, but others work extremely well. For example, if you wanted to show a car running around a race track, all you would need are enough frames to make up one lap. After that, you just repeat the frames over and over to "keep the car on the track." The individual frames

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<http://www.mustang.com>

are a resource, so they only need to be downloaded once. After the initial download, a caller can instantly see the scene again at any time.

RIPFlick Video is a practical approach to full motion video. The result is motion that is smooth and not jerky without the need for the user to have a powerful machine. Because of the size of the download, you will not want to run "Gone With The Wind" over a modem, but for short clips to add some zest and interest to your system, this is perfect.

INTERNET READY AND CAPABLE

All of these new products from ASR are fully Internet ready and capable. Access to the ASR products via the Web is possible thanks to a new Internet browser from TeleGrafix, code named "Mohawk." The Mohawk browser includes Telnet communications capabilities and allows RIPscrip-2 technology to be used on the Web. The News Reader has the ability to output Mohawk compliant code for the Mohawk browser or for plug-ins for popular Internet browsers such as Netscape. For the user, it means access to all of the features of HTML plus the robust features of RIPscrip-2. All of the ASR programs can also be made available via shell and PPP Telnet access. They also contain auto fall back to 7 bit file transfers for Internet connections.

"Current Internet graphics technologies are slow and make surfing the Web a painful experience. Our speedy RIPscrip-2 multimedia allows publishers to create dazzling images that can be transmitted and displayed almost at the blink of an eye," said Patrick Clawson, President of TeleGrafix Communications, Inc.

The Mohawk browser was not available at the time of this writing, but is scheduled for release in the second quarter of 1996. TeleGrafix will reportedly be releasing RIPscrip-2 multimedia plug-ins for other popular Internet browsers such as Netscape and Microsoft's Internet Explorer.

The Mohawk browser made its first public appearance at the Japan-USA RIPscrip Developers Summit in Tokyo in early March, 1996. In addition to demonstrating the browser, TeleGrafix announced that Media Interface Co. Ltd. (a Japanese electronic publishing company based in Tokyo) was awarded exclusive rights to market Japanese language versions of RIPscrip-2.

According to a release from TeleGrafix, "Media Interface also will license TeleGrafix RIPscrip software code to Japanese computer manufacturers and software developers to promote the use of RIPscrip as a Japanese standard for Internet and multimedia communications."

Just before we went to press, Alan told me he was beginning work on a UNIX version of all the products. Such a version will allow many more possibilities, including multi-threading and the transfer of files in the background while the user does other tasks. One could even engage in chat with another Internet caller in another part of the world. UNIX versions will open many more possibilities and will be a welcome addition to the ASR product line. No dates or costs have been announced, but the UNIX products should be available by the time this article is published.

Finally, all of the products reviewed here are easy to set up and implement. A case in point is Wayne Duval who runs Deep Cove in Vancouver, B.C., Canada. Wayne completely transformed his system in a matter of a couple of weeks with the ASR products. The result was an immediate increase in usage on his system and a lucrative merger with another company — none of which may have been possible without the line of products from ASR

CONCLUSIONS

This new collection of products from Advanced Systems Research provides the sysop with a powerful arsenal of weapons in the fight for recognition in the online arena. These tools allow even a small operator to provide his clients with both the interface and the functionality to not only compete with large commercial services but, in specialized cases, even surpass them.

Alan McNamee is one of the best programmers I have ever met. His attention to detail coupled with his understanding of real world situations can be seen in

the quality of his products. I have watched the development of most of the products reviewed here almost from the very beginning. I have also seen the concern and attention to detail that have gone into them. The results speak for themselves. These are solid products that work — not just in theory, but in real situations.

The selection of TBBS/TDBS from eSoft, Inc. and RIPscrip-2 from TeleGrafix Communications Inc., provides an extremely stable platform with a proven multimedia technology.



"RIPMASTER GIVES DEEP COVE INTERNET SERVICE A SENSATIONAL LOOK"

TBBS has been around for a long time. Although some say it has passed its prime, few deny that from the standpoint of flexibility and reliability it is one of the best Bulletin Board Systems available. TBBS/TDBS provides the basic tools that are needed for an online system. What it lacks is a bi-directional protocol and a graphical interface (a method of providing photos, images, graphics and sounds to the caller). RIPscrip-2 technology provides the graphical element.

RIPscrip-2 supports 16.7 million colors, uses all sizes and styles of Adobe and True Type fonts and uses both BMP and JPEG images. The language also allows one to create stunning graphics in a compressed ASCII text format that is both extremely small (which means they transmit and display extremely fast) and highly efficient. It has become popular in some circles to proclaim the death of the RIP technology. To paraphrase George Bernard Shaw, reports of that death are greatly exaggerated and not at all accurate. RIPscrip-2 is clearly a technology that has a great deal of life in it. It is fast,

efficient and reliable. Their new paint program (RIPaint 2.0) is complete and easy to use.

By combining these two elements, Alan is right on the money. The result is a system that is reliable, flexible, fast and exciting. Whether you are running a dial-up system or providing information via the Internet, this technology works.

Of course nothing is perfect and there are some missing pieces here. One is a bi-directional protocol within TBBS. Such a protocol would allow a single caller to perform two operations at the same time. For example, one would be able to download a file while writing a message or browsing a news item.

Another needed element is a Windows and a Macintosh terminal program from TeleGrafix. A special terminal program is needed in order to access and view the graphics and images created in RIPaint, the ASR products and any RIPscrip system. The programmers at TeleGrafix tell me that as soon as the Mohawk browser is released the Windows terminal will follow in a matter of weeks. This is because the same DLL (which is the heart of the Windows program) can be ported to Windows without a great deal of additional work.

Currently, only a DOS terminal program is available for RIP. It does work and is generally well-behaved under Windows 3.x and 95. However, it also creates many unnecessary problems such as finding the right

video drivers. Also, like it or not, this is a Windows world. If you want your software to be taken seriously, it must be a true Windows product, not one that sort of works under Windows.

I am also told that a Windows version of the RIPaint program is on the way. Again, it should have been done long ago. Let's just hope it won't take much longer for these products.

I also believe that for RIP technology to be a truly important force in the online community, a Macintosh terminal program is needed. TeleGrafix has said that one is "coming" but so far there has been no real evidence of this. Perhaps the new alliance with Japan will help TeleGrafix see the light on this issue.

The programs created by Alan McNamee clearly demonstrate what can be done by someone armed with an idea and talent. The fact that his products are inexpensive, run on a stable platform and are fully ready to run on the Internet make them something that any sysop should examine closely. ♦

Correction: In last issue's review of Power BBS, it should be noted that BitRip is made by PTS Software of Parsons KS.

CONTACTS:

Advanced Systems Research
P.O. Box 157
Maryhurst, OR 97036
Tel: (503) 655-7031
BBS: (503) 650-4872

COSTS:

RIPMaster: \$279.00
The News Reader: \$239.00
The Data System: \$210.00
The Graphing System: \$139.00
The Classified Ad System: \$239.00

RIPFlick Video: At the time of this writing, this product was not yet available. Check with Advanced Systems Research for current status.

House by Mouse: Not yet commercially available but available for system integration via ASR or VARs.

TeleGrafix Communications Inc.
26 S. Loudoun Street
Winchester, VA 22601
Tel: (714) 379-2131
Fax: (714) 379-2132
BBS: (714) 379-2133
WEB: <http://www.telegrafix.com>

NOTE: At the time of this writing TeleGrafix was moving from California to Virginia. The phone numbers may have changed.

COSTS:

RIPTerm: \$19.95 for registration code to upgrade from the shareware version. \$29.95 if it is shipped with installation diskettes.

RIPaint: \$99.95

eSoft, Inc.
15200 E. Girard Avenue
Suite 3000
Aurora, CO 80014
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BBS: (303) 699-8222
WEB: <http://www.esoft.com>

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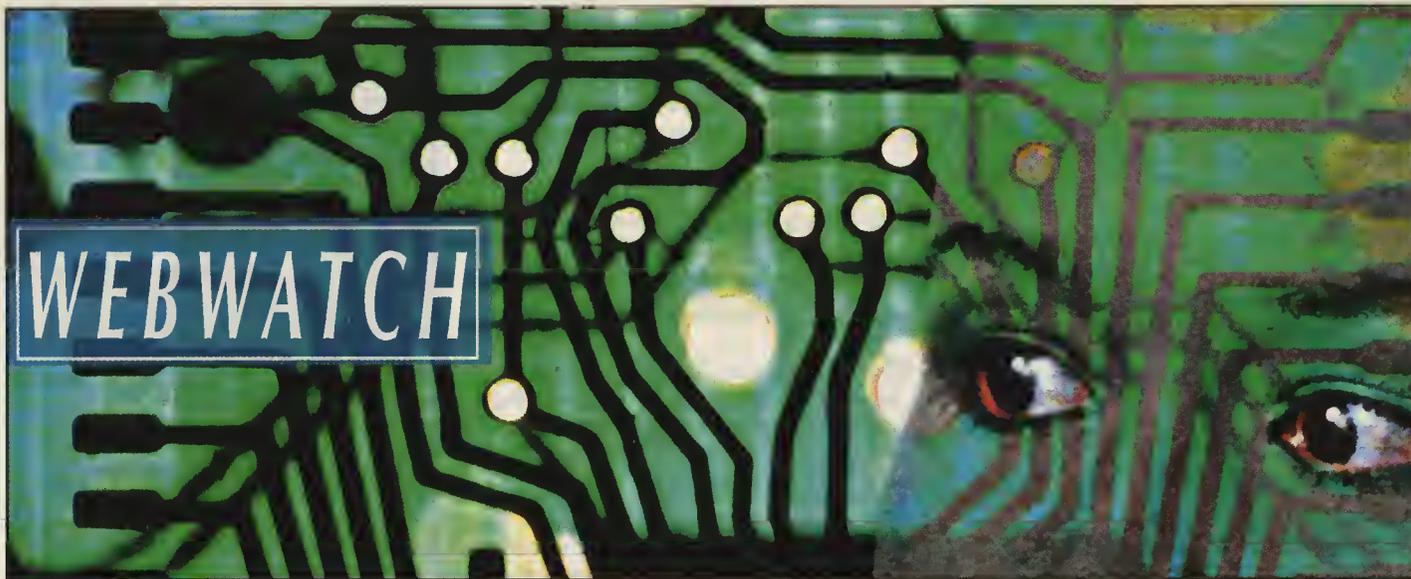
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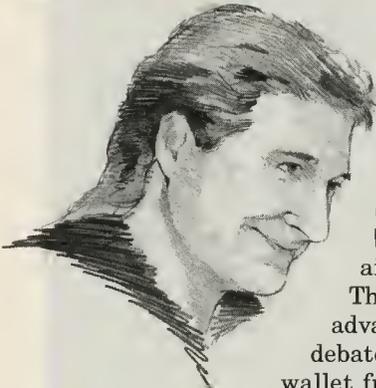
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WEBWATCH

BABB'S BOOKMARKS by Chris Babb

SAVING CONNECT TIME



Spring is in the air and I'm sure that many of you are finally coming up for air after this cold and dreadful winter. This past season brought us many Internet advancements, piles of programs, interesting debates and more likely than not, a thinner wallet from buying the latest hardware, more disk space and the most insidious money sucker of them all, time online.

Some of us are pretty lucky. Many have the Internet freely available from their place of enslavement. Others have the good fortune of being able to get unlimited Internet accounts from their providers at somewhat affordable prices. Some of us get our Internet for the low, low price of working for an Internet Service Provider, or because we do something as crazy as trying to write about an evolving beast that changes faster than we can put our thoughts into words. At times, it's like trying to predict what the weather is going to be like on Saturday... in the third week of next August.

One thing that remains constant though, is that we all pay in some way for the lifeline that connects us to the Internet. It may be leased line monthly charges or it may be long distance charges, but someone is paying that monthly charge and that someone, for the most part, is you.

To me, there is nothing more stifling than having to watch the clock while online. This is something I never quite got used to back when a 2400 baud connection to CompuServe was raping me for somewhere around \$12-22 per hour. What I did get used to was struggling to get on and off as quickly as possible while trying to convince myself that what little I was able to find was worth the exorbitant prices I

was paying. Fortunately, we are paying nowhere near these ridiculous prices today. Where some people really take the bone is not in the cost of these services but in the cost of connecting to these services through our beloved phone companies.

People in the boonies and the in-betweens suffer the minute-by-minute siphoning of their wallets, in the finest traditions of the early online services, through their phone charges. I'm one of the lucky ones. For me, it's a simple 5.2 cents per call (even lower on the weekends). This generally adds up to about \$3 per month for as much time online as my brain and my butt can take. For many others though, that same \$3 will get them maybe 2-3 hours worth of quality Internet time. For anyone in this predicament, using and liking the Internet is an expensive proposition. I'd bet that the pull of the clock is much stronger than the interest in the "Cool Site Of The Second" with a few exceptions who have deep pockets.

So, what are you to do if you're one of those unlucky enough to be caught by the "Telco-Collar?" What if phone charges don't matter but you have an Internet account that only allows you a certain number of hours per month? What if none of these things matters but you just want to minimize your online time? That's where off-line programs and utilities can be your lifeline to the online world.

It sure would be easier and more cost efficient if you could plan your Internet browsing ahead of time. There is no shortage of information on what's hot and what's not. It's sitting in the book stores, on the magazine racks, in your local newspaper and all over the tube so you don't have to be online to find what interests you. Fortunately, there is a growing mountain of off-line software to help you meet these ends and that's the subject for this month.

Chris Babb is a Senior Systems Engineer for Control Masters, Inc., a Systems Integrator located in Downers Grove, IL, where he designs industrial automation software by day. He's a member of the Aquila BBS/Internet Team by night. Chris has worked with Aquila since 1990 and currently handles technical support, Web design and construction, Internet training and various other online and offline duties. In his meager spare time, Chris enjoys music, playing bass guitar, the outdoors and his kitties. You can reach Chris via <mailto:chris.babb@aquila.com>

The largest category of programs designed for this purpose pertains to the Web. I counted seven programs that allow you to download an entire Web site to your hard drive, including graphics. Next come the time-log programs. While Win95 will tell you how long you've been connected, it doesn't show cumulative time throughout the month. That's where these programs come in handy. Some of them will even let you enter your charges per hour to help you estimate how empty your bank account will become. Thankfully, there are some programs available that help to manage this deluge of information.

What all of this means to you is that you can keep the phone charges down by getting online when they are at their lowest; you can save precious ISP delegated hours for when you really need them; and you can make the most of that precious resource that we always seem to run out of...time.

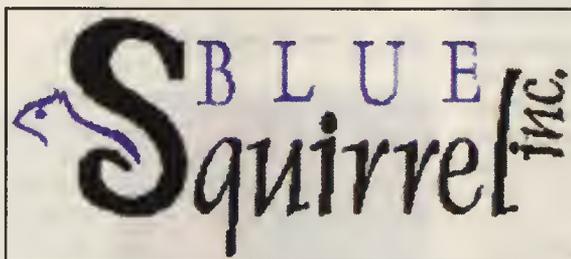
THE KITCHEN SINK

There is one supplier of software available who has thought of almost everything. They were mentioned in last month's column on Search Sites and they get mentioned again with their slew of productivity enhancement programs for the Internet. Besides that, they fit perfectly into the topic of this month's column.

BLUE SQUIRREL SOFTWARE

<http://www.bluesquirrel.com>

Imagine a world where you're looking at your favorite Web site on your very own Web Server through a T1. No delays, no waiting for those graphics to come down the pipe and no hassles. Well, stop dreaming and imagine using *The Blue Squirrel*



Automation System. I call this the kitchen sink for off-line Internet because it has just about everything.

Schedule is an easy to configure scheduling program. Programs are "scheduled" by adding an event, picking the frequency that it will run (once, every minute, etc.) and setting the month, date, year and time that you want it to run. From there, you enter a program description, the command line to run the program, the working directory and the Windows run mode (normal, maximized or minimized). You can add as many events as you wish. In order to run your schedule, run the *Schedule* program, leave your computer on and walk away. As an added bonus, this program was not designed solely to run Internet programs. You can automate virtually anything from disk compression to backups.

Grab-A-Dial - This handy program gives you functionality that Microsoft didn't. *Grab-A-Dial* allows you to specify any of your dial-in connections and cause it to make the call. You can do this from a batch file or through "*Schedule*." More advanced features allow you to specify a list of programs to be run, either before or after connecting.

Don't Stop - This is a must for unattended Internet. It's basic function is to press the "Connect" button for you when

using a Windows 95 dial-in connection, since Microsoft failed to give us any way to do so. This program runs in the background and sits in the system tray. Another good feature of this program is that it will also take care of itself if a busy signal is detected by forcing the dial-in connection to try again. Advanced features include the ability to run it from a batch file or scheduling program, unload itself after running once and the ability to customize logins.

SqURL - This was the program mentioned in last month's article on search engines. Another of the many uses for this excellent program includes the ability to monitor specific Web sites for any changes. All you need to do is list the pages you are interested in and set them to be monitored for modifications. When the program is run, the search will be performed and the results of the search will be written to a specific file. This is extremely useful (and necessary) to take things to the next step.

Grab-A-Site - The guts of everything. This program will grab any Web site that has been configured either in the program or by specifying an HTML file or list of URLs. Since *SqURL* results can output to both HTML or a list of URLs, it fits perfectly with this program and the whole process couldn't be any easier. This program also supports unattended operation through command line options that let you specify the list of URLs to be used, the amount of information to grab in Kbytes and a timeout value. Once everything has been grabbed, all necessary links are resolved so that you can view the pages directly from your hard drive.

Preferences for the program allow you to specify a couple of items. The first (and most important) is the number of levels deep that *Grab-A-Site* should grab. You need to watch this carefully, as going to 3 or 4 levels has the possibility of exponentially increasing the number of URLs collected depending on the site's complexity. Other important settings include the default retry and timeout values, limits on number of pages, size of files, and time, along with the ability to retrieve

FTP links and inline graphics. I highly suggest that you monitor in person the first run *Grab-A-Site* makes on the sites you intend to collect. This will give you a feel for the program settings and will probably surprise you with the amount of information that can get collected based on these settings.

Hang-It-Up - The final piece to make all of this work. After getting all the information you need to keep you happy, you need some way to disconnect. This program is it. You can schedule it to be run with "*Schedule*" or, by using command line parameters, you can have it hang up in a minute, an hour or later.

Overall, if you're looking for a common look and feel between programs and are looking to do more off-line than online, this suite of programs is for you. The integration between them is excellent and most of the features available in all the programs below are there. All of the Blue Squirrel programs are available for a free 30 day demo. They are also sold separately or together in various packages for a reasonable price. Be sure to check out their Web Site for the latest versions of these programs and for current pricing. The savings you will get by using these programs (and all those listed below) should more than pay for the programs themselves.

LOGGING IN

One of the most irritating things about the Win95 Dial-In Adapter is the "Connect" button must be manually clicked, so unattended Internet sessions aren't possible with Win95 alone. Thanks to a little ingenuity, we have a few solutions.

WINTRONIX, INC. - KEEP GOIN'

<http://www.xmission.com/~wintrnx/wx/index.html>



Keep Goin' is one of those "must have" programs to make your Win95 dial-up networking life a little easier. This program is along the same lines as **Don't Stop** listed above with almost identical features. When you run Keep Goin', it appears in the system tray as a green phone, which means the program is currently active.

You can de-activate the program by left-clicking on it. A right-click will bring up the help file. Once the program is running, any time you start a dial-up connection, Keep Goin' will take over and press the connect button for you. Simple and elegant.

RTV SOFTWARE - RTVRECO

<http://www.demon.co.uk/rtvsoft/index.htm>



RtvReco is Win95 program based on the idea of pushing buttons for you. While it performs the "Connect" functions described in the above programs, this program can also be used for virtually any application where a button

must be pressed to continue. With so many confirmations in dialog boxes that are basically nothing more than a nuisance, it's surprising that there are not more programs like this one available.

Adding a new button to be pressed is as simple as adding a program item. Press the Add button, give it a name, add the text that is on the button select the action you want performed and you're all set. Be sure to think of uses other than just connecting or reconnecting to make your life with Win95 a little easier. All in all, a useful addition to your box of tools.

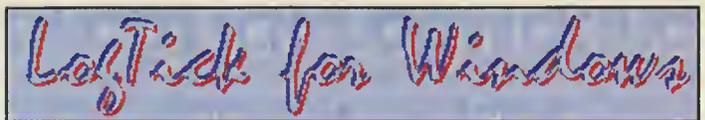
TIME LOGGING

Once you're connected, it would be nice to keep a running total of how much time you've been connected. This can help you determine how much your provider is going to charge you (if you have a timed account) and to also help you estimate how much the phone company is going to stick you for.

LOGTICK

<http://www.pi.net/~tmartens/logtick.htm>

LogTick is another program that will log your connection costs. This program can be started through the LogTick Server, through scripts using the LogTick requester or by



manual intervention and can be based on a carrier detect, if enabled. The program will log and calculate the cost of both your ISP and phone charges based on the configuration you specify.

Just copy the program files to a directory, then enter the rates you pay for various connectivity and usage services. This program takes into account the different phone rates that can be charged based on time of day and day of week.

You start by setting up an entry for your phone service with multiple sub-entries. These sub-entries allow you to set the rates for the times and days, giving you a somewhat accurate accounting of your phone charges. Unfortunately, LogTick fails to consider the normally higher cost of the first minute of a measured-service phone call, but it will give you a fairly accurate result within a few cents.

ISP charges are set up in almost the same way with the ability to specify the number of base hours you start with and the additional charges per minute or hour thereafter. Logging is done for you and you have the ability to view the logs for all of your sessions including the total time spent online and estimated cost of phone and ISP charges. A most useful program.

RAS+

<http://www.lambsoftware.com>



RAS+ is a full featured logging program in addition to a dial-up connection manager and online chat program. This is an excellent program and a definite must-have for anyone currently using Win95 as it incorporates many features that Microsoft left out.

Installation is quick and simple with virtually no configuration required to use the basic program and chat features. It uses your existing dial-up connections and adds functionality including accrued charges, logging and auto-reconnection. It displays complete information about your current connection including your assigned IP addresses. The chat features alone make this program worth using. By modifying the RAS+ initialization file, you can include the IP addresses of others using RAS+ and instantly know when they are online. You can then "hail" them in the finest traditions of Star Trek to get their attention and hold a semi-private online chat with them. Very handy and much more suitable for quick conversations than using an IRC client.

Charges are calculated based on information set up for each of your dial-in connections. You can specify as many different charges as your phone company can come up with based on time of day and day of week. The only exception is that you can't specify first-minute charges (this seems to be a re-occurring theme for all of these types of programs) so your actual charges will be a few cents off of what they should actually be. You can also review your billing history on a per-

connection basis and have the ability to export this information to another program. Other features include the ability to re-connect if you hit a busy signal and a very handy way to launch applications once you have connected to your provider. Overall, this one is the best of the time-logging programs available and should be a required program for all Win95 users.

OFF-LINE WEB

When you think about it, the things that you spend the most time doing on the Web are waiting and reading. Both activities can eat up your time and money faster than anything else on the Internet. The following programs make it convenient for you to look at Web pages whenever you want without the wait and help your Internet connection do exactly what it is supposed to do, get the information you need. No one ever said that you had to be connected to the Internet to make the most of it. Did they?

MILK TRUCK DELIVERY

<http://www.milktruck.com/home.htm>



Milk Truck Delivery is unlike any other off-line web program currently available. It's incredibly easy to use. When you run the program, it starts your Web browser and logs you into the Milk Truck Delivery Doorstep. It is from this page that all functions of the program are performed on the sites you have designated for "delivery" to your hard drive. Once the selected sites have been delivered, log off and browse at your leisure.

The program requires only that you install it and choose your Web Browser from the list that is presented. The real work of configuring the sites you want to read off-line occurs from the Milk Truck Doorstep page while online. When you run the program for the first time, you are taken to the Doorstep where you are allowed to select the sites or individual pages for delivery to your hard drive. This portion of the setup is straightforward and is also one of the main differences between this program and the other off-line Web programs described below.

Milk Truck has been working with various sites around the Web to provide pre-packaged information for Delivery users, which makes the configuration process as painless as possible. There are currently 10 such sites available including *The Dilbert Zone*, *InfoWorld* and *PC Week*. Simply select the site you want and choose from the sub-categories listed. These selections will then be added to the Doorstep. You can also set up your own selections (including password protected sites) to deliver from anywhere on the Web you wish.

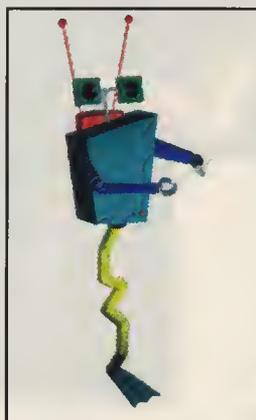
Retrieving your selected sites is also simple. Run the program and your Web browser is automatically launched to the Doorstep. Check your configured sites and click on "Deliver Now" to have them updated. Milk Truck grabs the sites, including graphics, video, JAVA and virtually any-

thing else on the pages, stores them on your hard drive and informs you what has been updated. At this point, you can log off the Internet and browse your sites at the speed of your hard drive.

If you have your browser running when you start Milk Truck, it closes the browser and restarts it at the Doorstep. Also, if you have Milk Truck running and attempt to go to another site on the Internet, you are told that it is not available. At this point, you need to close Milk Truck (which closes the browser) and re-launch your browser. A minor inconvenience considering the value of this program. Overall, Milk Trucks' easy and unique operation sets it apart from the pack and is a worthwhile investment. It is currently available only in a Win95 version but the Win3.x version will be available sometime in March.

SURFBOT

<http://www.specter.com>



SurfBot offers the ability to grab newsgroups, gopher sites and virtually anything else you can think of in addition to Web sites. SurfBot uses "Agents" to determine what you want and what to get.

Installation was fairly smooth with the exception of a failed DDE call while trying to make a program group in Program Manager. Why Win95 programs still do this is a mystery, but clicking on the Ignore button allowed the installation to proceed. When the program first

starts, you have the ability to choose from the included Agents (Internet Explorer Favorites, Netscape Bookmarks or the Reuters News feeds) or you can create your own from the Agent Wizard. You can also jump over to the SurfBot Home Page and download the "Agent Of The Week" or any of the previously created Agents that cover many of the newspapers and tech magazines available on the Internet.

Configuring your own Agent is very straightforward and allows you to choose HTML document (useful if you use a program like SqURL to generate a list of sites to grab), an Internet site or a local folder of Internet Shortcuts. From there you can choose to retrieve the time and date of the listed pages, a specific number of words from a page or the entire HTML page including images, movies, PDF's and other Web content. You also have the ability to highlight only those pages which have changed within the SurfBot Window and to perform a limited amount of filtering. Finally, you tell SurfBot how you want to view the results. Your choices include the SurfBot Quick Viewer, a single HTML page, multiple HTML pages, Netscape Frame pages or Internet Shortcuts.

Viewing the retrieved pages is as simple as clicking on them in SurfBot. Your Web browser is launched and you'll find yourself browsing the Web again, at the speed of your hard drive. By far, this is the most useful of the off-line Web programs I looked at. It's uses and features can only be scratched in this column and I recommend that you give

SurfBot a shot at being your personal Web Robot.

All of the sites and programs listed above just barely scratch the surface the number of programs available now. These types of programs are coming out at something like the rate of 2 or 3 per week and while that's great for the industry, it's hell on those who just want to install a program and be done with it. But, it does give everyone who uses the Internet the ability to try something before they buy it to see if it's useful for them. I highly recommend that you do so as you never know when the next Netscape will pop out of the software world. And wouldn't you hate to miss that?

This technology is still in its infancy and there is a ways to go before everything anyone could want and need in an off-line program is available. For now though, there is no better way to help control your Internet costs and your phone bills than by taking a few hours to evaluate and use these programs for yourself.

NUTSITE© OF THE MONTH

Extremes. Everyone likes to watch someone taking it to the limit, whether it's in the sporting world, the real world or the underworld as this months Nutsite© demonstrates. Many of us grew up during the cold war; I can remember the public service announcements in school films showing the "duck and cover" method of kissing your butt goodbye during a nuclear attack. The reminders are still with us every Tuesday at 10 a.m. with the public schools' air raid sirens. "The following is a test of the emergency broadcast system." The skeletons of abandoned missile silos. I've always wondered what missile silos looked like. I got my wish. Fortunately, it was at someone else's expense!

ABANDONED MISSILE BASE VR TOUR

<http://www.xvt.com/users/kevink/silo/silo.html>

This site is a walk-through of a Titan missile silo somewhere out west. The location is not revealed and any photos of people have been altered to protect their identities. A good move, considering that what these guys did violates

federal trespassing laws. As stated on the first page, the silo is decommissioned, dismantled and abandoned. It was active sometime in the 1960s and seemed to remain undisturbed until the 1980s. Today, it's dark, dirty and filled with rust, asbestos, kerosene, radon, water and tons of graffiti.

These pages and photos are some of the most compelling content I've found on the Web. I found myself glued to the screen throughout all of it and was sadly disappointed when I got to the end.



The tour starts at the entrance and walks you through the entire missile site with excellent quality photos, interesting descriptions and insights and plenty of warnings against performing your own personal exploration. My only wish after seeing all there was to see was for more to see, as it was a fascinating adventure.

This site gets my highest recommendation and I urge everyone to take this fascinating virtual tour of a past, potential tool of human extinction.

I hope you found something useful from this month's deluge of off-line software. Don't forget to keep a lookout for new software not covered in this article. Here are some excellent pages to check regularly:

CWSApps - Stroud's Consummate Winsock Apps
<http://cws.wilmington.net>

TUCows - The Ultimate Collection of Winsock Software
<http://www.tucows.com/>
The Slaughterhouse

<http://www.magpage.com/~cwagner/>

I have these as well as all of my past articles available for your rodent fetish natures:

<http://www.aquila.com/babbs.bookmarks/>

Feed those Nutsites to me! I know you know about them! Comments, good (preferred) or bad (only if you must) should be clicked off to:

<mailto:chris.babb@aquila.com>◆

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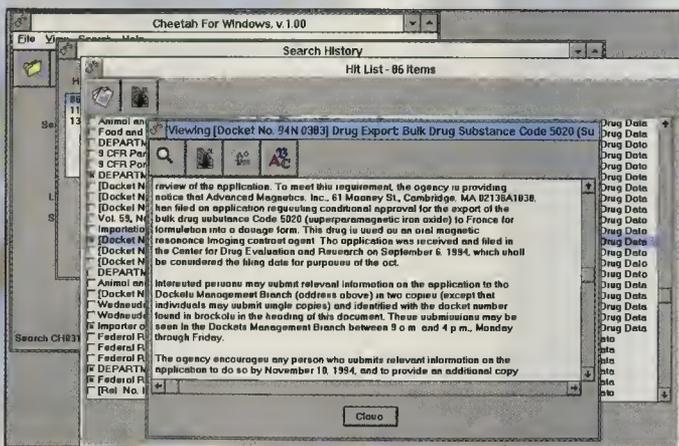
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Screen shot from APDI's new Cheetah for Worldgroup Product

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President Mark Burnett in one of APDI's Computer Rooms

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Jim Moriarty, United States Patent and Trademark Office

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Scott Brinker, President, Galacticomm, Inc.

...CompuServe is excited about the benefits that APDI can bring to our existing and future client base.

Jeff Kiely, CompuServe Network Systems

MICROSOFT, THE INTERNET, AND BILLGATUS OF BO



“You can’t outrun them. You can’t destroy them. If you damage them, the essence of what they are remains...they regenerate and keep coming. Eventually, you’ll weaken. Your reserves will be gone. They are relentless.”

Q, Stardate 42761.3

Early March, 1996. The month the Internet gained Microsoft’s undivided attention. And the message from Redmond is that “resistance is futile — you will be assimilated.”

First, Netscape had their vaunted Developers Conference in San Francisco. Some 3000 hopeful Internet developers gathered at Moscone Center for three days of marketing hype, exhortations to buy something, anything, from Netscape, and good old fashioned Microsoft bashing. By all accounts, this event was unmarred by the presentation of any significant technical information. At the end of the conference, the Netscapians asked for a show of hands among attendees as to who thought the conference was worth the time, money, and effort to attend. Nearly 5% of the attendees appeared to enthusiastically endorse the assemblage. The rest left grumbling. Netscape’s grossly overvalued stock plunged 14% in a day.

The very next week, the Microsoftians landed at Moscone — ostensibly for their Microsoft Developers Conference. This conference is so routine, and normally so routinely boring, that we just normally don’t go. For some reason, this “felt” like an event we had to make. With many of the foreign travelers laying over to catch both conferences, the Microsoft event really was quite sold out with over 4000 attendees.

And the world changed. Microsoft lowered the boom. They want the Internet — all of it. They want the software business — all of it. And it looks like they will have it.

THE LAYING DOWN OF SWORDS AND THE KISSING OF THE RING

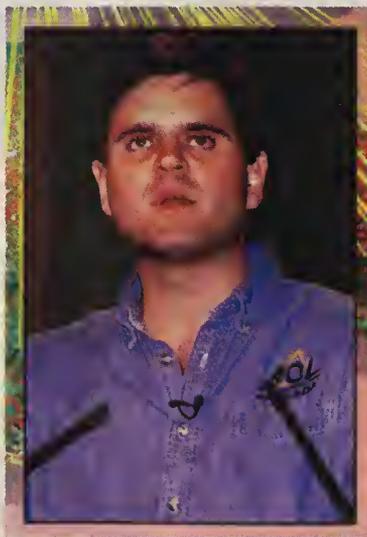
The most shocking thing notable at the conference was the “Who’s Who” list of people who hate Bill Gates and have

publicly noted his association with Satan, but who nevertheless showed up to publicly lay down their swords and kiss his ring. Steve Jobs, co-founder of Apple Computer, is currently in the final throes of NeXT Computerism. NeXT quit making the Darth Vader computer and resorted to marketing the NeXT operating system alone for Intel processors. Then it quit marketing the operating system and resorted to marketing programming tools. Finally, it quit marketing programming tools and resorted to something they call WebObjects — programming tools for the Web. Finally, at the Microsoft conference, Jobs announced that Windows and Microsoft were cool and owned all of it. Mr. Jobs apparently found resistance futile. He has been assimilated.

One of the big items at the conference was the press release noting that America Online now has 5 million members and had agreed to make Microsoft's Internet Explorer the official Olympic web browser for the service. Since they had also announced the same thing regarding Netscape's browser just a few days before, this caused some confusion. Steve Case noted that they would use the Netscape browser for their Internet Service Provider business, GNN. And they would use Internet Explorer for the existing AOLians on the main service. The trade out was that America Online's icon would now come shipped in Windows.

This caused quite a bit of furor over the fate of Microsoft's Network. MSN has actually just crossed the million member mark and is in little danger of going down the tubes. And the AOL icon will not be so prominent on the desktop as presumed. It won't replace the MSN icon. There will be an ONLINE SERVICES FOLDER on the desktop and so far AOL will be the only icon in it. But there is nothing in the agreement that prevents Microsoft from adding CompuServe, Prodigy, or anybody else to the folder as well. In fact, we have seen this as an existing trend in department store computer displays. Apparently the large online services have been very aggressive in getting their software included on various hardware manufacturer's systems. Many such systems now come bundled with almost all the online services software — usually in a single folder containing the Prodigy, AOL, and CompuServe icons.

All that said, Steve Case, the gentleman who has unceasingly sought sanctions against Microsoft through the U.S. Department of Justice, actually came in the second day to get up on stage, lay down the sword, kiss the ring, and note that Microsoft was cool. AOL also announced alliances with SUN, and apparently is seeking consensus with anyone with a product who will stand still long enough for a short conversation. Steve Case did give a short presentation and we understand now why he deigns speak in public so rarely. He has an almost unnatural God-given talent for emptying a room. Mr. Case found resistance futile. He has been assimilated.



Steve Case, America On-Line
*"I have seen the light...
 through yonder window"*



At First -
*A single microphone mounted on
 the chest, but as time went on...*

Borland, once a powerhouse in the compiler and programming tools market, was relegated to a tiny booth in the vendor exhibits area to tout their Delphi2 tools. They didn't even get on stage. I got a little misty back in that corner... Clearly resistance is futile. They've been assimilated.

Oracle had ostensibly agreed to have Larry Ellison come for the ring kissing.

But at the last minute, he apparently sent a gruntling in his stead. Rest assured, the ring has been kissed and Microsoft is cool. They're still going forward with their plans for a net terminal device. But Gates and company give it little chance of success — a position I happen to agree with. Resistance is futile. They will be assimilated.

Some of the surrender actually seems puzzling. Microsoft announced an agreement with Sun whereby Microsoft's Jakarta becomes the reference implementation of Java for Windows. Did I get this right? With seventy gazillion Windows machines on the planet, if Microsoft has control of Java, what other reference implementation matters? If Microsoft puts it in and says it says Haines, anybody else doing a Java compiler for something else had better follow suit. Technically Microsoft has licensed the language but the wording was clear — they are the reference implementation of Java for all Windows platforms. Sun's resistance is weakening. I don't think they will be assimilated easily. I don't think they want to be assimilated yet. But they certainly have surrendered the future of Java.

Digital Equipment Corp. was predictably on hand. They've tied their future fortunes with the Alpha servers to the NT operating system pretty strongly. It would appear to be a good move all around and one they will likely be pleased with. NT is gaining momentum impressively and the Alpha machines are the upgrade path to buy your way out of capacity problems. They were already assimilated.

MCI was present to note that Microsoft was indeed cool. Assimilated. RealAudio was there to note that RealAudio is now part of Microsoft's operating system — definitely assimilated. And a half dozen other small technology companies were

on hand to note that Microsoft was cool, they were now Microsoft, and things like Virtual Reality Modeling Languages were now cool in a very Microsoft way. There was a demonstration of a VRML world where Internauts could talk to each other using audio and some very tricky talking head avatars that really did blow me away. It was mostly faked, but resistance is clearly futile. I was wowed anyway.

THE GLOBAL DESKTOP

The total sweep of the universe and everything in it was apparently caused by some dramatic changes in direction by Microsoft. The utterly fascinating thing is how even Bill Gates, with an 11 billion dollar company and 15,000 employees, can order a "right turn, Clyde" and it actually happens in something on the order of 90 days. This will be a case studied in business schools for the next hundred years, or should be. It disproves the dinosaur theory that big is intrinsically linked to slow and stupid. The sudden change in direction was done emphatically and with precision — and in some quarters religious fervor.

The change in Microsoft itself is far more impressive than their new plans for the Internet. If you were counting on Microsoft growing big, stupid, and inertia ridden — it isn't happening. Bill Gates has surrounded himself with a handful of brilliant lieutenants. Gates isn't threatened by having smart people work for him, he seeks it. And he suffers fools with extremely poor grace. They have a meeting to thrash it out. Bill issues the final decree. These guys go make it happen. And their individual followers within the company idolize these guys to such an extent that they all immediately jump out to get out ahead and claim they had thought so all along. It is actually a little frightening to watch.

First, the company itself has now been "reorganized" into three units — personal computer applications, corporate applications, and the Internet. Second, the entire product line of the company, without any apparent exceptions, will be retooled to take advantage of the Internet. Gates himself stressed this several times in his presentation — everything from Word and Excel to all the programming languages, to a new series of tools like Jakarta and FrontPage for the Internet, will BE part of the Internet. This is not a plan to introduce some Internet products. It is a plan to convert ALL products to use the Internet.

Paul Maritz, the new head of the Internet unit and a visibly brilliant gentleman, held a press conference that was disarmingly straightforward. "Frankly, the Internet developments have been a total wakeup call for Microsoft. We missed it, and we're fixing it from top to bottom. We were going along perhaps a bit too comfortably, and this may have been just what we needed." There was nothing coy or disingenuous about the presentation. They didn't claim they were the "Internet Company" or that they invented it. Rather the reverse. They missed it, and they don't intend to miss it again. It was persuasive.

The most striking development was a description of Microsoft's vision of the desktop. They intend to release a version 3.0 of Internet Explorer that actually replaces the current desktop. All files, all folders, all applications that you now access with the desktop will be accessed with Internet Explorer. And this same Internet Explorer will be used to access the World Wide Web.

Numerous attendees and press asked point blank if this meant that Windows users would have to learn yet another interface. The answer was that to the extent that the web browsers were a new interface — YES. The desktop interface and the World Wide Web will be one and the same.

This essentially sucks the browser up into the operating system in such an integrated way that it virtually ends the browser war on announcement. But it also seamlessly links the individual's desktop to the entire global Internet. It may be hard to tell whether you are on your own local machine, or on a server in Africa in the very near future. And you may not care.

Maritz and Gates both touched on the centerpiece of their vision. If they can make the personal computer as easy to operate as the World Wide Web, and at the same time make the World Wide Web as easy to operate as the personal computer, they think it will dramatically expand the use of personal computers among those who haven't yet joined the party — potentially 100 million more PC, and thus Windows, users. That's a largish vision, and I guess the kind to have.

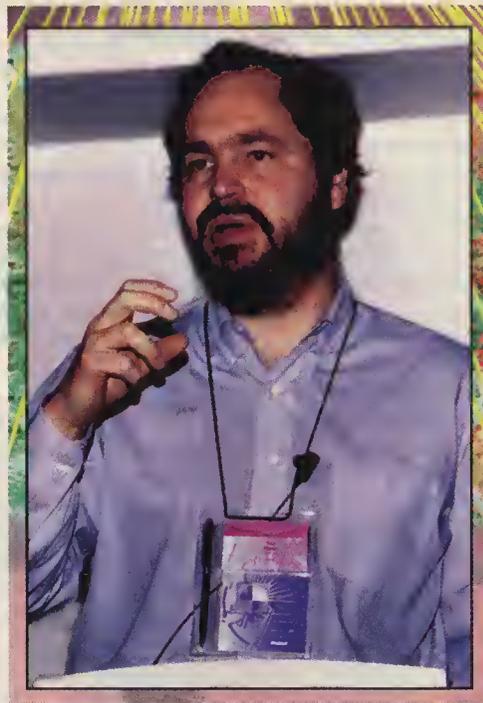
Attendees actually received a beta Internet Explorer 3.0 on CD-ROM on the last day of the event. Good vision. Good concept. Not there in software yet. Explorer is slower than ever, and a little bit broken in places. But it is beta.

DEVELOPING APPS IN INTERNET SPACE

Since it was a developers conference, most of the attendees were interested in developing things. Microsoft was intent on avoiding disappointment. The heart of their presentation was on ActiveX. ActiveX is a generic, though trademarked term to cover Active Controls, Active Scripts, and a series of other very active things to make programming for the Internet easy.

ActiveX looks a bit like a cross between the winsock application layer and the Object Linking and Embedding (OLE) technology on some sort of steroid abuse program. Actually, detractors may claim it is just warmed over OLE. But it is to OLE's credit that it is flexible enough to be warmed over in such a dramatic fashion. Programming network aware elements is not much harder than indicating URL's in the code. The Internet then becomes something of a peripheral device much like a hard disk or printer from a programmer's point of view.

Active Controls, for example, lets you program a button with a trivial few lines of code. But better, you can plant this button on your web page and anyone can grab it. In fact, I guess they could grab it and put it in a Word document, or even on a



Paul Maritz - Microsoft
So Bill says, "Look wear this around your neck, don't shave for 40 days and 40 nights, and I'll get you one of these cool chest microphones"

POWERBBS96

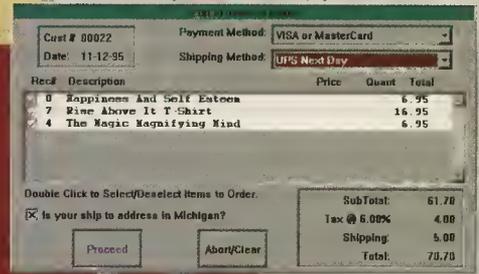
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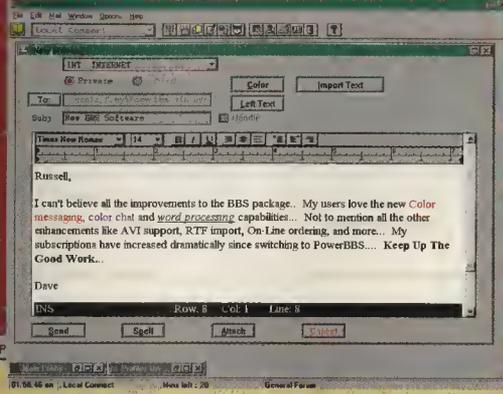


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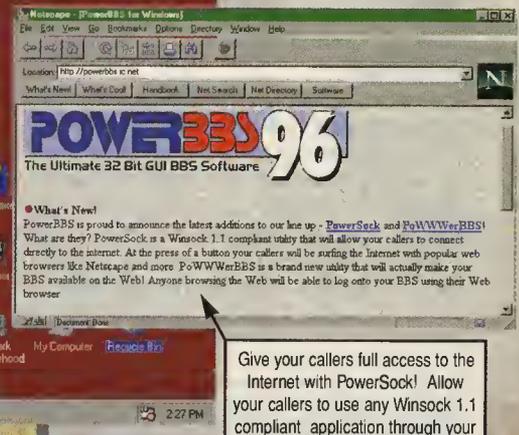
Graphical Games



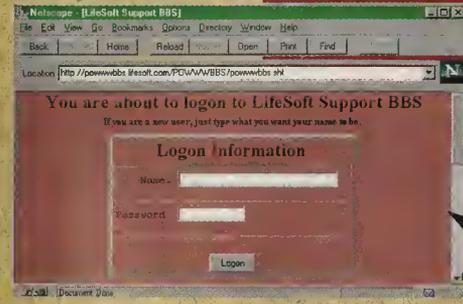
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Data compiled from reputable sources, November, 1995.

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Word toolbar, and it becomes rather theirs. The button might be something as trivial as a program to go to an Internet stock price server and retrieve the current price of a single stock for display on screen. Or I suppose it could be the launch sequence software for NORAD — rather dependent on the level of ambition for the gentleman writing the button. The two issues here are that the programmer needs to know approximately nothing about the Internet to write the program, and the program becomes a rather portable object that can transit web sites, desktops, and even be dropped into individual application programs — or for that matter documents created by other application programs. Easy to write and impressively portable — enough so that writing totally trivial applications requires relatively trivial effort.

Active Scripts are more like JavaScript in nature but an extension of Visual Basic. The scripts are simply embedded in HTML pages. VB has caught on pretty strongly. Some would claim there are nearly three million Visual Basic programmers in the field now — compared to six dozen or so Java programmers. So Microsoft has offered a subset of Visual Basic as a scripting language you can put in Web pages. To hedge the bet, they are also incorporating JavaScript into their browser, and of course introducing the Jakarta compiler for Java itself.

The company has a fascinating take on the peculiar aspect of Java, JavaScript, and ActiveScript in that they are very nearly totally useless. To avoid viruslike or Trojan Horse programs, these languages are currently crippled in that they cannot read or write to the local hard disk drive. This is to prevent someone from writing a fairly innocent looking script that actually scours your hard disk drive for your password

file and credit card numbers and surreptitiously transmits them over the network to the server, where it is collected for the express purpose of ruining your entire life. Conversely, there is a paranoid fear of similar programs that erase hard disk drives, scramble files, etc.

This has led to a bit of a confusing conundrum whereby everyone is buzzing about these great new net aware languages such as Java and Visual Basic Script, but since we don't want them to do any damage, we'll simply remove their ability to do anything damaging — or for that matter useful. Paul Maritz referred to this situation as "languages confined to the sandbox."

Microsoft actually appears to have a bit of a solution for this — and at first glance at least — a lucid one. Their take is that you can buy totally damaging software right off the shelf down at Egghead. But the reason such products are not normally damaging, and the reason you buy them despite the risk, is that you know where they came from. You "trust" the manufacturer of the program and assume that they see it as in their economic interest to protect you if they ever want to sell a second box to anyone anywhere. So Microsoft thinks the problem has nothing to do with damaging software, and everything to do with the ability to reliably tell where it came from and who is making it. They have teamed with VeriSign, Inc. to provide secure digital signatures and Ids to validate the origin and integrity of downloaded application software. This Microsoft Digital Signature Initiative already has 40 developers signed onboard to use this encrypted "signatures" so that customers who download the software can quickly detect if it is the genuine article from the genuine developer.

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The problem with most of these schemes, aside from additional complexity, is that the developer of the concept wants a wee piece of every transaction. And generally the piece is not so wee. As a result, they usually die of wishful thinking. It remains to be seen how this will be handled.

The other aspect of Microsoft's development tools for scripts was that VBScript is not only free, but the source code for VBScript is free.

OLE and ODBC were of course throughout Active Everything. But it is welcome. The biggest expense on the web these days seems to be getting the web to interface with a database somewhere. You can get 90% of where you want to be on the web with the first 90% of the development budget easily enough. And you can get the final 10% of the way with the other 90% of the budget — most of the time. The ability to easily link a database with a web page without writing your own compiler first would be very welcome in some quarters. Microsoft looks like they have a plan.

Microsoft also showed some new web development tools arising from their acquisition of Vermeer Technologies. FrontPage is an easy to use web page design program, and it shows very well in demonstration. Internet Studio, recently Blackbird, is the more advanced version and it looked pretty hot as well. More about these in future articles.

Finally, Microsoft has somehow licensed RSA cryptography so that any developer can incorporate encryption in their programs quite easily.

TO SERVE MAN

The March conference really does seem historic. First Microsoft gets the importance of the Internet to such a degree that it is retooling itself internally, and retooling its entire software line not just where it needs a nip and tuck here and there, but across the board. They are either buying outright, or buying alliances with any small developers that might ever be useful for any reason. And they were rather persuasive that they have a vision for connecting everyone planet-wide to a global Internet in useful fashion. And apparently everyone in the industry has seen the demos, seen the light, and now agrees that Microsoft is the way and the light.

There is actually a lot of good in all of this. The Internet has so rattled the cages throughout the industry that there is a kind of dawning "virtual panic" in play that is nearing hysteria. There are literally hundreds of developers and other businesses out there that have beautiful buildings, crack teams of technically competent people, and even persuasive war chests of ready cash. They are NOT out of business, and by any measure they are successful. They have just one problem — no relevant products. Whatever they were selling a year ago, or even last quarter, has been completely capsized by the Internet. Every strategy they have worked on over the past five years is so much useless paper and largely an embarrassment if anyone outside the company had actually read it. Sales are drying up completely. So the business looks good except for the bankruptcy hanging there a year out. This applies across a range from six man software shops to American Telephone and Telegraph. And the continuous stream of changing news and developments from the Internet make it look like there is no solid ground in WaterWorld.

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That Microsoft would plant a flag somewhere, anywhere, and offer to let people rally round it, is desperately encouraging. This would account for the procession of notables and aristocracy to Moscone for the ring kissing and assimilation ceremony. A little leadership is probably in order. And only strong leadership is credible. Most people would accept any future Internet scenario except the unknown and unknowable one. If anyone would set an agenda that would stick, they would be happy. I don't think it will help much myself. Frankly, we are looking at the makings of an industry shakeout of epic proportions. But it is true enough that a bit of believable leadership somewhere would give everybody a warm comfortable feeling while they are going broke.

But there are a couple of the usual quid pro quos and provisos. First, most of this is a little surreal. The software Microsoft is talking about doesn't really exist yet. What does is a little less than encouraging. I was genuinely excited to get a copy of Internet Explorer 3.0 in beta on the CD-ROM. And I bought into the desktop extended globally metaphor rather whole hog. The problem is that in use, like Internet Explorer 2.0, this program is just glacial in operation. After an hour with it, getting back into Netscape 2.0 was like being cured of multiple sclerosis of the operating system. What a relief. Watching Explorer load a graphic is actually painful.

DEC provided the terminal area at the show with hundreds of very fast PCs. Despite throwing an incredible amount of hardware at it, things were pretty slow. A Microsoft Exchange server provided e-mail to attendees and now sports public message areas that look for all the world like bulletin boards. Real...slow...bulletin boards. It took over five minutes to load the public conference where attendees discussed the developers conference. The mail server under NT, even on DEC hardware, appears to suffer badly under load. Netscape's Internet link the previous week was much snappier.

So on both the client and server side, Microsoft has some big hills to climb in code to get performance into the realm of the acceptable. Can they do that? Historically, it would appear they can. Microsoft Word, Microsoft Excel, and Windows itself started life as slow, awkward programs. Microsoft has a propensity to grind out a series of upgrades over years until their software not only works, but dominates. Today, putting a word processor up against Word, or a spreadsheet up against Excel, is futile resistance. You will just be assimilated. Similarly, Windoze, which was parodied for years in the computer press, has leveled everything in its path — including Apple who has incidentally just announced a record \$700 million quarterly loss and closed their eWorld online service. What Microsoft unveiled in March wasn't a product — it was a plan — a blueprint for combining software, operating system, and Internetworking seamlessly in the future. Actually, not a bad plan. But if you want to go to <http://www.microsoft.com>, download the Explorer 3.0 Alpha, and be wowed — forget it.

The second concern is that everything appears to be free. Internet Explorer is free. Internet Server is free. VBScript is free. VBScript source code is free if you want to port it to another operating system. And implicit in all this is that applications, if they will even be seen on the radar screen of the Internet end user, will be free. Esther Dyson was preaching this a year or two ago — that software would be free and you would have to make money from some sort of value added service — an outgrowth of the GNU project and John Gilmore's Cygnus Systems concept. Cygnus gives away a UNIX operating system, and sells services, training, and support. It has worked more or less, but never scaled up very well.

The fitting irony of all this isn't lost on me. Netscape entered the market and dominated it by giving away their browser — killing off almost totally a dozen other companies' plans to sell one. Microsoft has countered by giving theirs away, and now giving away the web server as well. They are sucking any relevant technology into the operating system by buying the companies involved. And they are playing the card they have — immense resources — in a most effective manner. They can give away things longer than anyone else without going broke.

But for the near term, if you develop a killer application for the Internet, you need to be prepared to give it away long enough to draw a crowd, and eventually a purchase offer from Microsoft — or you don't have much of a business plan. Ironically, there is such a glut of neat new software thingies on the Internet that everyone is overwhelmed by it. You don't have time to LOOK at a new program unless it sounds pretty persuasive. Forking out cash for a program when you don't even understand the concept of what it is supposed to do yet is a bit unlikely. Shareware has taken over the computer industry. And I fear for a lot of good people who have grown accustomed to high living on the software industry yacht. If there isn't a computer industry crash in this somewhere — there are certainly some realignments.

The OS battle looks like Windows vs UNIX. Apple is out of the game. IBM is out of the game. Novell is out of the game. It's basically SUN and assorted UNIX players vs Microsoft and Windows. Netscape, a two year old startup gives every impression that they are a huge, faceless corporation too busy and important to deal with anyone — especially their customers and faithful. Microsoft, which IS a huge corporation, looks mean, lean, entrepreneurial, and responsive.

Against this Alice In Wonderland surreal backdrop, the droning sound of the Microsoft borg ship continues with ever larger alliances and assimilations with MCI, NBC, and who knows what else — ergo our cover with BillGatus of Borg — “Resistance is futile...you will be assimilated...” ♦

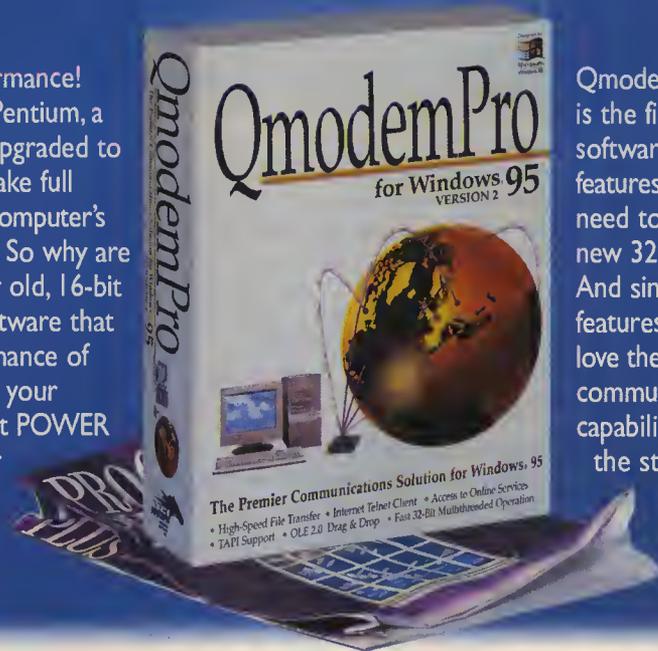


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Bill Gates

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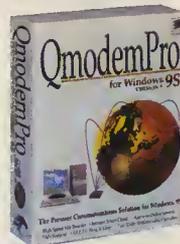
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Star Trek: the Next Generation (Lost Episode)

Scene: The Enterprise has once again found itself beset by the relentless and insidious Borg. Part machine and part organic life form, the Borg exist as one single entity, driven by its need to assimilate everything which is not part of itself, to make all one with the Borg. The Enterprise has momentarily given the Borg the slip and are currently monitoring the Borg ship from within a spatial anomaly, a warp in the space-time continuum if you will, into which the Borg's sensors cannot penetrate.

Picard: "Mr. LaForge, have you had any success with your attempts at finding a weakness in the Borg? And Mr. Data, have you been able to access their command pathways?"

Geordi: "Yes, Captain. In fact, we found the answer by searching through our archives on late Twentieth-century computing technology."

Geordi presses a key, and a logo appears on the computer screen.

Riker (puzzled): "What the hell is *Microsoft*?"

Data: "Allow me to explain. We will send this program, for some reason called 'Windows,' through the Borg command pathways. Once inside their root command unit, it will begin consuming system resources at an unstoppable rate."

Picard: "But the Borg have the ability to adapt. Won't they alter their processing systems to increase their storage capacity?"

Data: "Yes, Captain. But when 'Windows' detects this, it creates a new version of itself known as an 'upgrade.' The use of resources increases exponentially with each iteration. The Borg will not be able to adapt quickly enough. Eventually all of their processing ability will be taken over and none will be available for their normal operational functions."

Picard: "Excellent work. This is even better than that 'unsolvable geometric shape' idea."

... 15 Minutes Later ...

Data: "Captain, We have successfully installed the 'Windows' in the command unit and as expected it immediately consumed 85% of all resources. We however have not received any confirmation of the expected 'upgrade.'"

Geordi: "Our scanners have picked up an increase in Borg storage and CPU capacity to compensate, but we still have no indication of an 'upgrade' to compensate for their increase."

Picard: "Data, scan the history banks again and determine if there is something we have missed."

Data: "Sir, I believe there is a reason for the failure in the 'upgrade.' Apparently the Borg have circumvented that part of the plan by not sending in their registration cards."

Riker: "Captain we have no choice. Requesting permission to begin emergency escape sequence 3F..."

Geordi: "Wait, Captain; I just detected their CPU capacity has suddenly dropped to 0%!"

Picard: "Data, what does your scanner show?"

Data: "Apparently the Borg have found the internal 'Windows' module named 'Solitaire' and it has used up all the CPU capacity."

Picard: "Let's wait and see how long this 'solitaire' can reduce their functionality."

... Two Hours Pass ...

Riker: "Geordi, what's the status on the Borg?"

Geordi: "As expected the Borg are attempting to re-engineer to compensate for increased CPU and storage demands, but each time they successfully increase resources I have set up our closest deep space monitor beacon to transmit more 'windows' modules from something called the 'Microsoft fun-pack.'"

Picard: "How much time will that buy us?"

Data: "Current Borg solution rates allow me to predicate an interest time span of 6 more hours."

Geordi: "Captain, another vessel has entered our sector."

Picard: "Identify!"

Data: "It appears to have markings very similar to the 'Microsoft' logo."

Over the speakers:

"THIS IS ADMIRAL BILL GATES OF THE MICROSOFT FLAGSHIP MONOPOLY. WE HAVE POSITIVE CONFIRMATION OF UNREGISTERED SOFTWARE IN THIS SECTOR. SURRENDER ALL ASSETS AND WE CAN AVOID ANY TROUBLE. YOU HAVE 10 SECONDS..."

Data: "The alien ship has just opened its forward hatches and released thousands of humanoid shaped objects."

Picard: "Magnify forward viewer on the alien craft!"

Riker: "Good God, Captain! Those are humans floating straight toward the Borg ship with no life support suits! How can they survive the tortures of deep space?!"

Data: "I don't believe that those are humans sir. If you will look closer I believe you will see that they are carrying something recognized by twenty-first century man as doe skin leather briefcases, and they are wearing Armani suits."

Riker and Picard (horrified): "Lawyers!!!"

Geordi: "It can't be! All the Lawyers were rounded up and sent hurtling into the sun in 2017 during the Great Awakening."

Data: "True, but apparently some must have survived."

Riker: "They have surrounded the Borg ship and are covering it with all types of papers."

Data: "I believe that is known in ancient vernacular as 'red tape,' it often proves fatal."

Riker: "They're tearing the Borg to pieces!"

Picard: "Turn off the monitors. I can't stand to watch — not even the Borg deserve that!"

[Editor's Note: Author unknown; the "Lost Episode" is all over the Net. This copy came from <http://www.best.com/~sir lou/trek2.html>, where credit is given to "Cornell's Law FTP Server."] ♦

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PUBLISHING ON THE WEB by Michael Erwin

PART 16 - A POTPOURRI OF HTML POSIES

This month I need to do some Spring cleaning. We need to get some items out of the way, so that next month we can really take off. This is going to be a hybrid version of my column, so hang on – it's going to be an E-ticket ride. First we're going to look at a few of the remaining HTML extensions. Then, by popular demand, I'm going to cover the current crop of HTML editors. Lastly, I will cover a new WWW book. (No, it's not mine.)

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information mailto: miker@eve.net

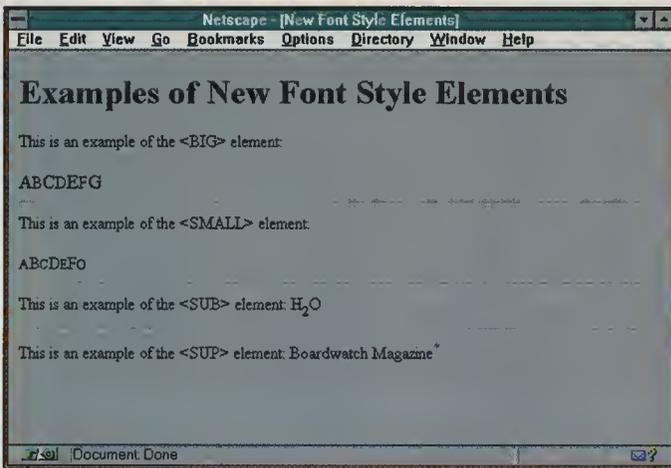


Figure 1: Font Style Elements Allow Big & Small Text

HTML EXTENSIONS

As HTML 3.0 nears completion by the Internet Engineering Task Force (IETF) and the WWW Consortium, Netscape has added a few more proposals for HTML tags and elements. Netscape has also added support for the new proposed tags in Navigator 2.0.

Font styles is one of the areas I have touched on before that is becoming more focused. These new elements are pretty simple and easy to use. The first new element is **<BIG>**, which tells the web browser that the enclosed text should be rendered using the definition for a larger font than what is being used.

For example, if we write the following HTML code:

```
<BIG>W</BIG>elcome to ISPCON.
```

The first letter in the sentence, **W**, will be slightly larger than a normal W. This makes the **<BIG>** element an excellent option to the **** tag. You could use this tag for the beginning letter of paragraphs or even to distinguish a letter for a menu item. (See Listing 1 and Figure 1.)

The **<BIG>** element is complemented by **<SMALL>**, which makes the enclosed text slightly smaller than the surrounding text. Take a look at Listing 1 Figure 1, to see how Navigator will render that HTML document.

Now that we can make text bigger and smaller, what's next? Well how about a way that you can display subscript and superscript text as well. To handle both subscript and superscript, Netscape gave us two additional font style elements. These new elements are **<SUB>** for subscript and **<SUP>** for superscript. For those of you who are new to this type of font control, subscripting is the method of displaying a letter or group of letters below the normal base line of the font. For example, if we write the following HTML code:

```
H<SUB>2</SUB>0
```

The first letter, **H**, will be rendered normally by the browser. However the **2** will be rendered below the font baseline, subscript. See Figure 1.

Superscripting is displaying a character above normal height. This is normally seen in a footnote to a document. So if you write the following HTML code:

```
Boardwatch Magazine<SUP>*</SUP>
```

The asterisk will be displayed slightly above the "e". Take a look at Figure 1.



Notice that the “*” is not only superscripted, but is also an anchored hyper-reference, `<A HREF>`. See the end of Listing 1 for the HTML code to do that.

That pretty much covers the latest batch of HTML extensions; however there will be much more in the coming months. So let us talk about something else for a second.

HTML EDITORS

I continually receive e-mail asking what HTML editor that I prefer to use or recommend. As some of you know, I normally recommend using a simple text editor to compose your HTML documents. However, I have an open mind, and it has been awhile since I looked at HTML editors. So I decided to take another look at them again.

HTML editors come in three main varieties: Application Plug-Ins, Dedicated Editors, and Generators/Wizards. Lets start with application plug-ins first.

Application Plug-ins are either macro or template files that allow you to use your word processor software to compose HTML documents. However, the new word processors handle HTML without these third party plug-ins. For example Lotus *WordPro*, *Notes* and Microsoft *Word 6*.

These editors are supposed give you the ability to see how your HTML will be rendered by a web browser. So I am going to test them using the HTML code in Listing 2. Then I am going to use these new word processors to display and edit Listing 2. You can also look at Figure 2 to see how the HTML code in Listing 2 is supposed to look.

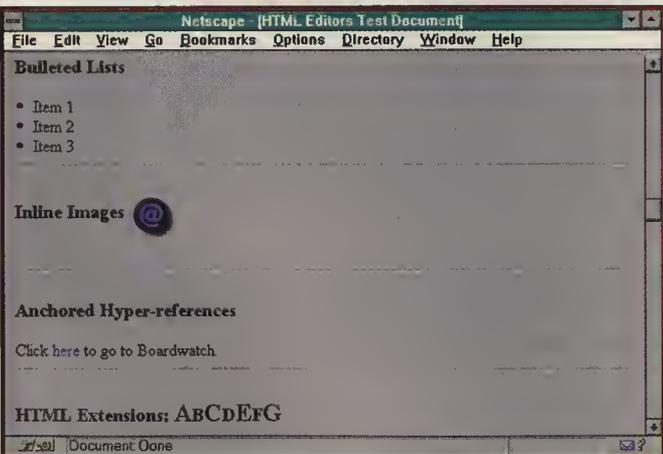
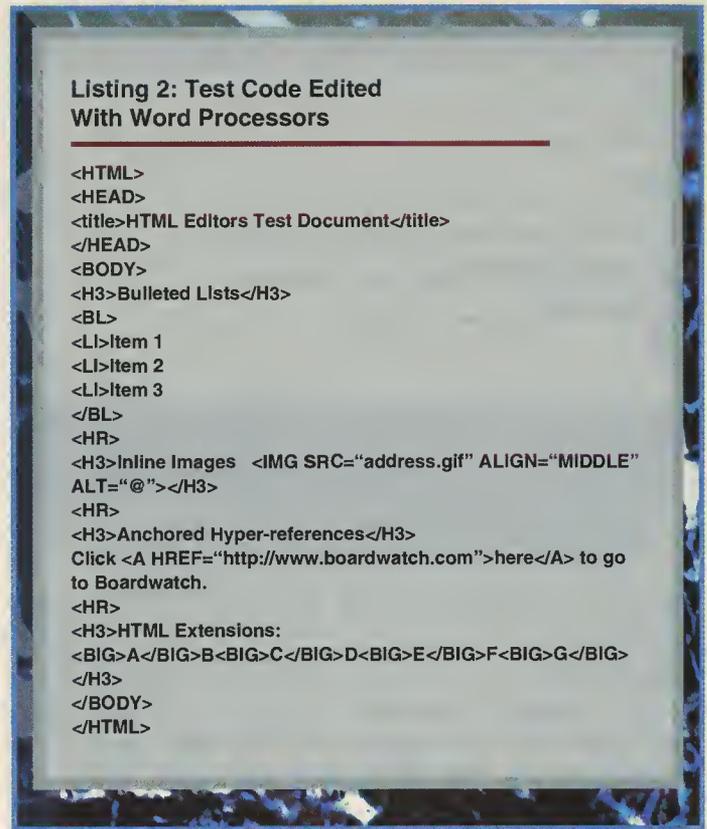


Figure 2:
Listing 2 Properly Rendered

Lotus WordPro's work-in-process display of Listing 2 is shown in Figure 3. By clicking on a yellow block, you open up a text window of the HTML code, which you can then edit. Not too great if you ask me, so I give WordPro a thumbs down for an HTML editor, though I love it as a word processor.

Dedicated HTML editors are basically modified text editors. The last time I really looked at them was almost a year ago, and things have improved. However, most do not even try to display the document in WYSIWG fashion, but as you will soon see, this may not be a problem.



The first of the dedicated editors is *Gissing v2.0* by IvoryTower Software. Figure 4 shows the Gissing editing environment. Gissing and other HTML editors use your external web browser to view the completed HTML document. Gissing will also start up your image mapping software to create the map files for Server-Side image maps. Will I use it? Nah, but I do give it a thumbs up.

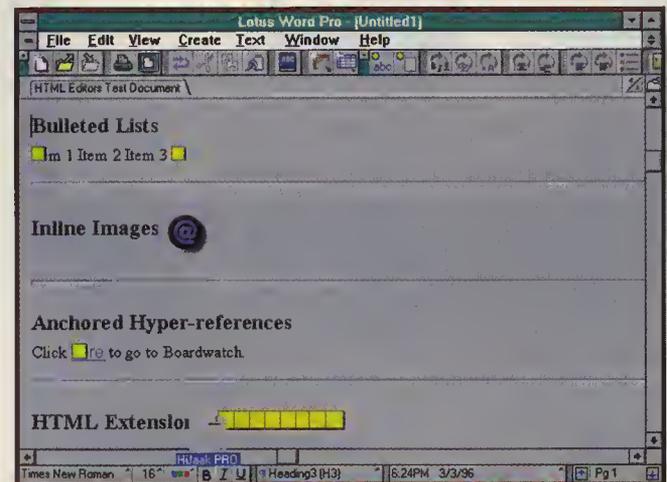


Figure 3:
Lotus WordPro HTML Editing Environment

Another HTML editor that has some advantages is *HyperEdit Lite v1.0* by Bandit Software. HyperEdit's environment is much sparser than Gissing v2.0, but the Pro version offers a few more features. However, I did find it easy to use. HyperEdit is written in MS Visual Basic, as are all of the HTML editors I tried. While I may not use HyperEdit, it may suit many of your needs.

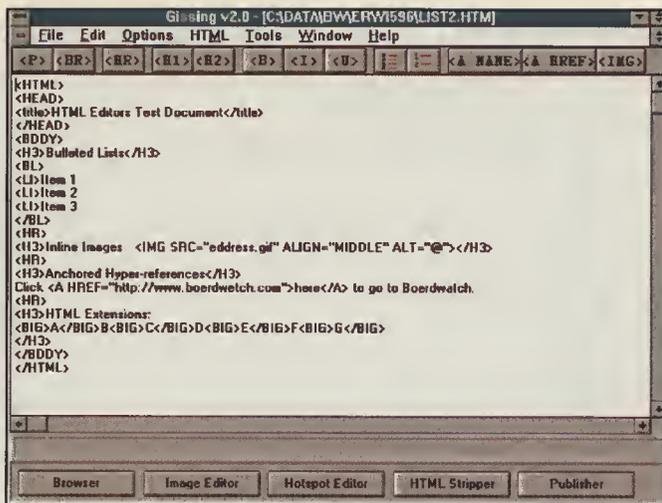


Figure 4: Gissing v2.0 HTML Editor

I really liked *WebMania v1.0*. It inserts HTML code into the document via either pull down menus or buttons. The neat thing about WebMania is that you can define clickable HTML buttons to do what you want them to do. (See Figure 5). The downside to WebMania is the cost. Q & D Software makes two version, standard and professional version. The standard version costs US\$34.95 to register and the Pro version is US\$49.95.

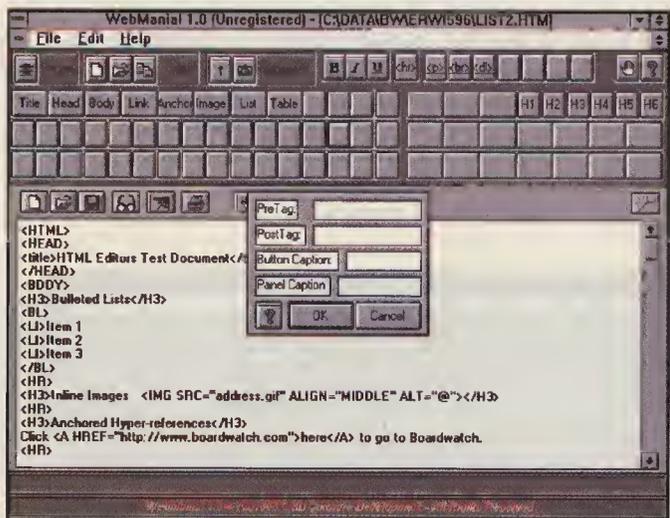


Figure 5: Webmania Makes Push Buttons a Breeze

HotDog by Sausage Software is one of the Net's commercial success stories. It has some very nice features, but it makes you do too much typing to add some simple tags or elements. WebMania is kinder on the fingers. HotDog also comes in two versions, the standard version is US\$29.95 and the Pro version is US\$79.95.

HTML generators like David Geller's *SnapCap* are great for absolute beginners. (See January's Column on WebCams) SnapCap asks the user questions via forms, and then generates HTML document based on the answers (see Figure 6). I like it for those who are just starting out authoring HTML, and want to throw together some HTML documents. However, you will soon outgrow its capabilities; well most of you will.

If any of you would like to try these HTML editors and a few others, I have placed the shareware versions on my ftp site at [ftp://ftp.eve.net/pub/editors](http://ftp.eve.net/pub/editors).

A MUST-HAVE BOOK FOR HTML EDITORS

The folks at O'Reilly & Associates have teamed up with the WWW Consortium to produce a book called *World Wide Web Journal* (ISBN 1-56592-169-0, US \$39.95, (800)998-9938 or <http://www.ora.com>). It is a collection of papers presented at the Fourth International WWW Conference, which was held this past December in Boston, Massachusetts.

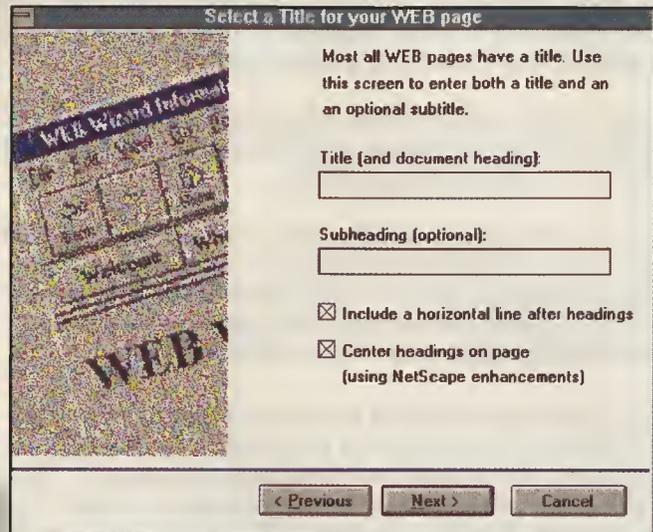


Figure 6: SnapCap Generates HTML Without Coding

This book is a must for those of you wanting to know where the web is heading! It contains papers on emerging technologies, conferencing systems and Web statistics. One of my favorite papers is on a new product called SWOOP, an application generator for using ORACLE with the WWW. A what? READ the book.

Well that wraps up this month's column. By the way, be sure to register early for my sessions at ONE ISPCON this year. Seating is going fast. Till next month... ♦

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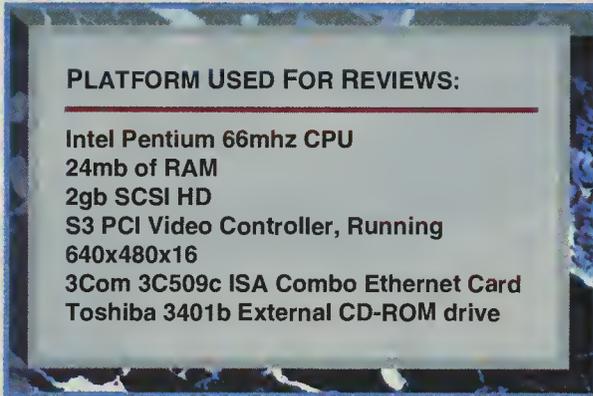


WEB SERVERS DISSECTED by Michael Erwin

WEBSITE V1.1

This month I will be reviewing O'Reilly & Associates' WebSite v1.1. I will be showing you features and consideration of their ever popular web server and suite of applications. So let's get started...

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information <mailto:mikee@eve.net>



I will be using Windows NT Server 3.51 Build 1057 as the operating system. However, you do not need to use Windows NT Server. You can use Windows NT Workstation or even Windows 95. Windows 95 is fine for a simple server, but for commercial web server applications, Windows NT is what you should use. Personally, Win95 just doesn't cut it and you will see some of the reasons later.

Unlike Netscape and Microsoft, WebSite includes wonderful documentation — 480 pages of it to be exact. Netscape's total is only 174 pages. WebSite's manual is comprehensive and written so that even inexperienced users can become masters of the WebSite server.

INSTALLATION

WebSite comes on four floppy disks instead of a CD-ROM. Also, Microsoft and Netscape include support for additional hardware platforms, like Alpha or MIPS. The software installs quickly and easily, but I would still like to have it on CD-ROM.

During the installation you will be asked several questions, such as the document root directory and the webmaster's e-mail address. You will also be asked what mode you wish to run the web server in.

You have 4 options on how you wish to run the web server on a Windows NT system. There are two methods of running the web server under Windows NT, the application and the service method. So you ask, what's the difference?

The application method means that the server will be run as a desktop application and that the server

will assume the identity of the user that is currently logged into the NT system.

The other method of operation is the service method. The service method runs WebSite as a service of NT. If you decide to run the system this way, make sure you understand service identities under Windows NT. O'Reilly recommends that novice Windows NT users run the server as an application. However, experienced Windows NT users will probably run WebSite as a service and that is how I decided to run it.

If you run in application mode, you have the option of automatically starting WebSite or starting it manually. If you choose the service method, you have the option of having the WebSite icon hidden or you can view the WebSite icon on the desktop.



Figure 1: *WebSite Comes With Design Tools*

Once you have installed WebSite, the installation will create a program group and create the icons for the server and the supplemental applications. See Figure 1.

Now here is an area where WebSite is head and shoulders above the current competition. Look at figure 1 again. Did you notice some of the tools that come with WebSite? Besides the web server software, you will also receive HotDog HTML editor, an enhanced version of Mosaic, ImageMap Editor and WebIndex. What a nice little bundle of supplemental software! This is an especially nice feature for those of you putting up your first web server.

CONFIGURATION & ADMINISTRATION

At this point, WebSite is installed and running. Like Netscape, WebSite can be administered from a web browser. However, you can also manage WebSite from the WebSite Server Admin application. With this utility you can change everything about the WebSite server.

Take a look at figure 3, the IDENTITY setting tab in the Server Admin application. This tab allows you to set up WebSite to handle multiple identities. A single WebSite server can act like it is various web

servers (Multi-Homing). This is an absolute must if you are planning to become a web space provider.

Now here is where using Windows NT is better than Win95. Under NT you can theoretically set up 256 virtual IP addresses. However, as the WebSite documentation points out, Microsoft does not support more than 5. If you decide to use WebSite with Win95, you will need to install one LAN adapter for each IP address.

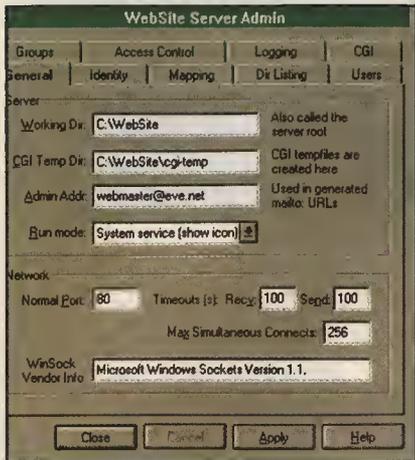


Figure 2: WebSite Allows Multiple Virtual Servers

other web server's user access control is as easy on web masters as WebSite's.

One of the problems with administering a web site is managing the HTML documents on the server. WebSite comes with an additional tool called *WebView* by EIT and Verifone (see Figure 3). *WebView* is a graphical web document display tool that shows the entire contents of your web server. *WebView* also has another feature that makes it worth its weight in gold: it will identify broken HTML links.

As the site grows, you will eventually want to add some type of search capability. The Web-Site suite of applications includes a tool called *WebIndex*. With *WebIndex*, you create an index of your site, then use an included CGI script called *WebFind* so that visitors to your site can search your HTML documents and files.

CGI AND SSI

Most of the commercial web servers support CGI specification v1.1, with extensions to CGI by using server APIs. WebSite supports *Windows CGI*, *Standard CGI* and *DOS CGI*. Along with the three different CGIs, WebSite supports CGI specification v1.3 and it also supports Visual Basic 4 as a CGI language.

The documentation covers in some detail how to write CGI scripts. The manual has four chapters on CGI concerns and WebSite also includes a bunch of ready to use CGI scripts.

WebSite also supports *Server Side Includes*, or SSI. The documentation covers SSI also. O'Reilly even includes some SSI code. For example, WebSite includes SSI support and code to create HTML documents that will include page hit counters, date and time. So you can use SSI to create modified HTML documents in real-time.

ISSUES AND PRICING

There is one issue that needs to be addressed about WebSite, and that is it currently does not support Secure transactions

via SSL or S-HTTP. However, O'Reilly has announced that they will be releasing WebSite Professional any day now. So you will want to check with them about the current status of the "Pro" version.

The suite of software has a suggested price of \$499, and if you are a nonprofit or education organization they have special pricing deals for you.

PERFORMANCE

WebSite's performance is on par with Microsoft's I.I.S., and it runs better on the limited resources of my test system than Netscape. Matter of fact, the support web site for WebSite runs on a single-CPU P90 with 64mb of RAM and 1Gb of disk space. Robert Denny, author of *WIN-HTTPD* and *WebSite*, states that if you have a T1 with nothing else on it except for the IP traffic from a WebSite server, you can totally saturate the T1 with a single CPU P90. You can find Bob's WebSite Performance Analysis at <http://website.ora.com>.

Another area in which WebSite wins is its ability to be modified on the fly by Server Admin. This version of WebSite beats Netscape and Microsoft when it comes to server modification. WebSite also appears to be somewhat bulletproof in regards to performance. Notice that I said *somewhat* bulletproof. I have seen the server just die a few times under weird circumstances. It seems be a memory leakage problem relating to either the server software or Windows NT v3.51.

So if you are ready to set up a great web server, and want one of the most flexible web servers packages available that can handle high traffic on a single CPU box, I would have to recommend O'Reilly & Associates WebSite v1.1. ♦

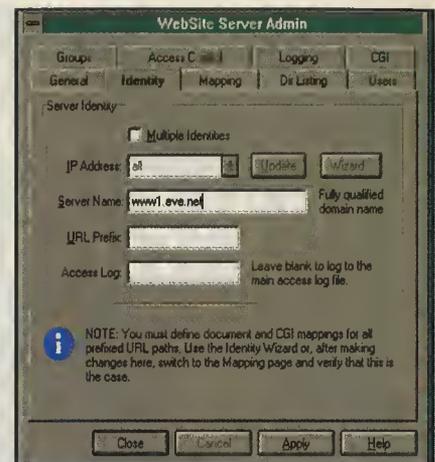


Figure 3: WebView Eases Site Document Management

REVIEW SUMMARY

AREA	RATING
PRICE	Thumbs UP
INSTALLATION	Thumbs UP
ADMINISTRATION	Thumbs UP
USERAUTHENTICATION	Thumbs UP
DOCUMENTATION	Thumbs UP
CGI HANDLING	Thumbs UP
PERFORMANCE	Thumbs UP
AUDIENCE	Any sites that do not require SecureTransactions.

CONTACT INFO

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INTERNETICA



DR. BOB by Bob Rankin

INTERVIEW WITH ROBERT SEIDMAN - THE ONLINE INSIDER

Robert Seidman lives a double life. By day he wears his corporate IBM hat, managing the development of a Net-based information management product. By night he scours the wires for material that will prick up the ears of the many thousands who know him as publisher of *The Online Insider*, an Internet mailing list that covers the online world in a unique way.

Lately though, the lines have been blurring as Seidman is swept into a world where the online and offline coalesce into a strange new existence. I talked with Robert Seidman about his accidental rise to cyberfame, the death of the ISP, and his take on AT&T, Netscape and Java.

You'll either love him or hate him after reading his ramblings...

Doc: How long have you been publishing *The Online Insider*?

Seidman: My first issue was in September 1994. And with the exception of about three or four weeks in that timespan I've been putting one out every week.

Doc: Have you been with IBM that entire time?

Seidman: No, actually I was with a company called FYI Online which is owned by MCI now. That plays a strong part in the genesis of the newsletter. We were working there on some technology for news filtering, and to test the technology out I tried to craft a custom query that would bring me in all this stuff on the Internet and Online. This was starting right after Mosaic for Windows launched in the fall of 1993. The

Internet at that point hadn't reached the hysterical level that it's at now.

After a while I got the FYI query refined to where it was actually pulling me the info I wanted — about 25-50 messages per week. Over the next 9 months or so, between hands-on use of the services and everything I was reading, I gained a pretty good understanding of what was happening in the online world.

Right before I started writing the newsletter, my query was getting 250 to 500 hits per week. I had the thought that if someone could read through all this stuff and tell me what I really wanted to know that would be great. When I had that idea I thought how over the years I've taken a lot out of online, Internet, BBS or whatever as a way to get something myself. This was a chance to give something back.

It started out simply, kind of abstract — far shorter on analysis and opinion than nowadays. It was mostly "here's what happened," "here's some cool stuff to look at" and maybe I'd give an editorial opinion on one thing. I got a lot of feedback from people mailing in saying that they really wanted more opinion and more analysis and it just kind of developed in that direction. When I started there was no *Edupage* yet. There was not any of these other 15 things you could get that would do that...

Doc: There was no Yahoo!

Seidman: There was no Yahoo — but it came along very quickly after I started. One interesting thing was my timing with starting the newsletter. If I'd have waited even two months I don't know if I



Bob Rankin, known as "Doctor Bob" in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of *The Internet TourBus* and author of "Accessing The Internet By E-Mail", which has circulated widely on the Internet, and is available in 15 languages. Send e-mail to BobRankin@MHV.net or visit him on the web at <http://csbh.mhv.net/~bobrankin>

could've broken through the signal-to-noise ratio because I hit like maybe four weeks before Netscape publicly announced their Beta and the world changed as we know it.

Doc: *What ground do you try to cover in your newsletter?*

Seidman: It's difficult to say because it shifts — from week to week even. Mostly what I'm looking at is what's happening within the commercial online services like America Online. The Internet obviously can't be ignored, so I focus on several areas there in terms of how to track usage, do advertising and stuff like that. Most of the focus is the impact of the Internet on online services, and vice versa.

Doc: *Has the entry of big news media such as Time Warner pre-empted the Internet's self-publishing opportunities?*

Seidman: I don't think so. I mean I think someone could still break through. But the tactic that I originally took was, "Okay, I'm going to do it this week — I'm going to post it to the newsgroups and if nobody flames me or most people don't flame me I'll try it again next week." It was really amazing... no matter how much information is out there, I think there's the desire for what people perceive as *good* information. And as soon as I posted in the newsgroups that I offer this LISTSERV and it's free, the subscriptions just really started pouring in.

Doc: *So do you think everything has to be free online in order to make a dent?*

Seidman: Yes, I think that it's clear that you have to give something away free. I don't know if you have to give the whole thing away free. When you start getting the numbers — tens of thousands — people start to listen to you. And in my particular case, because the information is focused and more geared towards the business side, I think maybe there's a point when I can charge for it.

I don't know what that point is, and my preference obviously is to keep it free because it gets more exposure. How I measure the likelihood that people will actually pay for it is just tracking the number of people who write and say "Hey, I'd pay for your newsletter." And

that's gone from literally nothing to several a week. I think that there's a business in it, but I don't know that I want to run it that way. It's very fun for me the way it is right now, and if some day I can make money at it, great.

Doc: *Do you have any commercial sponsors for Online Insider?*

Seidman: I would say in some ways IBM unofficially sponsors me, by allowing me to work on the newsletter during company time. I've talked the sponsorship route and most people that I've spoken with have been the traditional publishers.

They're not interested in the sponsorship — they want to hire me, and I'm not looking at that right now. The sponsorship model that we've looked at — that has been proposed to me from several publications — was quite

reasonable in terms of the dollars, but it's not enough to make me quit my job. And if I all of a sudden have AT&T sponsoring my newsletter, let's face it, I'm not going to be working at IBM anymore.

One thing everybody asks is, "We want your list... if we sponsor you we want your list." I say my list won't mean anything to you because Steve Case could be on there and it might say Jimmy Dean — you wouldn't know the difference. If sponsorship involves giving you my mailing list and you go out and spam them — I don't wanna do that because I'll be labeled a heretic and get burned off the Net.

I'm in a really great position because I don't need their money — I'm not a starving writer. I want to pursue the newsletter to the fullest, but if I'm doing this 5 years from now and still not making any money at it, I probably wouldn't continue with it — unless I won the lottery.

Doc: *How did you first get involved in the online arena?*

Seidman: Oh, my horror story... Well, I started with computers way back. I had the Timex Sinclair 1000 ... since I didn't have the money for an Apple I went to a Commodore 64. Then the day came when I read about "the modem" in *Compute* magazine and I decided I just had to buy one. It was the type of modem where you couldn't just plug the phone line into the modem — you had to dial from the handset, unplug it and then plug it into the modem. But from the very first time I connected to a BBS I

thought wow, this has got a lot of potential — I've been engrossed by it ever since. That was back in 1982 or 1983, and I've never been modemless since.

Doc: *OK, tell me what you think about AT&T as an ISP. Will it be all marketing and no service, as many ISPs hope?*

Seidman: It's starting out that way but you know, the one thing they have going for them is the trusted brand name — that means a lot. The thing that surprises me is that they launch a service where the cornerstone is, "great service 24 hours a day," and right away they're having problems handling the number of phone calls they're getting to sign up. That says to me that they did not know what they were getting into.

My big question with them — given that there will be some free service for up to a year — is how much really they are willing to pay for service in that first year. I think it's gonna be a lot more expensive than they forecasted. And it appears the service will only be ready to launch in the major metropolitan areas — they don't even have as many nodes as a CompuServe or SprintNet.

Doc: *I talk to a lot of small ISPs and they say by the time the telcos get their Internet act together, they'll be so entrenched that AT&T or whoever won't be able to touch them...*

Seidman: I think they're wrong. I think the ISPs will get totally blown away in the end. Some will get bought and they'll make money... I think the ones that tell you differently are lying — they're trying to hang on to their customer base and hoping someone makes them an offer. I've had seven ISPs over the last three years, and I can't say that any of them provided exemplary customer service. So I think in the end that AT&T will do just as well as these guys. They'll suck, but they won't suck worse than anyone else.

Part of the problem is that when you start having to talk about things like DNS, Winsock and subdirectories, it's very hard to handle those type of things over the phone. You need a different type of rep than the one who can tell you how to make a collect call. That's going to be very costly for them.

"No matter how much information is out there...there's the desire for what people perceive as good information."

"I think the [local] ISPs will get totally blown away in the end."

I think they have a chance to own the title of the biggest ISP before too long, but just because of the volume you'll start hearing a lot of horror stories. I don't know if they'll take the target off of AOL, but there will be people who do nothing but post in the newsgroups about how bad they are.

And contrary to a lot of the stuff I've been reading, I think it's absolutely great that they're doing this. Because I'm one of those people that wants everybody to be online — to have an e-mail address. Just the exposure that they can give to the Internet is a fantastic thing and we should be thanking them. But whether they come through with the goods when it comes to service remains to be seen.

Doc: *Do you think the buzz on ISDN is going to materialize before the cable companies figure out how to deliver high-speed access to the home market?*

Seidman: You know like most people, I put this in terms of myself. And where I am, I'm screwed on both counts because it'll be a long time before there's any working ISDN or cable modem. But there's another kind of service I've heard about (ASLDN?) that allows an 8Mb connection over copper wire. So why are people talking ISDN when there's this other thing? And for my money, a 56K ISDN link is no longer fast enough. I think the cable modem is going to win out over ISDN — it's going to be a lot faster.

Doc: *Aside from the time you spend writing **Online Insider** at IBM, what are your other responsibilities there?*

Seidman: I've been the Product Development Manager for their **InfoSage** product, which is a customized news clipping service that's eventually going to grow into a lot of other areas. You fill out a profile and twice a day InfoSage scans Reuters, UPI and 40 other sources to deliver a custom news feed to you by e-mail.

Doc: *You're capitalizing on everybody's information anxiety?*

Seidman: I think that's exactly what will sell a product like InfoSage — the whole FUD factor. People who are in a competitive market will feel they need a tool like **InfoSage**, because they think all their competitors have it. Something like **Edupage** might be enough for some people, but we're really going after the commercial market where people need the information as soon as it is available.

Doc: *Do you think that AOL, CompuServe and Prodigy, will all survive into the 21st century?*

Seidman: At least one out of the three, probably two...

Doc: *Who dies first?*

Seidman: Probably Prodigy, at least in it's current incarnation. If Prodigy becomes reborn as strictly a content producer, kinda like HBO where all they're selling is content, they could make it. They're clearly the weakest of the three right now.

Doc: *What prospect excites you most about the future of the Internet?*

Seidman: It's the same thing that excites me today — that I can get the kind of information I want when I want it. I'm not all that excited about the concept of multimedia over the Net until the time comes when there's more integration between your PC and your television.

I am excited about the potential for Java, but I'm very reserved about that excitement because I haven't seen anything really interesting there yet. I wonder if when we get to 1997 or 1998 and we see the charts of What's In and What's Out, if Java may wind up being Out.

Doc: *Is there any base to the claim that Prodigy owns patents covering the Java technology?*

Seidman: Here's my take on this... Prodigy has never specifically stated that is their claim. A former employee made comments that this was going to be Prodigy's golden egg, but I don't think anything will come of it. And with Prodigy's luck, even if something does come of it, they'll find so many holes in Java that they'll just shut it down.

Doc: *Is Netscape ever going to make any money, given the entry of some other really good browsers from the likes of Microsoft and others?*

Seidman: I think Netscape is in a really good position to make some money over time, but to be honest, until they come up with a good way to charge for the browsers I don't know what good it is. Microsoft and Netscape are both going to be out there trying to enforce their own standards, so it's all very unclear now — but I don't think it's unreasonable to say that Microsoft is still in the running.

Doc: *What's your take on how many people are really using the Net on a regular basis?*

Seidman: Counting e-mail, I'd say it's in the 10-20 million range. Is that broad enough for you? Just in the United States, I think there are over 10 million

people using e-mail on a daily basis. And some portion of those are using the Web, newsgroups and the other stuff.

Doc: *Aside from pure information gathering, do you use the Net for anything on a personal level? Does the idea of buying groceries via the Web or accessing your bank account appeal to you?*

Seidman: Yes, for me it does, because my usage has really blurred recently. I don't know why I'm on anymore — I'm just connected all the time. So I will use online banking and be OK with that — I like that idea.

Shopping online — I don't know about that. I really like the prospect of buying computer software online, though. Kind of like a download this now, use it for a week and then it will self-destruct. Or if you like it, call up and pay for a key number. I've bought some software that way and I thought it was great to get it when I want it without the hassle of driving to CompUSA.

Really, what's out there is information and communication, and in some sense community. And I like all those aspects as well. What intrigues me most is communicating with people and just bouncing ideas off each other. With the newsletter, even though it's a one-to-many distribution model, it's also many-back-to-one. There are people who write every week and I learn a ton of stuff from them that I would never learn otherwise.

And I like being able to keep in touch with friends that I might only talk to once every two years if not for e-mail. You know, for all the talk of the Web, e-mail is still the Killer App. And I don't think I'll be saying anything different five years from now.

I am still blown away — I still can't grasp it sometimes — that I was able to type up this newsletter in my bedroom, in my underwear, and now it's being read by CEO's in Fortune 500 companies. That's the power of publishing on the Internet. ♦

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yourfirstname yourlastname

TRADER'S CONNECTION - BBS on the Web

In the late 70's David Edsall was running a publishing business that specialized in classified ad papers, but he had a vision for moving the enterprise into the electronic world. That vision was the beginning of *Trader's Connection* (TCON), and for about a decade it thrived as a dial-up system on an NCR mainframe. By putting the Indianapolis-based *Trader* and a sister publication in Nashville online, they enabled bargain-hungry callers to search for the best deals on cars and other "for sale" items.

Over time, Edsall convinced a few dozen other publishers across North America that it would be in their best interest to make their listings available on TCON, and attracted a much larger caller base in the process. When TCON users get a match on the keywords they enter (ie: "Ford less than \$2000) they are told only the name of the publication in which the ad appears. For a nominal fee, they can then purchase the publication and read the ads online. It's win-win for all parties involved — TCON and the publishers share the fees, and the users get what they want at a good price. But TCON was basically just a database — no messages, no files and no community.

In the early 90's, TCON users demanded more in terms of communications. They wanted to talk with other users on the system and have a place to stash files, so BBS features like e-mail and file areas were added to the service. Eventually TCON moved into the ISP business as more and more customers asked for a way to connect to the Internet. TCON's master sysop, Carson Hanrahan, says they anticipated the demand for Internet connectivity and had already taken steps to meet the new demands before customers started walking.

Lately TCON has taken things one step further by moving their BBS out onto the Web. The TCON Web BBS has almost everything you would expect to find on a traditional BBS: e-mail, conferences and file areas. "The one-way nature of the Web is just not fulfilling to most users," says Hanrahan. "People want communication and community — so building a BBS on the Web makes sense because it offers a standard interface on a successful medium."

TCON developed its own code to move the BBS features to the Web using HTML and CGI scripts — no Java here, all the magic happens at the server. It is pretty cool to click a mailbox icon and read your e-mail on the web without having to hassle with Eudora or the like. Browsing or downloading in the file area really does feel like you're on a BBS. You can "search for files since your last access" or browse through a list of files with descriptions, unlike primitive FTP sites. It might be FTP under the covers, but who cares! Another nice touch is the input field at the bottom of each web page that allows you to enter "GO" commands for quick navigation around the BBS.

But there are a couple of traditional BBS features lacking in TCON's WEB BBS implementation, most notably chat and file uploading. Hanrahan says they have struggled with the chat problem but they just haven't found a web-based chat

facility that suits their needs yet. File uploading is going to be a tougher nut to crack because it'll require some client-side code to initiate the transfer, and even Java is not supposed to have access to the local file system.

TCON has developed a set of diskettes for new Internet users to eliminate many of the startup and support hassles that plague new PPP users. "It really is a one-click install," says Hanrahan. The install program loads Winsock, Netscape and other client software, and then figures out all the comm port, dialup telephone numbers and other parameters so new users get up and running quickly. Users can download the disks from the BBS or request to have them mailed. Most choose the latter, though, because the package is over 4MB in size.

TCON does quite a bit of in-house development, and Hanrahan says they "had to do a lot of inventing" to shoehorn the BBS technology into the Internet, just like in years past when they had to take things in the opposite direction. If getting a USENET feed connected to their Novell LAN was particularly challenging in the good old days, the care and feeding of their UNIX systems is no picnic today. A staff of seven people, including three developers, keeps things humming at TCON.

Today TCON offers a classified ad database with over 1.7 million entries, a traditional BBS and SLIP/PPP services. The classified ads come from over 40 print publications spread across the U.S. and Canada. Users can search for items by location, price and keyword.

Another service called *AdWatch* is an intelligent agent that will periodically perform a search and notify users with any matching results. So if you're willing to pay a few bucks, AdWatch just might be able to find that dark blue 1994 Acura you've been shopping around for.

The BBS and SLIP/PPP accounts are priced at **\$4.95** and **\$7.50** per month respectively, and include unlimited access. At those rates, you have to wonder if this isn't a loss leader for TCON. But it does make sense if they can pull enough of those customers in to try the other fee-based services. Although they have done national print media advertising in the past, TCON relies primarily on word of mouth and judicious use of Usenet newsgroups to make people aware of their services.

TCON seems to have reacted well to the changing online landscape. By planning ahead to offer Internet services, they have maintained and grown their customer base. And with fresh life breathed into a highly-specialized BBS via the Web, there are no plans to pull the plug anytime soon. ♦

TCON CONNECTION POINTS

<http://www.trader.com>
<mailto:info@trader.com>
(317)322-2000 voice
Traders' Connection, Inc.
P.O. Box 19817
Indianapolis, IN 46219-0817

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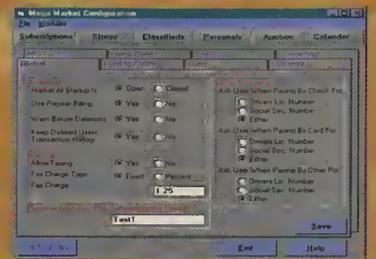
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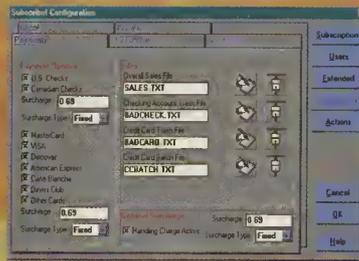
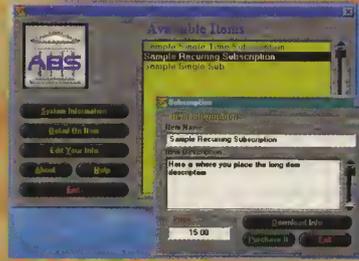
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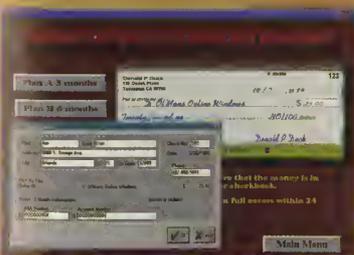
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CUBAN INTERNET

By Vito Echevarría

SURPRISE! CUBA HAS INTERNET, TOO

Those investigating the Cuban economy's overtures to foreign investment will note that the Marxist island nation has not fallen far behind others in the newest rage in high technology — the Internet. In fact, Cuba has had online access for years, thanks to university academics in the U.S. and elsewhere who were interested in gathering data on various facets of the Cuban economy, as well as on Cuban society in general. Such academics have long been the source of e-mail transmissions to Cuba, and today that's still the case.

Taking advantage of this inexpensive electronic means of communicating with the outside world, Cuba's Science Ministry has long used its CENIAI network (Center for the Automated Exchange of Information) to exchange scientific information with other countries through its Internet connection in Canada. CENIAI is the largest e-mail network in Cuba, with an estimated 692 users, which includes foreign journalists like the *Miami Herald's* Mimi Whitefield (<mailto:mimiw@ceniai.cu>), America's NBC television network (<mailto:nbctv@ceniai.cu>) and Fidel Castro himself (<mailto:siva@ceniai.cu>)! CENIAI also offers databases generated by nearly 200 research facilities throughout Cuba.

Canada is used by the Cubans for global Internet access because, until recently, the country had no direct telecommunications links with the U.S. Although there is currently an agreement between Washington and Havana for direct phone service between the U. S. and Cuba, Canada is still being used as Cuba's gateway to global cyberspace. The current negative diplomatic climate between Cuba and the U.S. (due to the downing of two U.S. civilian Cessna planes by Cuban MiG fighter planes in late February 1996) may cause phone links between the two countries to be suspended — vindicating yet again Cuba's Canadian E-mail connection to the rest of the world.

E-mail links between Canada and Cuba existed since 1992 through NirvCentre (which runs WEB, a network that connects 1,500 Canadian organizations). NirvCentre is associated with the Association of Progressive Communications (an organization that works with non-profit entities in numerous countries, including the San Francisco, California-based Institute for Global Communications — directed at present by Geoff Sears).

Another Cuban Internet network, TINORED, has nearly 500 subscribers, usually consisting of various

government ministries (like Cuba's Foreign Ministry (<mailto:minrex@tinored.cu>) and Radio Havana Cuba at <mailto:radiohc@tinored.cu>). TINORED also hosts a sizable number of short wave radio hobbyists turned computer enthusiasts, like Lázaro Echevarría (<mailto:co21e@tinored.cu>), as well as institutions and individuals involved in the social sciences, culture, mass media, health, education, the environment, and social justice. Unlike CENIAI, TINORED is a non-governmental entity.

In addition, there are two other Cuban networks: INGEN (Center for Genetic Engineering and Biotechnology/CIGB) and INFOMED (Center for Medical Sciences Information).

A Miami Cuban from CubaNet (Omar Galloso) commented on Cuba's Internet capability: "The (Internet) service is quite irregular since the shortage of electrical power interrupts connections and many nodes are running on old IBM ATs." Galloso added, "All the service is based on e-mail capabilities using UUCP and some database locally designed. No access is given to the public in general, even if they have dollars to pay for it. These nodes are, as mentioned before, for academics, medicals, and (scientific workers)."

A growing number of foreign-run companies and hotels operating in Cuba are starting to take advantage of the country's Internet capability, especially since Cuba's telecommunications lines are still too few to accommodate reliable phone calls and fax transmissions (which are still costly for most Cubans). Such hotels participating in foreign joint ventures, like the Hotel Havana Libre (<mailto:hlibre@ceniai.cu>) under the Spanish firm Guitart's management, the Hotel Riviera (<mailto:hriviera@ceniai.cu>) under the Spanish firm Endesa's management, and Hotel Tuxpan/Varadero (<mailto:hotuxpan@ceniai.cu>) under the German firm LTI's management, are among those using the Internet.

Precisely because of the unreliability of fax transmissions to and from Cuba, both businesses and government institutions list their e-mail addresses in advertisements and elsewhere, as a more reliable and cost-effective data communications substitute. There is, for example, DHL (the Belgium-based international air courier service), whose Cuban e-mail address is <mailto:Ljaseuc@tinored.cu>, while the local electronics and computer distribution firm Cubaelectrónica has <mailto:insa@c%eniai@web> as its e-mail address, and the Japanese elec-

tronics firm Canon (Service Center), whose e-mail address is <mailto:canon@ceniai.cu>.

However, as Galloso pointed out, the (Cuban) government monitors what it can on the Internet: "Presently, the State Security has its hands on Tinored and Ceniai, and mail is being cautiously seen through, especially if (it) arrives in masses from AOL or other U.S. providers."

CUBA ON THE WORLD WIDE WEB

Miami-based Cubans have taken the initiative to set up their own online communications link and web site, known as *CubaNet*. A non-profit enterprise, CubaNet's organizers are based not only in South Florida, but in Spain, the Czech Republic, and other U.S. cities as well. One can go into CubaNet to communicate with Internet users in Cuba, find articles relating to Cuba (from the U.S. trade embargo to pro-Cuban government stories, as well as even official Cuban government documents). Because of the presence of Cuban exiles on this web site, there is some material dedicated to the anti-Castro cause. In fact, one of CubaNet's goals is to use the Internet as a means to promote political freedoms in Cuba. CubaNet's E-mail address is <mailto:cubanet@netpoint.net>. Its World Wide Web homepage is <http://www.netpoint.net/~cubanet/>

Also on the World Wide Web is the Republic of Cuba W.W.W. Home Page (<http://www.unipr.it/~davide/cuba/home.html>), which, despite its official-sounding name, is a web site set up by Italian Internet user Davide Peis (<mailto:davide@ipruniv.cce.unipr.it>). Peis' web site contains an assortment of information on Cuba, including e-mail addresses in that country, tourist & business information, as well as official Cuban government documents. Through Peis' web site, one comes across a list of foreign companies operating in Cuba (<gopher://makenda.edu.uy:70/00/otros/gophers/cuba/empresas.ext>) — although it was dated early 1994; as well as a web site for the Horizontes Hotel in Cuba (<http://www.maple.net/cubaweb/>), which provides Internet users with information on that tourist operation in Cuba.

In response to Cuba-related web sites initiated by Miami Cubans and others, the Cuban government itself decided that it, too, must have a web site, to serve its own uses. Earlier this January (1996) Havana launched its web site, Cubaweb (The National Web Site of the Republic of Cuba) at <http://www.cubaweb.cu/>. This state-of-the-art web site is being used by the country's ruler Fidel Castro to expand foreign investment opportunities for Cuba — particularly in tourism and other areas of investments foreigners would most likely be interested in (like mining).



Cubaweb has a small section on news stories (those the Cuban government wants to promote, particularly from the Cuban newspaper *Granma Internacional*). Those looking through that part of Cubaweb will find the Cuban government's version of the February shooting of the two American Cessnas. There's also sections on travel/tourism, science & technology, Cuban publications, medicine, arts & treasures, a trade directory (with sections on Cuban exports & imports), investing in Cuba (with materials from the Havana trade magazine TIPS), a Cuban consular directory, a Cuban e-mail listing, as well as a calendar of future events in Cuba.

The tourism section is by far the most eye-catching, since it contains detailed, graphics-intensive information on a variety of tourism operations (both Cuban and foreign-owned), such as the Horizontes Hotels, Cubanacan, Grupo Sol Meliá, Havanatur, Delta Club, Iberostar, Gran Caribe, Gaviota, and Meliá hotel operations — reflecting the growing dependency on tourism of the sugar-based Cuban economy.

As part of Cubaweb's desire to bring in foreign tourists to shore up Cuba's woe-ful economy, there's an elaborate listing

of Cuban museums (from the Museum of the Revolution to the Ernest Hemingway museum).

In Cubaweb's Medicine section, the Cuban government highlights the functions of not only Infomed, but Fitomed (Natural Medicine), and Servimed ("health tourism" being marketed to Internet surfers around the world); not to mention medical courses that foreign doctors and medical school students can take in Cuba (in the government's efforts to cash in on Cuba's highly-esteemed reputation in certain fields of medicine).

Cubaweb is a joint effort of the Cuban Ministry of Health, the Infomed Network, and the Cuban firm Copextel S.A. Despite the heavy Cuban involvement in setting up Cubaweb, it actually comes out of Canada (due to Cuban phone lines not being reliable enough to support Internet-related transmissions, aside from e-mail). In reality, Cubaweb has been set up by the Canadian Internet Service

Provider, Mobius Web Corp. (in Ajax, Ontario, Canada).

One of individuals that runs Mobius, Clive Cozens, confirmed that it "would not make sense to tie up valuable and limited bandwidth into Cuba when the physical location of the Web set makes very little difference as long as there is reliable and fast access."

In referring to the mechanics of setting up Cubaweb, Cozens says: "The bulk of the work on the HTML pages is being done in Cuba by (the) staff of Copextel and Infomed for the <http://www.cubaweb.cu> and <http://www.horizontes.cu> (web sites). The work for the Cuban business magazine TIPS is being done by the TIPS staff and they are planning on producing the Web Magazine monthly in seven languages." He continued by noting that editing, technical support, and public relations in getting the word out about Cubaweb are all being handled by his firm (Mobius). In citing the curiosity about what's happening in Cuba, Cozens noted that Cubaweb received 185,500 hits from around the world between January 28th and February 18th alone! ♦

SOME CUBAN E-MAIL ADDRESSES:

CENIAI Users: user@ceniai.cu (example: acnu@ceniai.cu)

User Prefix	Institution or Individual
acnu	Asociación Cubana de las Naciones Unidas
aduan	Aduana General de la República/Cuba
ain	Agencia de Información Nacional
alimport	Emp. Cubana Importada de Alimentos
asia	Centro Estudios Sobre Asia y Oceanía
biuo	Centro de Información/Universidad de Oriente
bm	Biblioteca Médica Nacional
bnc	Banco Nacional de Cuba
bnct	Biblioteca Nacional de Ciencia y Técnica
camcam	Camara de Comercio de la República de Cuba
canon	Canon - service center/Havana
cdisac	Centro de Diseño de Sistemas Autom. de la Acad. de Cien. de Cuba
cecm	Consejo de Ministros
cee	Centro de Estudios Europeos
ceigb	Centro Ing. Genética y Biotecnología
cenais	Centro Nacional de Investigaciones Sismológicas/Santiago de Cuba
cenatox	Centro Nacional de Toxicología
cib00	Centro de Investigaciones Biológicas/Ciudad Habana
cicetrn	Centro de Información Científica y Económica del Banco Nacional
cicma	Centro de Investigaciones de Construcción de Maquinaria/SIME
cida	Centro de Información y Documentación de la Agricultura
cidp	Centro de Investigaciones y Desarrollo del Petróleo
ciei	Centro de Investigaciones de la Economía Internacional
cncu	Comisión Cubana de la UNESCO/CNCU
constimp	Construimport
consumim	Consumimport
cqf001	Centro de Química Farmacéutica
cubana	Cubana de Aviación (Cubana Airlines)
cubanacan	Cubanacán S.A. (tourism agency)
cupetmb	Unión CUPET
driuh	Univ. Habana - Relaciones Internacionales
edicub	Ediciones Cubanlas
electro	Dirección de Electrónica/Academia de Ciencias de Cuba
eempelect	Emp. Industria Electrónica
emex	Mexican Embassy/Havana
emsume	Emp. Suministros Médicos
esicuba	Seguros Internacionales/ESICUBA
etmh	Emp. Terminales Mambisa
fabio	Instituto de Meteorología
faohav	FAO/Food and Agric. Organization
fgastro	Instituto de Gastroenterología/MINSAP
fc00	Flota Cubana de Pesca
gaviotasad	Gaviota - Dpto. de Computación (Gaviota — Cuban tourism agency)
hcapi	Hotel Capri
heber	Centro de Ingen. Genética y Biotecnología
hemotec	Instituto de Hematología e Inmunología/MINSAP
hguadvac	Hotel Guardalavaca/Holguín
hlibre	Hotel Habana Libre
hnc	Hotel Nacional de Cuba - Dpto. de Computación
hotuxpan	Hotel Tuxpan/Varadero
hplaza	Hotel Plaza
hpresid	Hotel Presidente
hriviera	Hotel Riviera
hstgo	Hotel Santiago/Santiago de Cuba
hvedado	Hotel Vedado
ica00	Inst. de Ciencia Animal
ich	Inst. Cubano de Hidrografía
infeco	Universidad de Camagüey
infotur	Palacio de Turismo/Havana
inica	Inst. de Caña de Azúcar
inn0	Inst. de Neurología y Neurocirugía
inor	Inst. Nacional de Oncología y Radiobiología
insac%	Cuba electrónica
ipk00	Inst. Medicina Tropical "Perdo Kouri"
Literal	Inst. de Literatura y Lingüística/ACC
maquimp	Maquimport
meteo	Inst. Meteorología/ACC
mimiw	Mimi Whitefield/Miami Herald
minag	Ministerio de la Agricultura
mincex	Min. de Comercio Exterior
minrex	Min. de Relaciones Exteriores
msspcu	Dpto. de Equipos e Instrumentos Médicos/MINSAP
navcarib	Emp. Navegación Caribe
navega	Emp. Navegación Mambisa
niquelib	Unión del Níquel (Moa)/MINBAS
nbctv	NBC-TV/USA
ojito	Centro Nacional de Información Ciencias Médicas
onitem	Oficina Nacional de Inventiones Información Técnica y Marcas
opsalud	OPS/Org. Panamericana de la Salud
quimimp	Emp. Cubana Importadora de Productos Químicos
radiohc	Radio Habana Cuba
reduniv	Red Universitaria de Información Científica y Tecnológica

User Prefix	Institution or Individual
rioluna	Hotel Rio Luna/Holguín
silvio	Negocios Angol
sismocu	Centro Nacional de Investigaciones Sismológicas/Santiago de Cuba
siva	Fidel Castro Diaz-Balart
teimport	Tecnoimport
tractimp	Tractoimport
uclv	Universidad Central de las Villas
uemed	Unión de Equipos Médicos/Ciudad Habana
ufc00	Unión de Ferrocarriles de Cuba
unesco	Oficina Regional para América Latina y el Caribe/UNESCO
univhab	Univ. Habana

TINORED Users: user@tinored.cu (example: asia@tinored.cu)

User Prefix	Institution or Individual
asia	Centro de Estudios Sobre Asia y Oceanía
bibliouh	Biblioteca/Univ. Habana
cbmsc	Centro de Biofísica Médica/Santiago de Cuba
cea	Centro de Estudios Sobre América
ceamo	Centro de Estudios de África y el Medio Oriente/La Habana
cer	Grupo "Computación Electrónica y Robótica" (CER)/Camagüey
ciei	Centro Invest. Economía Internacional
ciprensa	Centro de Inf. para la Prensa/UPEC
co2le	Lázaro Echevarría (radio hobbyist)
dictmes	Dpto. Información Científica/MES
ejmou	Editorial José Martí
emilio	Emilio Badia (Cubanet)
eqnac	Equipo Nacional de Computación/UJC
esiho	Emp. de Serv. Informáticos/Holguín
figecu	Fiscalía General de la República
granmai	Periódico Granma Internacional/Habana
iciodi	Instituto para el Estudio de la Demanda Interna
iscommg	Instituto Sup. Ciencias Médicas/Camagüey
jaseuc	DHL/Havana (Juan Antonio Seuc/Adm.)
jrint	Juventud Rebelde Internacional
minrex	Ministerio de Relaciones Exteriores
minsap	Ministerio de Salud Pública
nelson	Nelson Valdes
radiohc	Radio Habana Cuba/ICRT
rech	Rectorado/Univ. Habana
root	TINORED System Administration (Carlos Valdes)
uneac	Unión de Escritores y Artistas de Cuba
univpr	Univ. Piñar del Río/MES
varela	Centro Felix Varela

INGEN Users: user@ingen.cu (example: biblio@ingen.cu)

User Prefix	Institution or Individual
biblio	Centro de Información CIGB
bioind	División Biotecnología Industrial
cibprod	Producción CIB
cigbss	Centro de Sancti Spiritus
clin	División Estudios Clínicos
compu	Dpto. de Automatización
comunix	Centro de Comunicaciones
dircam	Dirección CIGB/Camagüey
dircigb	Dirección General CIGB
paten	Dpto. de Patentes CIGB
proyec	Dpto. de Proyectos CIGB

INFOMED Users: user@infomed.cu (example: ayuda@infomed.cu)

User Prefix	Institution or Individual
ayuda	Ayuda Solicitada a InfoMed/InfoMed
cecm	Ctro. Ctr. Est. Medicamentos/MINSAP
cenatox	Centro Nacional de Toxicología/MINSAP
dietec	Area de Ciencia y Técnica/MINSAP
cqf	Centro de Química Farmacéutica/MINSAP
dpscmg	Dir. Prov. Salud/Camagüey
aaa	Empresa Aviación Agrícola/Colaborador
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CONSUMMATE WINSOCK APPS by Forrest Stroud



The PointCast Network



Desc: An amazing app that delivers critical news right to your desktop for free

Pros: Tons of features, easy customization, impressive design and excellent user interface, free news feeds

Cons: Limited to a 16-bit Windows release, could benefit from a speed infusion

Location: <http://www.pointcast.com>

Status: Freeware

Company: PointCast, Inc.

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://www.cwsapps.com> and <http://cwsapps.fibr.net>

Forrest H. Stroud is a senior at The University of Texas at Austin. He is currently pursuing a degree and career in Information Systems and Data Communications Management. Stroud can be reached at <mailto:neuroses@mail.utexas.edu>

The PointCast Network (PCN) exemplifies all that is good and bad on the Internet. The good — PCN delivers free to your desktop timely and relevant information in the form of stock updates, sports scores, weather forecasts, news feeds, industry analyses, and more. PCN offers a variety of customizable options that allow you to personalize the app within a framework of nine general categories — sports, stocks, business news, general news, weather, lifestyle (including entertainment, horoscope, and lottery news), the Internet, national and political news, and international news. PCN includes a scheduling agent and an extensive configuration manager for personalizing the service to your needs.

An extremely cool screen saver is another of PointCast's strong points — the screen saver rotates between all of the above features so that you can get the latest scores, news clippings, and stock quotes without even having to touch your keyboard. The PCN interface has been developed from the ground up to be efficient and intuitive for all users, from novice to Net adept. An iconic hand allows you to change the direction and speed of stock and score tickers as well as to quickly find the company or game that is most important to you at the moment. Clicking on news clippings gives you a full screen view of the news report, saving needless keystrokes in the process. While not a true newsreader per se, PCN offers more important news than you'll find in your daily newspaper and does so with an interface that is easier and also more enjoyable to use.

So if all this is the good news, what could be the bad news? PCN has one negative aspect that it shares with the Net itself — both are adept at sucking up your time. Hours can easily be whittled away with PCN, but unlike the Internet, PointCast offers several features designed to help you maximize the information available to you with a minimal loss of time.

Every news feed category has a summary report which briefly lists all the clippings currently available. This allows you to quickly find the articles important to you, jump to the relevant articles, and then move on. Still, it would be even more efficient if each summary header included a hypertext link to the relevant article. PCN could also be made faster by only updating new information when it conducts its updating procedure. Currently, information is downloaded regardless of whether it has been loaded before, which results in considerably longer delays in receiving new information. Also like the Net, PCN can be dreadfully slow for those with low-bandwidth connections. PCN attempts to resolve this problem by storing static information (like advertisements) on your hard drive.

Unfortunately, PCN is currently available only as a 16-bit Windows release; my condolences go out to the many Mac and Unix users (and those awaiting a native 32-bit release) who will not be able to use this amazing application. Overall, while PointCast is far from being *the* consummate application, it may well be the best I've seen to date.

Enhanced CU-SeeMe



Desc: Enhanced Net videoconferencing, albeit slow

Pros: 24-bit true color and 4-bit greyscale send/receive videoconferencing

Cons: For many users, data transfer is too slow for continual use

Location: <http://www.cu-seeme.com>

Status: Shareware - \$49

Company: White Pine Software

Enhanced CU-SeeMe is the commercial release of the freeware standard CU-SeeMe client from Cornell University. White Pine Software has added some solid features to it, including an appealing interface, full-color videoconferencing (24-bit true color and 4-bit greyscale), audio and chat capabilities, and white board communications. You can also participate in "Live over the Internet" conferences, broadcasts, or chat conferences. Enhanced CU-SeeMe works well as a web browser helper application, automatically launching itself directly from web pages whenever needed. Additional features include advanced security and compression, Caller ID, easy installation, a phonebook preconfigured with several reflector sites, and selectable audio compression algorithms.

Unfortunately, as with the standard client, attempting to connect at any rate less than 28.8 Kbps will get you



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nowhere fast, or even slow — only audio telephony is recommended for users with 14.4 Kbps and lower connections.

For those with fast connections, Enhanced CU-SeeMe definitely delivers when it comes to high-quality color videoconferencing. And when used with the Connectrix black and white VideoCam (about \$99), Enhanced CU-SeeMe is an inexpensive and efficient tool for both sending and receiving video feeds. The low cost of this high-tech combo has many users racing to put themselves on the Net in full-video glory. It is gratifying to see so many users, especially corporate users, wildly interested in all that the Net can offer. Overall, for those with speed to spare, Enhanced CU-SeeMe is a must-have video app.



WEBWHACKER

Desc: Direct delivery of web sites to your hard drive
Pros: Saves connect time, fast and easy to use
Cons: Can't tell whether a web site has been updated since last whacked
Location: <http://www.ffg.com/whacker.html>
Status: Shareware - \$49.95. Free 30 day evaluation
Company: ForeFront Group, Inc.

WebWhacker automatically downloads single web pages, groups of pages, or entire sites (including text, images, and secondary links), and stores a complete copy on your local desktop. Each copy is a complete replica of the original, relinked for quick and easy local browsing without an Internet connection. WebWhacker reduces your Internet bill by saving you the time and cost associated with checking out web sites while connected. Any Web browser can view and navigate the local Web-Whacked pages, and the speed of browsing a web site locally is another reason to buy WebWhacker. Imagine having your own complete copy of The CWSApps List to quickly browse through on your computer, even during peak-traffic times on the Net. With WebWhacker, the web really can be delivered direct to your desktop. WebWhacker is available in versions for both Windows 3.x and Windows 95/NT platforms.



QuickTime and QuickTime VR

Desc: Multimedia and virtual reality viewer for QuickTime movies
Pros: Currently the only driver that plays MOV files
Cons: NET TOOB offers more features, MOV files lack the quality and compactness of MPEG-1 files
Location: <http://qtvr3.quicktime.apple.com/toys/winOS/>
Status: Freeware
Company: Apple Computers, Inc.

No other application on the Net currently allows you to view a QuickTime file (*.MOV) without the drivers included in this

client. For a sample of some of the many QuickTime movies available check Apple's QuickTime Cool Content repository (<http://quicktime.apple.com/content.html>) or one of my favorites, The Niagara Falls Page (<http://www.moran.com/falls/nfhome.html>). MOV files are 2-3 times bigger than MPEG-1 files and 25-50% bigger than AVI files, and the video playback isn't quite as solid as that of a MPEG-1 movie. However, QuickTime files can combine audio and video content, they offer relatively high quality, and they are readily available on the Net.

QuickTime VR gives users access to interactive 3D videos. It makes possible navigable movies — you can look up and down, turn around, zoom in and zoom out, click and drag, and much more, all from within the QuickTime interface. QuickTime VR allows for scenes, or virtual reality spaces, which are non-interactive 3-Dimensional movies that give added depth to scenes like panoramic mountain-top vistas and architectural blueprints. QuickTime VR also supports *objects*, which are interactive videos that you can examine, move, pick up, rotate and much more. Check out Apple's extensive QuickTime VR site at <http://qtvr.quicktime.apple.com/Samples.htm>.

FPARCHIE FOR WINDOWS 95



Desc: Locates files at anonymous FTP sites
Pros: Built-in list of archie servers and support for FTP, quick and easy to use, multithreading
Cons: Archie servers miss many anonymous FTP sites; Windows 95 required
Location: http://www.euronet.nl/users/petert/public_html/fpware/
Status: Freeware
Authors: Tanis and Frank Fesevu

It can be nearly impossible to connect to major sites and download apps immediately following their release. That's when a program like fpArchie comes in handy. By contacting one of the many archie servers, fpArchie can search FTP sites world-wide for the files of your choice. fpArchie is the latest archie client to arrive on the Net but the first to be offered as a Windows 95-specific app. The program functions and looks nearly identical to the Windows 95 built-in Find option. Menus are available for selecting the file or files to be found, for specifying the archie server to be used, for specifying a date that will bypass outdated files, for specifying the app size and path name characteristics, for sorting the results, and much more. Once you find your desired app, you're likely to want to save it to your hard drive as well. Thankfully, fpArchie contains built-in FTP support.

There are a few downsides to this app. First, Windows 3.x and NT users will have to search elsewhere for an archie client (try David Woakes' WS Archie), as fpArchie is currently limited to the Windows 95 platform. Also, like other archie clients, fpArchie is limited by the number of FTP sites monitored by each archie server. Some of the best file archives on the Net cannot be accessed via archie. Finally, fpArchie lacks the capability to manually or automatically enter additional archie servers for monitoring. As fpArchie continues to evolve, watch for this app to become even more impressive. ♦

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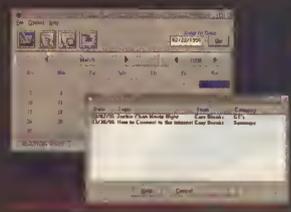
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CYBERWORLD MONITOR Frank X. Sowa

U. S. SEES ITS FUTURE IN CANADA'S TELCO/ISP WARS

Frank X. Sowa is president of The Xavier Group, an international consultancy providing strategic planning, forecasting, training, and development of business and communications systems for organizations since 1981. As a certified software consultant for Softarc's First Class, and a reseller for other companies, he configures customized BBS systems for organizations, complete with "regular content updates." Sowa is also founder and sysop of SEED.NET (412) 487-5449, "the online incubator" for small businesses, a seamless BBS-to-Internet (PPP) provider, with business start-up assistance and seed capital available online. **mailto:franksowa@seednet.com**

The telephone giants in the U.S. and Canada have initiated a two-pronged attack on independent Internet Service Providers (ISPs) in recent months that should serve as a "wake-up" call for the smaller companies to organize and fight for their survival. The major telcos are offering consumers subsidized low-cost Internet connectivity services, and asking the U. S. and Canadian Communications Commissions to alter tariffs – the rates telcos are allowed to charge. The telcos want to switch from the current, flat-rate per-circuit access rate to a per-minute usage-based rate, which would cause independent ISPs costs to skyrocket, while at the same time lowering costs to operate a telco-based ISP.

ROCKEFELLER DID THE SAME THING

In 1872, John D. Rockefeller formed the Standard Oil Trust in an attempt to corner the oil industry by providing end-to-end oil industry solutions to "help lower the cost of delivery of oil to consumers, and to help manufacturing businesses grow." Rockefeller claimed that competition in the oil marketplace would be of great benefit to everyone by lowering the cost of oil driving the new economy, and making the U.S. more competitive against foreign dominance.

What Rockefeller failed to mention was that nearly 80% of all competition at the pump was taking place between companies he owned, managed, or had a "trust" relationship with. His total control of the oil industry from derrick to final marketing facilities gave his companies substantial price and tax breaks, while smaller competitors were saddled with higher transportation costs (they had only one transport option – Rockefeller's Standard Oil Trust), and government regulatory tariffs (which the trust, because it was not your typical corporation, did not have to obey).

By 1978, Rockefeller owned 92% of all refineries in North America, and had a virtual monopoly over all oil transportation systems and marketing facilities as well. All of his smaller competitors were eventually driven out of business before the "trust-busters" stepped in.

Today, the telecom giants are working in much the same manner to try to corner the Internet and information technology markets and, in Rockefeller fashion, the little guys who pioneered the industry are the primary targets of the giants' anti-competitive actions.

TELCOS FOLLOW ROCKEFELLER'S LEAD

Today, a few major telcos operate close to 92% of the telephone distribution networks. In spite of their oli-

gopolistic control of the industry, these behemoths have convinced the governments of Canada and the United States that there is sufficient competition and therefore they should be allowed to operate without government restraints. Rockefeller revisited in the 90s!

And, like Rockefeller, they failed to mention that because they own the key "pipelines" to deliver the information products to market, the telecom giants can control the future of the industry.

BELL CANADA "ROLE MODEL" FOR U.S. BABY BELLS

It's already happening. The situation in Canada this winter is a working model that the Baby Bells in the U.S. — especially Bell Atlantic and Pacific Bell — have been following very closely to determine what strategic moves they should make to dominate the new Information Superhighway, and keep it out of the reach of actual and "would-be" competitors.

The Canadian government allowed its largest telecom companies to "collaborate" and form the Stentor Alliance, a "trust" set up between Canada's largest telephone behemoths. Once established, the Stentor Alliance worked quickly to shore up control over Canada's domestic telephone market and make it harder for foreign-owned companies like AT&T, Sprint and MCI to compete there. Once accomplished, Stentor then turned its attention on the independent small-fry.

Stentor launched aggressive collaborative efforts to dominate all aspects of telecommunications and Internet connectivity — working to rapidly control all aspects of content, application, delivery, distribution, and direct consumer sales. Not satisfied with just being the pipeline, Bell Canada is working to dominate the online world from content to commerce, via all delivery methods from satellites to broadcast. They want it all!

As Owen McAleer, Group Vice-President, Network Development Bell Canada, stated in a recent speech to the Toronto-Irish Chamber of Commerce, "the current focus on the convergence of technologies at Bell in alliance with our Stentor partners, is now preparing the way to bring communications to Canadians in ways they can't even imagine... We now have to think about creating competitive advantage over competitors of all sizes, in a number of fields, so that we can continue to provide low-cost access and cutting-edge services to our customers." In the eyes of the Bells there is no room for competition outside of the Bell family, just as there was no room for competition outside of the Standard Oil Trust in Rockefeller's day.

If the Bells in the U.S. follow that model, every BBS operator and start-up Internet Service Provider, not to mention a wide range of information technology start-ups, will see their future shot down by the awakening giants who recently received the government's blessing to freely "do their thing." Even though the stronger and more focused ISPs and online services will likely survive the onslaught, the carnage wreaked among smaller less-focused and financed operators will not be pretty.

In fact, the shakeout will likely eliminate most of the high energy that is driving this bleeding-edge field — and making North America the leader in the technology. As in the computer industry, it will no longer be feasible for garage-based start-ups and hobbyists to live their version of the American Dream.

IN CANADA, "THE LITTLE GUY" GOT STEPPED ON

On November 1, 1995, Bell Canada made a major move toward realizing its grand vision to seize control of the Internet market using a two-pronged attack — launching its new "Sympatico" Internet service that targeted the small ISP's primary audience, and filing for the capability to charge ISPs by the minute for access.

Bell Canada even tried to claim "The Net" as its registered trademark! They prepared to sue Canadian ISPs

who used "The Net" in their advertising. But the trademark was challenged by small ISPs and Bell backed down. Instead, they called their service "Sympatico" and marketed it as a solution that "took direct aim at the frustrations that many Canadians expressed at getting started on the Internet." Bells low-cost entry package, along with attempted price hikes for ISP connections, sent many small independent ISPs scrambling for survival.

A few ISPs merged or were acquired. Rate changes and battles between the independent ISPs began, shaking up the entire industry. Other ISPs and BBS operators providing Internet access went out of business without warning, leaving their customers stranded and angry — and further supporting Bell's claims that "Canadians

needed a low-cost service they could count on."

The fact that many independent ISPs were already filling that low-cost need fell on deaf ears in the Canadian government. They had been working on their own National Information Policy for years — obtaining most of their advice on issues directly from the telcos, and never considering any input from the independent ISPs. The Stentor companies, citing increased long-distance competition and foreign-controlled entries into the Canadian telephone market as major threats to the Canadian infrastructure, were given permission to hike telephone line rates for independent Internet Service Providers. This extra burden accelerated the demise of many ISPs.

Twenty of the remaining ISPs retaliated by forming a coalition known as the "Responsible Internet Services Companies (RISC)." RISC challenged Bell in a class-action lawsuit calling the increases in conjunction with the new Internet service "anti-competitive." For a few months, according to one ISP, "it was like a war was being waged here in Toronto."

The ISPs were joined by cable companies and other independent telephone companies, who had been battling

Stentor's unfair market controls for three years. Initially, Bell backed down. But, in early February, the

federal Bureau of Competition Policy determined that Bell Canada and the Stentor Alliance is not a cartel practicing anti-competitive business. The BCP did not find evidence that this alliance, and its business practices, had substantially lessened or prevented competition in the long distance services, Internet services, local services and equipment markets.

Immediately following the favorable ruling, Bell and the other Stentor companies filed proposals with the Canadian Radio-television and Telecommunications Commission (CRTC) to collect competitors' contribution payments for line-side access on a per-minute, rather than the current per-circuit, basis. The change will mean a substantial increase in the cost for an ISP to operate in Canada. It is a major

blow against American companies like Netcom and America Online that have recently entered the Canadian marketplace, as well as the many undercapitalized independent ISPs who will not have the cash flow to continue their operations.

U.S. TELECOMM ACT FEES HURT ISPs

In the U.S., since the February 8 passage of the Telecommunications Act, similar movements within the telecommunications industry have begun to take shape. In December, 1995, FCC Chairman Reed Hundt proposed access charge reforms, changing from interstate access rate base to cost-based levels where everyone would pay the same rate based upon usage. This column has warned of such plans as early as May of last year. According to industry analysts, "The extra burden will likely drive out or accelerate the demise of 'mom and pop' ISPs."

The recent decision by AT&T to provide low-cost access to the Internet through its new WorldNet Service has, as expected, provided the regional Bell operating companies additional ammunition to demand price hikes for all ISPs. The Baby Bells as a group have recently filed hundreds of pages of testimony citing that a 1983 exemption which provides free data service provider access on the local level has "had a detrimental effect on their profitability, and has in effect subsidized their competitors in the online business, a field they plan to enter."

CAN THE BELLS COMPETE WITH SMALL ISPs?

Dave Dorman, president and chief executive of Pacific Bell, was quoted by the *New York Times* as saying "the exemption is no longer justified because the line services market is a mature one, and Internet Service Providers no longer need to be protected. It establishes unfair competition."

In fact, the Bells have been lobbying that *they* need to be protected *from* the small ISPs. To hear their side of the story as provided in testimony to the Feds, we little operators are really hurting their businesses, which they feel is bad for their shareholders and detrimental to the future of information technology in America.

"Bell Canada even tried to claim 'The Net' as its registered trademark!"

It's really hard to imagine that small ISPs and BBSs pose such a threat to these behemoths. I mean, we purchase 100% of our access through the telcos. If I was a "pipeline" operator like the Baby Bells, and I had over 800,000 self-operating sources of revenue feeding profit through my network, I'd be pretty happy.

If I had to make a strategic decision on my entry into the Internet market, I'd vote against it. I would do so on the basis that my entry into the marketplace has no guarantee of success. The track record of the telcos in providing online and Internet services has been abysmal to date, and may have done more harm to stock values than competition has.

The Bells would do better by propping up the little guys with enhanced network services and lower data transmission costs. That approach would allow the small start-ups to carry all of the risks in developing the new industry. If they came up with an idea that was a profitable winner, the telcos could "buy-in" and become a strategic partner reaping even larger profits.

But, clear strategies — other than market dominance — are not part of the make up of the Bell Companies. In a full court press, they along with AT&T and the other telco oligopolies plan to use their lobbying strength and well-capitalized marketing capabilities to attempt to retake the Internet market from the independents.

Ameritech, Bell Atlantic and Pacific Bell plan to join AT&T, MCI and Sprint in providing Internet and Online Services in 1996. Cable companies and the regional Bells plan their own services shortly thereafter. If the Bells get their way, and change the existing laws that allow for equal access through the local carriers so that ISPs and BBSs have to pay more for

telephone access while the Bells cost of service drops, it is reasonable to assume that the days of hobby boards will end abruptly, and that commercial boards and services will have to identify and dominate particular market niches just to survive.

THE NEED TO ORGANIZE

Independent ISPs and online services from the single-line hobby boards to the commercial giants like Netcom and America Online face an uncertain future if the telephone pipeline to the Internet is suddenly no longer available due to the posturing of the major telcos. They will have to pass along any network cost increases to their customers. It seems ludicrous to me that a federal Government that has invested millions of dollars into studying the impact on society of a growing divide between the computer "haves" and "have-nots," would allow the very profitable telcos to further widen that gap through anticipated price hikes. It further astounds me that the same government since two years ago has been looking to charge private carrier the cost of subsidizing service to the computer "have-nots." Such increases will only serve to widen the affordability gap.

ISPs, BBSs and those who use them are running out of time. There is a strong need to organize, like our Canadian counterparts, and be in a position to collectively strengthen our future. There is also a need to continue an education process so that your users and the general consumer is made aware of these issues, and demands corrective action through their representatives in government at all levels. Finally, it is time for everyone who likes the sense of community that they feel when they go online to stand up and speak out against the forces that will decimate this fledgling industry before it reaches its potential. ♦



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WIN95 COMMUNICATIONS by Steve Jenkins

CREATING A TWO-COMPUTER PEER-TO-PEER ETHERNET NETWORK

In man's search for computer meaning, he hates to be alone. That's probably why there's such a global movement toward plugging two computers together and trying to make them "see" each other. "Why?" you ask. For better work processes? For heightened levels of corporate communication? For world peace? Nah... the first time I networked two computers, it was for the express intent of playing DOOM. I suspect things haven't changed much since then.

What has changed, however, is the simplicity with which you can make computers see another, especially with Windows 95. Those of you who read my column with some regularity know that my wife and I were blessed with a new arrival in our home last month: a Pentium 133 with 32 MB of RAM, 17" monitor, and a Matrox Millennium PCI video card. We're both very happy, although we're still arguing over what to call it. The bottom line is that since the new arrival, I've been able to goof around with more of the peer-to-peer networking tools in Windows 95 (I have to ask my wife's permission first, however, since my old 486 machine is now hers).

This month, we'll take a look at setting up a basic two-computer peer-to-peer network with Ethernet cards. Before you get started you'll need the following:

- Two Computers
- Two Ethernet Cards
- An adequate length of Ethernet cable

You can pick up a couple of no-frills Ethernet cards for \$50-\$75 each, although you may want to spring for some more costly ones if you're a real power-computing freak. You can probably buy Ethernet cable by the foot at a number of electronics stores, including Radio Shack. I'd suggest a networking cable specialty shop, if you can find one close. Living in Provo, Utah (about 800 yards from Novell, Inc.'s world headquarters), I found one in the yellow pages in less than a minute.

The type of cable you choose depends on the type of connector on your network interface card (NIC). If your card has a co-axial connector (a round metal tube sticking out of the back of the card) then you can just ask for co-ax Ethernet cable. You'll also have to buy T-connectors and terminators for a co-ax connection. You can't just plug one end of the cable into each NIC. You'll have to plug the T-connector into the card, then affix a terminator to one end of the T-connector, then plug the Ethernet cable into the other side of the T-connector.

If your NIC has a twisted-pair connector (it looks a lot like a phone jack, only a bit bigger), then you should

get cross-over twisted-pair Ethernet cable. If you get regular twisted pair for a two-computer peer-to-peer setup, you'll need to purchase an additional piece of hardware, called a hub. You don't need a hub if you're only connecting two computers, so make sure to get cross-over twisted-pair cable. Most cable specialty shops will color these cables red, so that they are quickly identified. With cross-over twisted-pair, you can just plug one end of the cable into each NIC.

If your NIC has both types of connectors on it, go with the twisted pair. It's a bit less complex to set up. In either case, you should be able to pick up 10-15 feet of cable with the connectors on the ends for \$10-\$15. Once you've got all the necessary hardware, you're ready to "plug and play" (well, maybe "plug and pray"). The installation steps are identical for each of your two computers.

STEP 1: INSTALL THE NICs

The first thing you should do is turn off your computer, open your computer's case, and insert the NIC in an open expansion slot. Unless you've got piles of other peripherals, you shouldn't have to worry about IRQ and port address conflicts. If you do have lots of other expansion cards in there, then you already know how to troubleshoot such problems — and I wish you well.

Once the card is inserted, close your computer's case and fire up your system. If you've purchased a newer NIC, there's a good chance that it's Windows 95 Plug and Play compatible — in which case Windows will try to install the card automatically when it boots. If it doesn't, don't worry. You can install the card drivers manually from the Control Panel.

Open the **Control Panel** and double-click the **Add New Hardware** icon. Follow the wizard and let it try to detect your hardware. It's best to close all programs before letting Windows 95 check for new hardware.

If Windows still doesn't detect your card, then it will let you select the type of hardware you want to install. You can do this from the Add New Hardware wizard, or from the Control Panel.

In the **Control Panel**, select the **Network** icon, then choose **Add**, then **Adapter**. If you're using the Add New Hardware wizard, then select **Network Adapter** from the **Hardware Type** list.

In both cases you'll then see the **Select Device** dialog box with **Manufacturers** on the left and **Models** on the right. Select the manufacturer and the model of card you purchased. If you can't find it on the list, then scroll down to **Novell/Anthem** and then select

Born and raised in Australia, Steve Jenkins moved to Portland, Oregon with his family in 1978. He is currently owner and Webmaster of **Windows95.com** at <http://www.windows95.com> which he administers from his two-bedroom apartment in Provo, Utah. Steve has a BA in French Literature, and is currently completing a Masters degree in Business Administration from the Marriott School of Management at Brigham Young University. He lives with his wife, Kay-Dawn, and his 15 year-old turtle, Sherman. Steve works as a consultant on Internet strategy to a number of firms, is an avid Netsurfer, and is one of the founder channel operators of **IRC #Win95-net**. When not sitting in front of his computer being yelled at by his wife to "shut that darned machine off," he enjoys skiing, piano, karate, teaching, writing, and wishing his wife would let him back on the computer. Steve's love of computers started in the early 80s, when he saved up enough money to buy a Commodore 64. He still argues that the C64 is one of the most powerful and user-friendly systems to date.

the **NE2000 Compatible** card. Most cards are NE2000 compatible, and there's a good chance your card will work with this driver.

Windows will now install the necessary drivers for your NIC, and will probably prompt you to reboot.

STEP 2: INSTALLING THE CORRECT PROTOCOLS AND SERVICES

In order to allow the largest number of network applications to take advantage of your peer-to-peer network, it's best to install the three most popular network protocols: TCP/IP, NetBEUI, and IPX/SPX.

A network protocol is much like a language. Someone could call my apartment and start speaking to me in Japanese, but I wouldn't be able to communicate with the caller at all. However, if the caller were to use French or English, I'd be able to understand them just fine. The language (or protocol) travels over the phone wire the same way, but I'd better have my French and English drivers installed in my head before it's going to mean anything to me.

The TCP/IP protocol is the language spoken by the Internet. NetBEUI is a protocol that Windows 95 can use for fast machine-to-machine information transfers. IPX/SPX is most popular for its use in Novell network implementations, but is gaining even more popularity as a network game protocol (for games like DOOM).

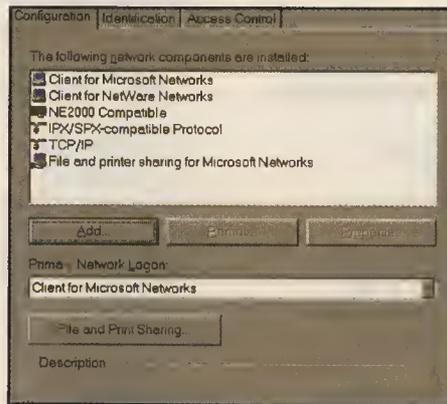
You'll also need to install some networking services to take advantage of the protocols. The **Client for Microsoft Networks** is the all-around Windows client that will make peer-to-peer networking easy and functional. In order to take advantage of file and printer sharing across your peer-to-peer network, you'll also need to install the **File and Printer Sharing for Microsoft Networks** service.

Windows 95 may have installed some or all of these protocols and services when it installed your NIC, but you should double-check to make sure. Double-click the **Network** icon in the Control Panel, and take a look at the installed network components. You should see your NIC, and maybe some other components as well. Make sure all the following network components are installed:

- Client for Microsoft Networks
- Your Network Adapter (NIC)
- IPX/SPX compatible Protocol for your adapter
- NetBEUI for your adapter

TCP/IP for your adapter
File and printer sharing for Microsoft Networks

If you also have a dial-up adapter installed (for access to the Internet, for example), you'll need to make sure that the three required protocols are installed for the NIC, in addition to any you have installed for the dial-up adapter.



Network Components Needed

To install any of the protocols or services you're missing, just press the **Add** button and follow the prompts.

STEP 3: IDENTIFY YOURSELF

Each computer on your network must have a unique identity. You can set this up under the **Identification** tab in the **Network** dialog box. Select the tab, and then enter a name for your computer (it can't be the same as the other computer in the network). This will be referred to as the **computername**. Next, choose a name for your **workgroup**. What you choose isn't important, as long as you enter the same workgroup for both machines (by default, Windows 95 chooses WORKGROUP as the workgroup name). Next, you can enter a short description of the machine that will be displayed when others browse it in the network.

Once the required services and protocols are installed and you've created an identity for your computer and workgroup, you should make sure that the **Primary Network Logon** in the Network dialog box is set to **Client for Microsoft Networks**. You can then close the Network dialog box, plug your Ethernet cable into both machines, and reboot.

STEP 4: GETTING CONNECTED

Before your network will be of much use, you'll need to make sure that both computers are sharing some resources (such

as folders or printers). You can share a folder or printer in Windows 95 by selecting its icon, pressing the right mouse button, then selecting the **Sharing** option. This will allow you to restrict access to the resource by passwords, and choose what type of access you'd like to allow.

A cool trick is to create *hidden* resources. These won't show up if the computer is browsed on the network, but you can still connect to them if they're there. To create a hidden share, you simply place a dollar sign (\$) at the end of the share name. For example, I've created shares called **C\$**, **D\$** and **E\$** on my wife's computer for her two hard drives and her CD-ROM drive.

You can then access the remote computer's resources from the **Run** dialog box on the **Start** menu, by running the remote computername, followed by the resource name. For example, if the remote computer's computername is **BOB**, then you could run `\\bob\funstuff` to access the folder that was shared as **FUNSTUFF**. You can also open the **Network Neighborhood** on your desktop, and browse the resources of your peer-to-peer network using the Windows 95 Explorer. You can drag and drop, open, copy, and manipulate files just as if they were on your own computer. You're now the proud owner of a peer-to-peer network!

STEP 5: WHAT YOU REALLY READ THIS ARTICLE FOR

OK...OK... I left the best part until last so you'd at least finish the article. If you're interested in playing network games like **DOOM** (and if you're not, you should probably have yourself checked out), your peer-to-peer network makes it easy. Just fire up the game in network mode on both machines, and *voila!* It works! The IPX/SPX compatible drivers just sense the network traffic and route it accordingly — even for DOS network games like DOOM!

That's about it. Peer-to-peer networking made simple, and cheap! You can start experimenting with some of Windows 95's built-in networking applications, like **WinPopup**, **WinChat**, **Netwatcher**, and **Hearts**. I better quit writing now, though. Since I installed my peer-to-peer network two weeks ago, my wife has been staying up late at night learning all the secret locations of the weapons in **DOOM II** — and she's ahead four games to none in our "best of ten" series to decide who gets to take out the trash this month. ♦

INTERNET STATISTICS

by David Hakala

Imperative Internet Solutions, formerly *The Internet Group*, maintains an impressive collection of Internet statistics, tables, maps and charts at its <http://www.tig.com> web site. An example is the following table of U. S. states ranked by the number of domain names of each type registered with InterNIC. (The data in this table is current only

through November 15, 1995.) A Java applet at this site lets one point the cursor at a state to see the exact number of com, net, edu and org domains registered in that state. You can retrieve domains by SIC code down to the third SIC level, and look up domains by state name, city name, ZIP code and firm name, or combinations of these terms. Other tidbits include rankings of ISPs by number of domains, the 50 U. S. cities with the most domain names, and a fuzzy but interesting plot of domain locations on a U. S. map. ♦

. COM RANKINGS

1. California
2. New York
3. Massachusetts
4. Texas
5. Florida
6. Illinois
7. Colorado
8. Washington
9. Virginia
10. New Jersey
11. Ohio
12. Pennsylvania
13. Arizona
14. Maryland
15. Minnesota
16. Georgia
17. Michigan
18. Oregon
19. Connecticut
20. Wisconsin
21. North Carolina
22. Missouri
23. Indiana
24. Utah
25. Tennessee
26. District Of Columbia
27. Nevada
28. New Hampshire
29. Kansas
30. New Mexico
31. Alabama
32. Hawaii
33. Iowa
34. Louisiana
35. Oklahoma
36. Kentucky
37. South Carolina
38. Nebraska
39. Delaware
40. Maine
41. Rhode Island
42. Idaho
43. Vermont
44. Arkansas
45. Mississippi
46. Montana
47. Alaska
48. South Dakota
49. West Virginia
50. Wyoming
51. North Dakota
52. Puerto Rico

. NET RANKINGS

1. California
2. Texas
3. New York
4. Florida
5. Virginia
6. Washington
7. Massachusetts
8. Maryland
9. Ohio
10. Pennsylvania
11. Illinois
12. Georgia
13. New Jersey
14. Michigan
15. Colorado
16. Minnesota
17. Arizona
18. Oregon
19. Utah
20. North Carolina
21. Wisconsin
22. Tennessee
23. Missouri
24. Indiana
25. Connecticut
26. Alabama
27. Oklahoma
28. Kansas
29. Louisiana
30. District Of Columbia
31. Nevada
32. Hawaii
33. Iowa
34. South Carolina
35. Kentucky
36. New Hampshire
37. Idaho
38. Rhode Island
39. Nebraska
40. Montana
41. Maine
42. New Mexico
43. Arkansas
44. Delaware
45. South Dakota
46. Mississippi
47. West Virginia
48. Vermont
49. Alaska
50. Puerto Rico
51. North Dakota
52. Wyoming

. EDU RANKINGS

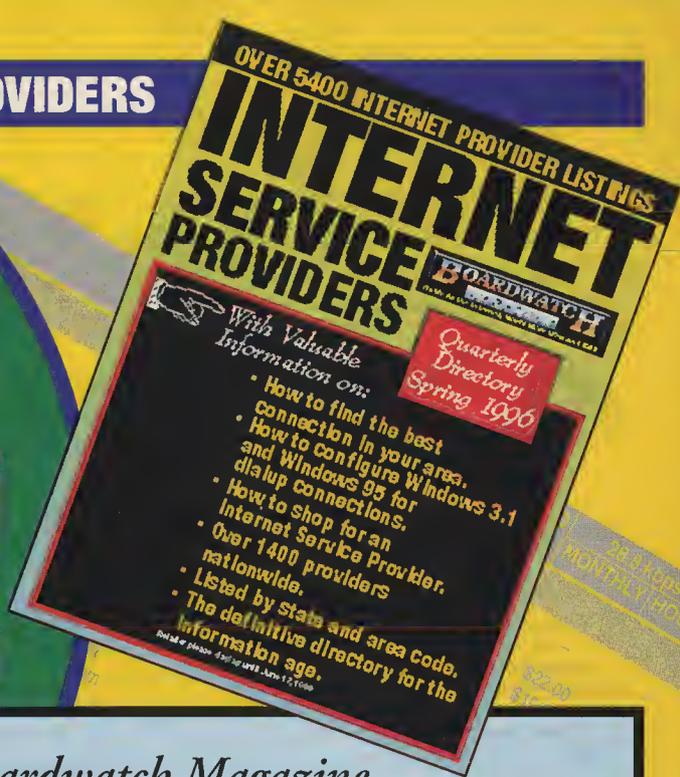
1. California
2. New York
3. Pennsylvania
4. Texas
5. Massachusetts
6. Illinois
7. Ohio
8. Virginia
9. Michigan
10. Missouri
11. Iowa
12. Florida
13. Wisconsin
14. New Jersey
15. Maryland
16. Colorado
17. North Carolina
18. Tennessee
19. Indiana
20. District Of Columbia
21. Alabama
22. Minnesota
23. Washington
24. Georgia
25. Oregon
26. Kansas
27. Louisiana
28. South Carolina
29. Oklahoma
30. Nebraska
31. Arkansas
32. Utah
33. South Dakota
34. Arizona
35. Connecticut
36. Kentucky
37. New Mexico
38. New Hampshire
39. Maine
40. Vermont
41. Rhode Island
42. Mississippi
43. Montana
44. Hawaii
45. West Virginia
46. Idaho
47. Nevada
48. Puerto Rico
49. Delaware
50. Wyoming
51. Alaska
52. North Dakota

. ORG RANKINGS

1. California
2. New York
3. District Of Columbia
4. Massachusetts
5. Texas
6. Virginia
7. Colorado
8. Illinois
9. Maryland
10. Washington
11. Ohio
12. Pennsylvania
13. Florida
14. Michigan
15. Arizona
16. Minnesota
17. Oregon
18. Georgia
19. North Carolina
20. New Jersey
21. Wisconsin
22. Missouri
23. Utah
24. Kansas
25. Indiana
26. Tennessee
27. Connecticut
28. Alabama
29. New Hampshire
30. Iowa
31. Kentucky
32. New Mexico
33. Hawaii
34. Maine
35. Oklahoma
36. Nevada
37. Louisiana
38. Delaware
39. South Carolina
40. Nebraska
41. Arkansas
42. Rhode Island
43. Montana
44. Vermont
45. Idaho
46. Alaska
47. West Virginia
48. South Dakota
49. Mississippi
50. Wyoming
51. Puerto Rico
52. North Dakota

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Notes From The Underground by Wallace Wang

LEGENDARY VIRUSES

No, this article isn't about putting a live computer virus on somebody else's computer and wrecking havoc out of revenge, curiosity, or plain dumb ignorance. Instead, this article is about the number of curious ideas that the entire computer virus threat has spawned.

With all the hysteria surrounding computer viruses, it's no surprise that a number of "urban legends" have popped up to strike fear and terror in the hearts of the computer beginners and veterans alike. While these mythical virus are nonsensical, it's still intriguing to read about them nevertheless.

PYROVIRUS

This virus gets its name from its method of attack. Unlike other viruses that erase files or trash your hard disk, the PyroVirus supposedly attacks a multi-sync monitor by modifying the horizontal scan frequency, thereby causing the monitor to overheat, smoke, and possibly catch on fire.

The story of this virus appears to have originated with a now obsolete IBM monitor, back in the days when the 80286 CPU was leading edge technology. Due to a defect in this monitor, more than a few of them overheated and burnt themselves out (but no flames). Eventually someone decided to blame the monitor's overheating problem on a virus, and the story has stuck to this day.

AT&TACK VIRUS

This fictional virus supposedly infects a computer and checks for the existence of a Hayes-compatible modem. If it finds one, the AT&Tack virus dials a pre-determined phone number, which allows someone waiting on the other end of the phone line to access the contents of the infected computer.

Of course, such a virus doesn't exist. First of all, it would be a simple matter of dissecting the virus to determine which phone number it is calling so you could trace the culprit trying to access your computer. Second, programs that allow someone to access another computer over the phone lines are fairly common (such as LapLink, Remote Access, and pcAnywhere). However, such remote access programs are huge. To expect a virus to infiltrate a computer and provide remote access capabilities without being detected is nearly impossible. Despite its fanciful name and fictional purpose, the AT&Tack virus is likely to remain an amusing myth (at least for the time being).

THE "GOOD TIMES" E-MAIL VIRUS

One day, subscribers to America Online found the following message waiting for them:

Happy Chanukah everyone, and be careful out there. There is a virus on America Online being sent by E-Mail. If you get anything called "Good Times", DON'T read it or download it. It is a virus that will erase your hard drive. Forward this to all your friends. It may help them a lot.

Of course, this warning proved to be a hoax. An e-mail virus is impossible for two reasons. First, a virus can only travel through the phone lines if it has infected a program. A virus cannot infect e-mail since e-mail is simply text displayed on your screen. This would be like thinking you could get infected just by touching a photograph of a biological virus.

Second, a virus can only infect your computer and damage your computer if you run an infected program. Just reading e-mail can't load a virus. (Of course, if the program you're using to read your e-mail happens to be infected, then it may look as if a virus infected your computer through e-mail.)

Since its initial appearance on America Online, the "Good Times" virus hoax has appeared on other online services such as CompuServe and the Internet. Just remember that a hoax is still a hoax no matter where it may come from.

However, America Online members recently had a real-life threat, modeled after the e-mail virus, called the AOLGold Trojan Horse. This trojan horse appeared as a file attachment to an e-mail message and appeared in a file called **AOLGOLD.ZIP**. If a user foolishly downloaded this file, unzipped it, and ran its installation program, it would expand into the following files:

**ADRIVE.RPT
ANNOY.COM
DOER.DO
DOOMDAY.EXE
INSTALL.BAT
INSTALL.EXE
SLOWER.ZZ
SUSPEND.DRV
VIDEO.DRV**

If you ran the **INSTALL.BAT** file, it would rename the **VIDEO.DRV** file to **VIRUS.BAT**. The next time you booted your computer, the **VIRUS.BAT** file would start deleting all the files stored on your C:\

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672 @compuserve.com or bothekat@aol.com or bo_the_cat@msn.com

drive. So while you can never get a virus just by reading e-mail, you can get a virus whenever you download and execute a file.

THE JPEG VIRUS

Similar to the e-mail "Good Times" hoax is another virus hoax dubbed the JPEG virus, which supposedly activates whenever you view a JPEG file. Occasionally you may find a message on a BBS or online service such as the following:

W A R N I N G : If you are using a DOS or Windows machine, then you are vulnerable to attack from the JPEG virus. THIS IS NOT A JOKE! The JPEG virus has already destroyed the hard disk of a major BBS in Chicago and has caused much grief to several users already.

The JPEG virus supposedly hides in the comment field of a JPEG file. When you view the graphic file, the JPEG virus uses an undocumented (and non-existent) feature of DOS to spread and attack your computer.

Since this undocumented feature of DOS is entirely fictional, it's impossible for a virus to hide in a graphic file and spread by displaying it. (Of course, a virus could still infect your graphic viewing program. If you run an infected graphic viewing program, the virus could spread and give the illusion that it popped out of your JPEG file. But now that you've read about this, you'll know where to look for the virus, and it won't be inside your JPEG graphic files.)

THE FAX MACHINE VIRUS

No, fax machines can never get infected by a computer virus. However, occasionally someone will send a fax with the words **FAX MACHINE VIRUS — GOTCHA!!!** printed in bold letters. Anyone who hasn't taken the time to learn about computer viruses will usually panic at the sight of these harmless words spewing out of their fax machine.

If this happens to a co-worker, calm the person down and explain to them that it's impossible for a virus (which is a computer program) to transfer itself to a fax machine over the phone lines. If this happens to your boss and he (or she) panics, believing that a virus has infected the fax machine, then you'll know that your boss is a total moron who doesn't deserve to be making more money than you anyway.

THE IRAQI PRINTER VIRUS

According to a report in *U.S. News & World Report* in 1992, the National Security Agency (NSA) had planted a virus-infected computer chip into a printer sent to Iraq shortly before the Gulf War. Supposedly, the virus spread from the printer and eventually infected the Iraqi computers connected to it. Each time an Iraqi technician tried to use an infected computer, the contents of the screen would appear briefly, then disappear, rendering the computer useless.

While the Pentagon has never officially admitted or denied the existence of this printer virus, the story resembles an April Fool's joke published by *InfoWorld* magazine in 1991. Apparently someone (who didn't know anything about viruses) took this April Fool's joke seriously, with the result that Ted Koppel, a news broadcaster, reported the existence of this virus on the popular American news show, "Nightline." Of course the American military's penchant for secrecy may

be justified. Who knows what "black" projects the Pentagon may be funding right now, hiring computer virus writers and hackers to break into the computers of other countries to infiltrate their secrets. After all, the German government once funded an espionage program dubbed Operation Rahab, whose goal was to break into the computers of other countries to map out their weaknesses.

So if the German government is using hackers for espionage, you can bet the American government won't be far behind. Then, of course, there's the Japanese, the French, the British, the Israelis, the Russians, the Chinese, and practically every other government in the world, jockeying for position to protect their physical borders and national corporations using every means possible at the expense of everyone else.

FUNNY (BUT NON-EXISTENT) VIRUSES

The following viruses don't exist, but are examples of the fun you can have creating imaginary viruses without having to write a single line of code.

AT&T VIRUS: Every three minutes it tells you what great service you're getting.

MCI VIRUS: Every three minutes it reminds you that you're paying too much for the AT&T virus.

PBS VIRUS: Your programs stop every few minutes to ask for money.

PAUL REVERE VIRUS: This revolutionary virus does not horse around. It warns you of an impending hard disk attack: Once, if by LAN; twice, if by C:

POLITICALLY CORRECT VIRUS: Never identifies itself as a "virus," but instead refers to itself as an "electronic micro-organism."

RIGHT-TO-LIFE VIRUS: Won't allow you to delete a file, regardless of how young it is. If you attempt to erase a file, it requires you to see a counselor about possible alternatives.

GOVERNMENT ECONOMIST VIRUS: Nothing works, but all your diagnostic software says everything is fine.

NEW WORLD ORDER VIRUS: Probably harmless, but it makes a lot of people really mad just thinking about it.

FEDERAL BUREAUCRAT VIRUS: Divides your hard disk into hundreds of little units, each of which does practically nothing, but all of which claim to be the most important part of your computer.

GALLUP VIRUS: Sixty percent of the PCs infected will lose 30 percent of their data 14 percent of the time (plus or minus a 3.5 percent margin of error).

TEXAS VIRUS: Makes itself bigger than any other file.

ADAM AND EVE VIRUS: Takes a couple of bytes out of your Apple.

CONGRESSIONAL VIRUS: The computer locks up, and the screen splits in half with the same message appearing on each side of the screen. The message says that the gridlock is caused by the other side.

AIRLINE LUGGAGE VIRUS: You're in Dallas, but your data is in Singapore.

FREUDIAN VIRUS: Your computer becomes obsessed with marrying its own motherboard.

ELVIS VIRUS: Your computer gets fat, slow, and lazy, then self destructs; only to resurface at shopping malls and service stations across rural America.

STAR TREK VIRUS: Invades your system in places where no virus has gone before.

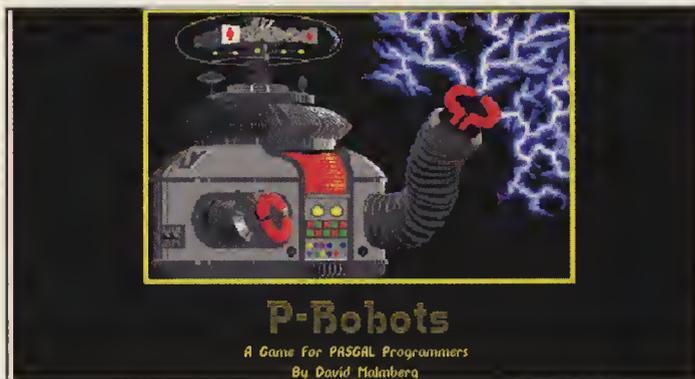
HEALTH CARE VIRUS: Tests your system for a day, finds nothing wrong, and sends you a bill for \$4,500.

VIRUS GAMES

Many people write viruses, not because they want to destroy a total stranger's hard disk on the other side of the planet, but because they're curious to learn how computer viruses work. So what better way to teach yourself about viruses than to write your own?

Of course, that's like saying what better way to teach yourself about pipe bombs than by making your own and blowing your fingers off in the process. So rather than take the risk of destroying your own hard disk data with a malicious virus of your own creation, divert your energy to a more amusing past time and play a virus-like game instead.

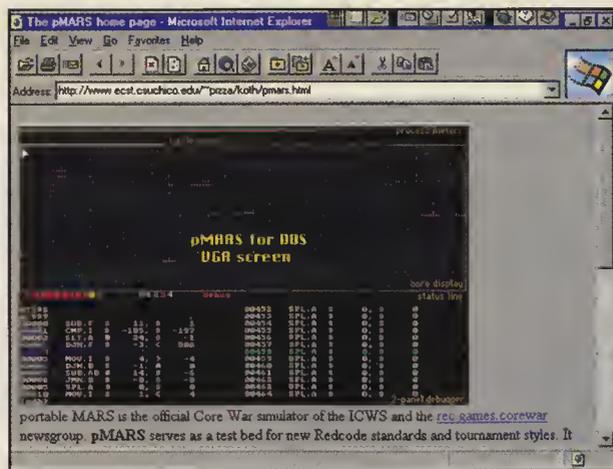
For Pascal language enthusiasts, download the **PROBO3.ZIP** file from <ftp://boardwatch.com>. This file contains a shareware game called **P-Robots**, which lets you build and program your very own battle robot complete with shields, land mines, cannons, and cloaking devices. Write a poor program and your battle robot winds up a hunk of smoking metal in the battle arena. Write a good program and your battle robot can deftly dodge attacks from other battle robots while pummeling them into rubble in return. With a game like P-Robots, you can quickly see the difference between "good" code and "bad" code right before your eyes.



For assembly language purists, play a similar game called **Core Wars**, where assembly language programs stalk one another through a virtual computer. Core Wars has even spawned an international following, which holds regular tournaments from entries around the world. For more information about Core Wars, visit the <http://www.ecst.csuchico.edu/~pizza/koth/pmars.html> site and download the official tournament rules along with one or more Core Wars programs to help you get started writing your own Core War assembly language battle programs.

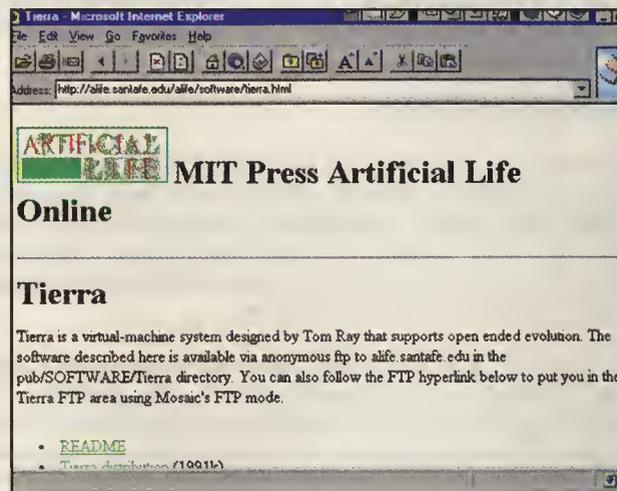
Since the appearance of viruses, many researchers have used computer viruses as a way to explore the idea of artificial life. After all, computer viruses live and reproduce within the electronic confines of their environment, so why not use them to test theories about evolution?

To explore your own ideas about artificial life, visit the **Tierra** web site at <http://alife.santafe.edu/alife/software/tierra.html> and download a copy of the Tierra program. This program lets you create digital organisms in an



electronic environment, so you can see which ones survive and which ones die before they have a chance to reproduce. With enough luck, you can get your digital organisms to create their own religions and kill each other in your name for peace, brotherhood, and good will towards others.

For more related programs and information about the whole field of artificial life (this doesn't include women with breast implants, by the way), visit the following web site:



<http://www.construct.net/tierra/al.html>. Here you'll find even more information about artificial life so you can play god in your own tiny part of the universe.

While computer viruses aren't very funny if they wipe out your entire hard disk, they can be amusing if you think about them in unconventional ways, such as making up your own comical viruses, debunking virus myths for your co-workers, or playing virus-like games to keep yourself amused at work when you should be doing something more productive instead.

So the next time you get that destructive urge to write a malicious computer virus, let loose a dangerous Trojan Horse, or return to work with a handgun to shoot your fellow co-workers, take a deep breath, browse through this article again, and see if you can find a safer, more constructive alternative for your pent-up energy. Who knows? Maybe the fun you have killing digital beings in Core Wars, P-Robots, or Tierra might satisfy your craving for destruction so you won't go out and hurt somebody else. ♦



WEBCUBE™

WebCube Internet Servers by Pacific Internet



World-Wide-Web Server
Internet Service Provider (ISP) Server
Internet Firewall System



Complete System w/
16MB RAM, 1GB Disk
ONLY \$4,995!!!

THE ULTIMATE PLUG-AND-PLAY INTERNET SERVER



WEBCUBE™

The **WebCube™** family of turnkey Internet servers from Pacific Internet allows anyone to *easily and economically* establish an Internet/World-Wide-Web server — for use as a global Internet Web Site, an intra-company communications server, a LAN-to-Internet gateway, or an Internet Service Provider (ISP) system.

WebCube utilizes an industry standard open PC architecture. It integrates all the hardware and software required to setup a Web server on the Internet or your LAN — *all within a simple 10-minute installation process*. More so, the WebCube is a complete, self-contained solution. There are *no additional* hidden software, hardware, or networking requirements. Keyboard, monitor, mouse, CD-ROM, Ethernet, router, it's *all* there....

At the heart of the system is an Intel Pentium™ CPU running a 32-bit POSIX UNIX®-like operating system and powerful Web/Internet software. WebCube comes fully loaded with over 200mb of the latest Internet server software including TCP/IP, Web server & browser, Electronic Mail, News, FTP, a Netware® Client, and LAN Manager® compatibility - all easily administered with a user-friendly, graphical interface. We also include a complete set of industry-favorite Internet books on Web server administration and HTML development. The WebCube is designed with maximum scalability and modularity, allowing you to easily expand your system as your requirements grow — using standard, low-cost PC peripherals.

System highlights include an easy, icon-driven user interface, built-in Ethernet, an optional built-in T1/56kbs router, graphical web statistics software for precise data on your Web hits, the capability to host multiple domain names, Web sites, and IP addresses on the single WebCube system, the ability to store on-line web content on the built-in CD-ROM, and powerful HTML authoring tools that greatly simplify the task of web content development. Pacific Internet provides unparalleled technical support and a firm commitment to complete customer satisfaction.

Call us or visit our Web site today to find out why the WebCube guarantees to deliver the most affordable, and most comprehensive Web server in the market — and to take advantage of our special introductory prices.

Standard Features — All models

- Unix-like operating system - unlimited users
- Intel Pentium CPU
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- Auto-response E-Mail
- Icon-driven graphical user interface
- Hard copy Internet manuals



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Tel (310) 410-9700 Fax (310) 410-9727

pac-sales@pacnet.com <http://www.pacnet.com>



THE SOUND OF THE INTERNET

Voice/Video On The Net

by Jeff Pulver

LONG-DISTANCE DOGS IN THE MANGER

Jeff lives in Great Neck, New York (although one could argue he really lives on the net and sleeps in his home in Great Neck). These days Jeff is a self-proclaimed "Net Technologist" and publisher of *NetWatch* (<http://www.pulver.com/netwatch>), a web magazine which tracks enabling net technologies with a specific focus on audio, video, marketing and services on the net. He is also the project manager of the Free World Dialup experiment (<http://www.pulver.com/fwd>), and the moderator of several mailing lists including: *VON*, *NetWatch* and *IPhone*.

You can e-mail Jeff at <mailto:jeff@pulver.com>

On March 4, a group called "America's Carriers Telecommunications Association" (ACTA) filed a petition with the FCC claiming that Internet Telephony is a threat to the continued viability of its members. ACTA has asked the FCC to prohibit the distribution of Internet Telephony software and begin regulating the Internet. If the ACTA filing is successful, it would effectively ban Internet Telephony and possibly eliminate all of the associated multimedia Net technologies — even before they have had a chance to mature and achieve critical mass. (A copy of the filing is available at <http://www.von.org>)

When ACTA filed the petition, I received about 400 e-mails from various people and organizations. My immediate reaction was that something should be done about it — and that it wasn't safe to assume that the FCC won't make an adverse ruling. There haven't been many things in my life which made me feel that I *needed* to do something — but this was one of them.

After reading about the ACTA filing, I set up the VONYES mailing list and started the VON Coalition with the help of Sandy Combs. On March 18, 1996, the VON Coalition's corporate membership included VocalTec, Inc., Voxware, VDONet, InSoft, White Pine Software, Netspeak Corporation, FreeTel Communications, DSP Group, Xing Technologies, Jabra Corporation, Metaverse, Telechoice and Telescan.

The VON Coalition will be filing a response to ACTA's FCC petition, and hopefully will be allowed to testify before the FCC in Washington, D.C. during its Spring 1996 meeting. The coalition's web site at <http://www.von.org> will keep consumers informed as events unfold.

THE FREE WORLD DIALUP PROJECT

Since October, 1995 I have been involved with the Free World Dialup (FWD — see <http://www.pulver.com/fwd>). FWD is a volunteer effort to establish Internet Telephony gateway servers worldwide, allowing VON users to call off-Net telephone users

while bypassing most of the public telephone system. In late November, 1995 the first beta software was made available and on February 29th, we announced the start of the public phase of the project.

In October 1995, there was a thread on the Internet Phone mailing list concerning Enterprise Computing. Of particular interest was the "patching" of a POTS (plain old telephone service) line into an IPhone session. There was a heated discussion regarding the feasibility of doing such a thing. To everyone's astonishment, Izak Jenie of Jakarta, Indonesia, not only stated that it was doable but that he had a working prototype!

A couple of days later, the Free World Dialup experiment was started.

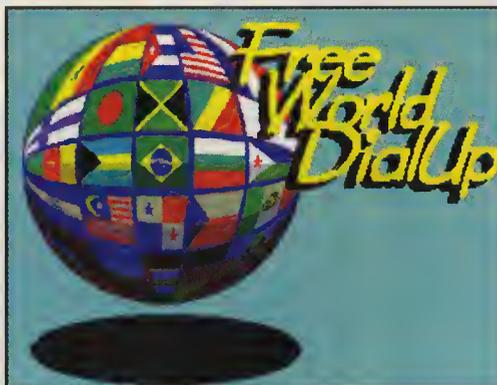
FWD provides access to any phone in a local calling area directly from the Internet. Since 1993, there has been a conceptually similar free server available on the Net — the Internet Faxing Service. I will be discussing the Internet Faxing Service in a future column for *Boardwatch*.

FWD was the first software-only based solution which eliminated the need for the receiving party of the phone call to be online. In the evolution of Internet Telephony this was a significant step forward. In February 1996, VocalTec Inc. (<http://www.vocaltec.com>) and Dialogic (<http://www.dialogic.com>) announced a gateway product which provides a hardware solution similar in concept to FWD. The biggest difference between the two projects are: (1) FWD is available free of charge and (2) FWD is a software-only solution.

There was a lot of excitement surrounding Free World Dialup when it was first announced. I received hundreds of e-mails from people who wished to participate in the experiment — mostly from people who had

family members overseas and were hoping to find out that there was a local server near their family members. The international media also found the project fascinating, especially in the United Kingdom.

During the first couple of days of the FWD project, there were many e-mails and follow-up discussions between three of us — Izak in Indonesia, Brandon Lucas in



Tokyo and myself in New York. We started using *PowWow* (<http://www.tribal.com>) as our standard for multiple user chat sessions, which worked quite well. Within the first week of the experiment, the core project team was assembled. The people who contributed to this effort included: Izak Jenie (Jakarta, Indonesia) - Development, Brandon Lucas (Tokyo, Japan) - Global Server Coordinator, Alex Balfour (London, England) - Media Relations, Lynda Meyer (NYC, USA) - Legal Coordinator, Leonard Czajka (Seattle, WA USA) - Webmaster, Sandy Combs (Burlington, VT USA) - Global Media Coordinator, and myself, Project Manager.

The FWD Project was to allow only non-commercial use for the specific reason of being able to contact friends and family members overseas. FWD also was a social experiment — a test to see if people who have never met, from places all around the world could get together as a team and work toward a common goal in 1996.

We knew from the start that FWD was not a scaleable technology. At the present time there needs to be a dedicated PC for each phone line made available. We put a floating end date of April, 1996, on the experiment so that the people running FWD Servers could get their machines back. As things have turned out, it appears that there will continue to be FWD Servers running past the original project end date and for some time to come.

Within the first 10 days of the FWD project, I used the FWD Client to dial a local phone number in Jakarta — and connected to Izak's girlfriend. This was pretty cool! Imagine being out of the country and being able to speak with family members who don't have Internet access. As the word started to spread about Free World Dialup, the FWD mailing list became an active discussion group and a collective think tank. Together we learned that in some countries there is no such thing as a free (or unlimited) local phone call. And to this date, there haven't been any FWD Servers installed in some countries, including Germany.

On November 25th, 1995, Beta I of the FWD Client was made available. When it was first released, there was only one experimental server running — in my home. The phone line was connected to

an answering machine. Over several weeks, I received phone messages from Australia, Brazil, Pakistan and many points in between via my FWD Server. Many of the messages reflected tremendous excitement regarding the FWD project.

The FWD Client/Server software is a winsock application. All it does is provide a means for a telephone number to be remotely dialed over the Internet. FWD works well with all of the winsock-based VON products. Many of the FWD Servers have chosen to use IPPhone simply because IPPhone has a feature called "autoconnect."

HOW TO PLACE A FREE WORLD DIALUP CALL

1. Install the Free World Dialup Client and Internet Phone on your computer. The FWD Client is available from: <ftp://ftp.pulver.com/pub/fwd> and Internet Phone is available from <http://www.vocaltec.com>.

2. Start your Web browsers and go to <http://gsn.pulver.com/gsn/gsn.htm>, the home page for the Global Server Network. The GSN provides a view of the FWD Servers which are online at this very moment. The number of active FWD Servers will vary minute by minute.

3. Write down the Host Address of the FWD Server you wish to access.

Let's assume for the moment that somebody wanted to place a call to Guam. Assuming the Guam FWD Server is up and running, the hostname of the Guam server is dcs.guam.net (Special thanks to David Sykes — <mailto:dsykes@kuentos.guam.net> — for running the Guam FWD Server).

4. Use the FWD Client to connect to the desired FWD Server.

5. Use the FWD Client to enter the phone number you want to call.

6. When the party answers the conversation begins. The length of the conversation is preset by the FWD Server operator in the FWD Server configuration file. The average length supported is 10 minutes.

In the future, there are plans for the FWD Client to log onto a central server which will perform an automatic hand-off to the desired FWD Server.

The Seattle Server run by Ammon Larson was the second FWD server to go online. During the time the Seattle server was up and running, we observed some of the habits of the FWDers. Some didn't seem to care what time of day or night it was, and despite the pleas of the FWD Server operator, these people would dial random phone numbers in my local calling area just for the fun of it. This seemed harmless, until it started happening at 2:30 in the morning.

After the Seattle Server went online, we started seeing servers from all over the world come online as well. There are now FWD servers in Melbourne, Australia, Jakarta Indonesia, Singapore, Moscow, Russia, Guam, Stockholm Sweden, Canada: Vancouver, Calgary, Toronto, and 10 U. S. states. Volunteers in more than 60 locations have committed to establish FWD Servers and I fully expect many (if not most) of these sites to be active during 1996.

STARTING A FWD SERVER

What's required to run a FWD Server? A multimedia PC which has Internet Connectivity — either via Ethernet or SLIP/PPP — as well as a Cirrus Logic compatible voice/fax modem. The speaker output of the soundcard is attached using an attenuator cable to the mic input of the voice/fax modem. The speaker output of the voice/fax modem gets attached using a second attenuator cable to the microphone input of the soundcard. Levels are adjusted using the VON software — Internet Phone™ being the most popular VON product used with the experiment. (VocalTec agreed to provide their Internet Phone™ software to participating FWD Server locations.)

What started out as a technical feasibility experiment ended up a worldwide community. Mostly people whose interest was to help extend the virtual community. By in large the project was a success. We were able prove that in 1996 people from all over the world, who have mostly never met could work together and give so much of their time to help each other. ♦

CABLE ACCESS by Neal Schnog

SPEED, SPEED, SPEED — CABLE MODEMS ARE HERE !



In real estate the **I**ncredo is location, location, location but in Internet access it is speed, speed, speed! Internet Service Providers have seen a boom in business as new users have flocked to their doors in search of faster Internet access. But the speed advantage of 28.8 and ISDN gateways could be short lived. The telephone network is not the only path to the Internet. The cable television industry has wired 95 million homes with very high bandwidth coaxial cable. Cable "modems" are now available, and they are very fast!

HOW FAST ARE THESE NEW MODEMS?

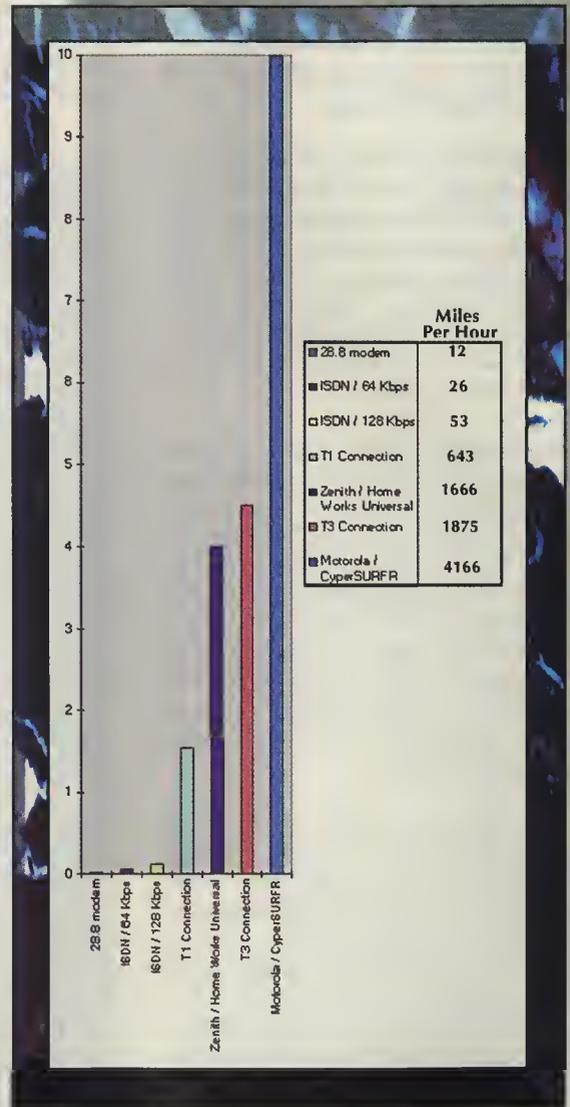
The **CyberSURFR**, Motorola's first generation of cable modem, offers throughput speeds of up to 10 Mbps in the downstream path and 786 Kbps upstream. Zenith's current cable modem, the **Homeworks Universal**, provides 4 Mbps both down and upstream; but, according to Michael Scott, Zenith's Regional Manager Data Communications, "The next generation of Zenith's cable modems will be capable of 27 Mbps downstream and 10 Mbps upstream." There are several other cable modem manufacturers including Toshiba, Hewlett Packard and Lan City; but the one common thread is that all the products are ready for market. The modems work and are matched only in throughput speeds by direct Ethernet connections which on average run about 10 Mbps.

These new high speed modems will mean big changes in the marketplace. James M. Phillips, corporate vice president and general manager of Motorola's Worldwide Multimedia Distribution and Marketing Division, says that "Once in place, the CyberSURFR modems ... will open up the true capabilities of today's expanding Internet and other on-line services... customers will communicate at speeds nearly 1,000 times faster than conventional modems and for the first time, experience the full potential of these services."

CABLE MODEMS' OTHER ADVANTAGES

Besides being fast, cable modems will deliver other performance enhancements. First (and most notable) is the ability to use the modem and watch television at the same time. Unlike phone lines which become busy once in use, cable modems only use a small fraction of the available bandwidth of cable systems. What this means for consumers is

Relative Modem Speeds



* "Miles Per Hour" is provided only as a relative measure of the difference in modem speeds and does not reflect the true speed of data transfer which actually measures the volume of data sent over any given second.

that they can surf the Internet, watch television and use the telephone all at the same time.

The bandwidth advantage also gives cable modems instant access to the Internet. Unlike phone systems, no dial-up and login process is needed; the service is always available. Cable systems will essentially be configured as wide area networks (WANs) and allow users to send and receive data at will. In addition, a

Company	Basic Cable Subscribers	Modems On Order
Tele-Communications, Inc. (TCI)	14,000,000	250,000
Time Warner Cable	11,700,000	100,000
Comcast Corporation	3,410,000*	100,000

* Comcast Corp has an agreement to acquire Scripps Howard Cable with over 800,000 subscribers.

computer can be left on the network twenty four hours a day without using any network or system resources except when data transfers are under way. This means that e-mail would no longer be static but instead be configured much like e-mail on today's local area networks (LANs).

WHEN WILL CABLE MODEMS GET TO MARKET?

The cable television industry is betting on this potential. As of March, 1996, cable modem manufacturers had announced firm commitments to deliver over 500,000 units to the domestic market. The buyers are cable television companies including the three largest MSO's (Multiple System Operators) in the United States.

TCI plans to roll out its first cable modem services this spring in Silicon Valley's Sunnyvale, California, with the start up of **@Home**. According to Bruce Ravenel, senior vice president and chief operating officer, TCI Technology Ventures, Inc., cable modems "are key to our plans to launch the **@Home** services in 1996." **@Home**, a joint venture between Tele-Communications, Inc. and Kleiner Perkins Caufield & Buyers, is a high-speed network that provides real-time multimedia news, entertainment and advertising content, access to the Internet, e-mail and other services to consumers via cable systems and their personal computers.

Currently over two dozen US cable systems have cable modem trials under way. Test sites include Cablevision System's in Woodbury, New York; Time Warner Cable in Elmira, New York; TCI in East Lansing, Michigan and Continental Cablevision in Cambridge, Massachusetts. Most of the trial sites have less than 200 subscribers but most of the companies will soon be on the way to offering Internet access via cable modem to all their customers. Steve

Craddock, vice president of New Media Development for Comcast Cable, sees Comcast "introducing this superior data solution to customers in 1996;" and Michael Luftman, vice president of Corporate Communications for Time Warner Cable, says that the Elmira trial will start offering its service to the general public "as soon as billing issues are resolved."

ECONOMIC AND TECHNICAL FEASIBILITY

The plan in most of the markets is to lease the cable modems (which cost **\$375 to \$500** each) to customers. This cost is not much more than today's ISDN equipment and like other electronics should drop substantially as manufacturing and competition increases. Over time, as cable modems become more widely available and less expensive, cable operators plan to have customers purchase their own modems and use the cable television system as the connection point for the device. Of course, consumers will also want to be able to move modems from area to area or from cable system to cable system.

Portability of the modems is dependent on compatibility between cable systems and two-way capability of the majority of cable systems. The compatibility issue is already being addressed through a consortium of cable operators called Cable Labs. Cable Labs has been testing modems for some time and has been key in promoting a single standard for the entire industry. Many cable systems, however, do not have two-way capability.

According to the National Cable Television Association (NCTA) approximately 25% of the cable systems in the US have two-way capability and 95 million homes have cable television available. Simple calculations would translate to an immediate market potential for cable modems of only 24 million households but this number could

increase substantially over the next five years. According to Michael Luftman, vice president of Corporate Communications for Time Warner Cable, "Time Warner has been aggressively rebuilding cable systems for quite some time and now has about one third of its systems capable of two-way operation." In addition, TCI and most of the other major MSOs continue to install fiber optic cable and upgrade their older systems. Even as cable operators become capable of delivering two-way service, they will still have to convince customers that their new systems, unlike current systems, will be the most reliable way to access the Internet.

Finally, there is one factor out of the control of cable operators — the speed of other networks. Most internet connections are made through T1s and T3s and while these connection points used to be considered the fastest available, they may soon be the cause of data bottle necks. For this reason, it may be some time before consumers can take full advantage of the 10 Mbps speeds of cable modems. ♦

CABLE MODEM CONTACTS

National Cable Television Association - NCTA
1724 Massachusetts Avenue, N.W.
Washington, DC 20036

Contact: Barbara York,
VP Industry Affairs
Phone: (202)775-3669
<http://cable-online.com/ncta.htm>

Cable Television Laboratories, Inc. - Cable Labs
400 Centennial Drive
Louisville, CO 80027

Contact: Mike Schwartz, VP
Communications
Phone: (303)661-9100
Fax: (303)661-9199
<http://www.cablelabs.com>

Motorola Multimedia Group
1475 West Shure Drive, N304
Arlington Heights, IL 60004

Contact: Suzanne Boggs,
Communication Specialist
Phone: (847)632-5964
Fax: (847)435-2025
<http://www.mot.com/multimedia>

Zenith Network Systems Group
1000 Milwaukee Avenue
Glenview, IL 60025

Contact: Michael Scott, Regional
Manager Data Communications
Phone: (847)391-7511
Fax: (847)391-8919 (no web site)



EDUCATION LINK

by Rea Andrew Redd

ELECTRONIC FOOTNOTES

Ah, the citation! An easy way to tell the difference between the student scholar and the student who understands college to be a keg party with a \$30,000 cover charge at the door.

The Internet has not made it any easier to add these marks of honest scholarship — citation at the bottom of the page and the bibliographic citation at the rear of the research paper. Students, faculty, librarians, and researchers who use the Internet are grappling with the proper form for something that appeared in the 1980s and has now become much more popular and necessary in the 1990s. What do you do with a citation that has no publication date or page numbers, and uses brackets for punctuation?

The Modern Language Association (MLA) and the Psychological Association, those arbiters of commas, periods, dates, titles, and names, are debating the standards for the citation of online sources. *The Chicago Manual of Style*, the chief standard reference book for scholars, does not offer much help. The International Organization for Standardization has not yet settled the dispute after five years. Americans are loath to wait for the word from on high; we're inclined to make it up as we go along.

But how do you create a permanent citation for an online document when the document's content often changes and the whole thing moves to another location? How do you show readers where to find what you found when there are no page numbers on the WWW? How do you cite a document that is not archived anywhere, such as a mailing list?

Our current print record essentially began in the year 1440, with the invention of the printing press. We have that much heritage and work into a process which now allows us to find out if a book is in print or if it's in a library or archive. The history of the periodical article citation is only a few decades less than the book's six hundred years. Scholarship depends on whether the reader can find the source from the citation which the writer has provided. If the reader cannot retrace the search path which the writer has taken, then it is not scholarship.

The use of the word "online" to show how the text was found is the MLA's only requirement at this time. Standards to be offered later this year suggest the inclusion of Internet addresses and dates indicating when a text was viewed by the researcher. The following are a selection of the most popular citation reference guides. Italics appearing below should be dropped and underlining added when used in a research paper; the boldface type appearing below

should be dropped and regular type added when used in a research paper.

Electronic Style: A Guide to Citing Electronic Information, Xia Li and Nancy Crane, Meckler Publications, Inc., 1993

"A Brief Citation Guide for Internet Sources in History and the Humanities," Melvin E. Page. Gopher://hnet.msu.edu:70/00/lists/HAfrica/internet-cit.

"A Bibliographic Formats for Citing Electronic Information," Xia Li and Nancy B. Crane. <http://www.uvm.edu/~xli/reference/estyles.html>

ONLINE FIELD TRIPS



Classic and Contemporary Art Galleries

Exhibitions in art galleries and museums from around the world may be viewed at *Art City*, <http://www.artcity.com>. The *Los Angeles County Museum of Art* — <http://www.lacma.org> — is in the process of updating its Web page to include a cyber gallery of permanent and future exhibitions.

The *Whitney Museum of Art* offers portions of current shows and their collection at <http://www.echo.nyc.com/~whitney> — live chat and essay contests allow viewers to interact.

The *National Museum of Art*, a subdivision of The Smithsonian Institution, can be visited at <http://www.si.edu>.

The *Web Museum*, created by Nicolas Pioch, now has many mirror-sites to avoid the traffic jams which the initial 100,000 hits a week caused; go to <http://sun.site.unc.edu/wm> during off-peak hours.

The *Louvre Museum* at <http://www.louvre.fr> sports English, Spanish and Portuguese translations. While in France, visit the *French Ministry of Culture* Web page at <http://www.culture.fr> which includes photographs of the most recently discovered Paleolithic cave paintings.

The *Berger Foundation* collection at <http://sgline.epfl.ch/BERGER/> (Lausanne, Switzerland) offers Egyptian, Asian, and Italian Renaissance art. Visit <http://www.christusrex.org> which is a non-

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: red@genesis.duq.edu

profit organization dedicated to art preserved in churches, cathedrals and monasteries. Containing more than 1,300 images, including over 300 from the Sistine Chapel and nearly 600 from the Vatican Museums, this site deserves several electronic field trips.

For modern artists, visit *GenArt* at <http://www.genart.org>. The photography, etchings, and paintings of contemporary artists are available for viewing and purchase from Cesium133 (<http://www.cesium133.com>).

If you enjoy the art of the American Southwest and are making plans to spend time in the region, then use the *Wingspread Collector's Guide Online* (<http://www.wingspread.com>) to find more than 300 galleries and studios.

YES, WE HAVE BANANAS!

Banana Programming of Missoula, Montana is offering free *BananaCom* to public libraries, universities, and colleges. BananaCom is the communication program designed for novice modem users; it automatically locates and configures your modem, eliminating most of the problems new users face trying to get online for the first time. BananaCom comes with an unlimited distribution license; copies can be passed out as needed without cost to the institution or the end user.



BananaCom works with DOS, Windows, Windows 95 and supports ZModem, ANSI, and VT100/102. It's designed for dialing bulletin board systems or Internet shell accounts. Banana Programming: (406)543-8234 BBS, (406)543-1928 voice, <http://www.split.com> or <mailto:banana@montana.com>.

RECYCLED COMPUTERS

There are nearly 50 million obsolete computers in the U.S., and though teachers and students want the latest technology, budgets often don't allow for it. Often the used computer market provides a program to begin or upgrade a school's technology program.

First-time shoppers need a buyer's guide to computers. *John Dvorak's PC Magazine Computer Buyer's Guide* and Darcy DiNucci, et. al.'s *The*

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Macintosh Bible will set you on the right path. If you are spending public funds be prepared to defend your purchase down to the last port, because someone's brother-in-law on the local school board will whine that the money didn't come their way.

Try these established sources for used computer systems. Please e-mail to me any others you know.

- The American Computer Exchange, (800)786-0717 or (404)786-0054
- East/West Education Development Foundation, Boston, MA, (617)542-1234 or (617)542-7552
- GE Remarketing, Inc., Norcross, GA, (800)431-7716
- National Christina Foundation, Greenwich, CT (800)274-7846
- Pre-Owned Electronics, Bedford, MA (800)274-5343
- Shreve Systems, Shreveport, LA (800)227-3971 or (318)424-9791
- United Computer Exchange, Atlanta, GA (800)755-3033 or 404-612-1205

THE COLLEGIATE BROWSER

**Natural Sciences:
Agriculture, Biology, Geology**

The Farm Journal Web site at <http://www.FarmJournal.com> features articles from five agricultural magazines and links them to related materials and organizations. The University of Manitoba offers the bimonthly *Journal of Paleolimnology* at <http://www.umanitoba.ca/>

[geosci/PALEOLIM/jopl.html](http://www.geosci/PALEOLIM/jopl.html) which covers river, lake and estuary systems. Worms are the topic of *Annelida*, a mailing list through gopher://biosci-server@net.bio.net. The University of Wisconsin has an ecology mailing list. Send mailto:listserver@relay.doit.wisc.edu with the message **subscribe <annelida or ecology>** <your name> to begin receiving mail from these lists.

GOVERNMENT AND INTERNATIONAL AFFAIRS

IntelWeb at <http://www.awpi.com/> IntelWeb is an intelligence organization community report of global activities. **BosniaLink** at <http://www.dtic.dla.mil/bosnia> focuses on news about the American and British military forces in the region, and presents fact sheets, briefing transcripts, press releases, and U.S. DOD speeches. "The Hungary Report" is a weekly news update mailing list; send mailto:hungary-report-request@hungary.yak.net with the word **subscribe** in the message or visit <http://www.isys.hu/hrep>. "Ibads" (mailto:listserve@tome.worldbank.org) provides information on Sub-Saharan Africa and, most importantly for the academician, offers abstracts and an index for the resource materials of the World Bank's Africa Technical Department.

NATIONAL AND STATE GOVERNMENT

Subscribe to **democrats96** or **republi-cans96** depending on your preference. Send mailto:listserve@vm.mari

[st.edu](http://www.st.edu) with the word **subscribe** in the message. The Republican National Committee is on the Web at <http://www.rnc.org>. The **NRA's** Web page at <http://www.nra.org> has their view on the year's politics and legislation. The **California** State Senate provides public access to non-partisan data; biographies of senators, legislative rules, pending legislation and ballot propositions, committee news and voting district maps at <http://www.sen.ca.gov>.

THE K-12 BROWSER

Novae (mailto:listserve@idbsu.idbsu.edu) is a mailing list for classroom instructors who are looking for email projects, grants, listservs, pertinent Web sites and articles related to Internet instruction. The **Internet Headquarters for Student Governments** is at <http://umr.edu/~stuco/ihsng.html> sponsored by the University of Missouri at Rolla; discussion groups, links to constitutions, bylaws, and a directory of participants are featured here.

Geography and American culture teachers who use student planned travelogues in their lesson plans now have a non-commercial source for student research; the University of Colorado at Boulder (<http://www.ustin.org>) offers the "U.S. Travel and Tourism Information Network." Airlines ticket and highway route information, bed-and-breakfast inns listings, theme parks, and national parks in over 20 states are available; new states are being added monthly. ♦

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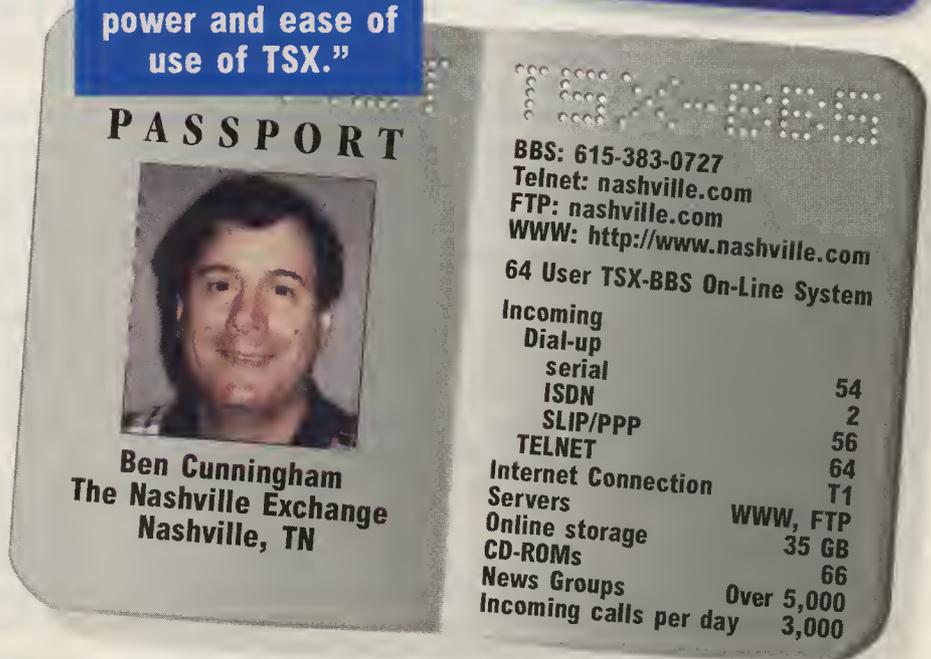
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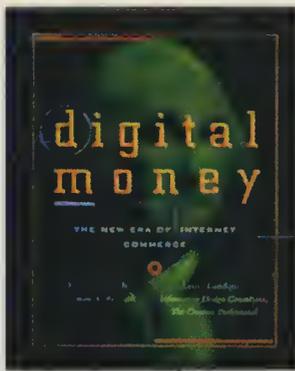
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BOOK BYTES

by L. Detweiler

Digital Money: the New Era of Internet Commerce

By Daniel C. Lynch and Leslie Lundquist

1996, John Wiley and Sons, Inc.

285 pages, \$24.95

ISBN #0-471-14178-X

(800)225-5945

<http://www.wiley.com/compbooks/>

Cyberspace seems to spawn a steady, endless, dizzying stream of innovation. That pace is likely to continue unabated for many years. A relatively new development just now working its way through the pipeline and about to burst forth, “digital money,” is likely to be a massive milestone by becoming a key part of future electronic infrastructure. The explosion of the web may even pale in comparison to the entrepreneurial industries made possible by digital cash variations. Lynch and Lundquist justifiably call it, “the cuneiform of a new age.”

Currently, digital money goes under many different titles, such as e-cash, digital cash, electronic checking, e\$, etc. A critical distinction is whether the money is traceable, with schemes where it isn't more appropriately called “cash,” and those where it is (i.e., buyer and seller identities are available to each other) a “check.”

Lynch and Lundquist have put together a concise and respectable compilation on the current state of the field, the diverse issues involved in digital money, some speculation on the future, and technical background to implementations. Lynch is president of Cybercash, Inc. — <http://www.cybercash.com> — one of the digital money alternatives covered in the book.

The book is objective and balanced, but not extremely detailed in its coverage. It reflects the state of the field, in which there are early, competing Internet transactions prototypes but no clearcut winner or standard.

Many of the schemes are piggybacked on existing credit card system. The day that anyone can charge small amounts of money automatically when files are downloaded or web page hit is fast approaching but perhaps a few years away.

Chapter 1 gives a background on the Internet and future possibilities. Chapter 2, *Dramatis Personae*, summarizes key existing “cash” schemes including Checkfree, Cybercash, DigiCash (founded by David Chaum), First Virtual Holdings, Open Market, Inc., NetBill, and Netscape Communications. Online ser-

vices such as CompuServe, Prodigy, and Microsoft get some blurbs, and later parts of the chapter cover government regulatory agencies like NSA, NIST and the SEC. Cryptography/encryption basics are covered in chapter 3 with major emphasis on the RSA system.

The authors tend to focus more on higher-level issues involved in digital commerce. They have a nice table 4.1 that identifies key transaction issues of “independence, security, privacy, offline payment, transferability, divisibility” and rates seven existing schemes in the matrix.

The lack of any significant focus on Chaum's revolutionary algorithms for digital cash — see <http://www.digicash.nl> — seems a glaring hole here, although DigiCash gets a few footnote-length sentences in later chapters. The authors fail to adequately address or highlight the key identification issues associated with cash and Chaum's very fervent political stance regarding it. “Blinding” (the process by which the cash user's identity is protected from both the bank and/or seller) is described but not credited or associated with DigiCash or Chaum, its inventor.

Later chapters cover New Business Concepts, The Evolving Cyber Economy, and Electronic Information Exchange that will be useful to entrepreneurs trying to understand the relevance of digital cash to their own ventures. Legal issues are in chapter 9.

We found no coverage of taxation issues, a gaping chasm. Taxation considerations affect both the consumer and cash supplier, and ramifications of cash technology such as tax evasion and government response deserve major coverage in virtually any treatment of the topic. A final chapter, “Technology in Service to Humanity” examines the social utility of digital cash in a rather fluffy and idealistic way. An appendix on “classical cryptography” provides a few more ideas in this area.

Lundquist and Lynch have done a fairly good job of presenting an overview of all the key areas involved with digital commerce. The book is a decent early start for this field. However, if they want to keep the book up-to-date and substantive they are probably going to have to greatly expand and frequently revise it as the electronic cash innovations begin to spin off even faster than the current HTML standard is transmogrifying. This only-modestly-ambitious book does not inspire confidence that they are up to this task.



**World Wide Web Marketing:
Integrating the Internet into
Your Marketing Strategy**

By Jim Sterne

1995, John Wiley and Sons, Inc.

331 pages, \$24.95

ISBN #0-471-12843-0

(800)225-5945

<http://www.wiley.com/compbooks>

Web marketing is easily one of the hottest interests of readers. Sterne has a strong technical and marketing background and has checked in with a usable and substantial entry.

The book is largely nontechnical and covers the higher-level issues involved in devising and carrying out a web-marketing plan. However, somewhat more technical coverage is needed in places, because the success of a web server is related to its performance, which is highly dependent on technical issues. For example, no attention is given to the problems of extremely high volume web sites. Despite Sterne's examples of very large companies, such as Bell Atlantic or Hewlett Packard, the book is probably more appropriate for small- to mid-sized-companies. A comparison of web server architectures, software, and hardware from the point of view of different sizes of businesses and their requirements is conspicuously absent.

Sterne focuses on the problem of providing "value-added content" that capitalizes on the specific strengths of the web. He lucidly describes the ingredients that lead to an attractive web page based on existing web culture. This will help companies avoid a net presence that makes them look out-of-touch or incongruous on the web, or creating a site that is simply ignored. He also shines in highlighting the ways that a web site can be utilized as an effective part of a company's total marketing plan. He dedicates a significant part of the book to critiquing the efficacy of many existing sites. Later chapters on attracting attention and gauging consumer response are well-conceived and thorough.

The organization of chapters is rational, and the layout is generally good.

Appendix A is a good collection of marketing mailing lists and newsgroups. The specific critiques of existing sites are likely to be some of the more useful, helpful, and illuminating aspects of the book for many readers. Sterne does seem to have a good intuitive feeling for the psychology of average web users and the dynamics of web traversal by them.

Java-specific information is almost completely nonexistent, a serious detriment to this book. Conceivably Java could have significant impact on almost every area that Sterne covers in his book.



**Creating Cool Web Pages With
HTML, 2nd Edition**

by Dave Taylor

1995, IDG Books

294 pages plus disk, \$24.99

ISBN #1-56884-822-6

(800)762-2974

<http://www.idgbooks.com>

This is the best book for beginning webmasters and personal-page dabblers. Actually, *Creating Cool Web Pages* should be required reading for everyone who dares post a page on the Web, regardless of experience. As Jack Rickard is fond of saying, "The power to create is the power to make ugly," and there are a lot of two-bagger pages out there. This book will help you avoid being ugly in public (which is still a misdemeanor in Chicago).

Taylor's building-block approach to explaining the Web, URLs, HTML commands and Web authoring tools is as easily followed and entertaining as one of John Dvorak's recipes. Taylor has written over 500 Web pages, including the critically acclaimed Internet Mall at <http://www.internet-mall.com> which he founded in 1994. The Internet Mall now sports over 10,000 virtual stores, yet it is crisp, easily navigated and continually fresh. Follow this book's advice and your Web site can be the same.

Chapter 1 describes the differences between linear and hyper media, the advantages of being able to include other people's sites in your Web document and where to find them. Taylor

favors Microsoft's Internet Explorer web browser and devotes a few pages to its use and praise.

Chapter 2 explains URL syntax with remarkable clarity, including esoterica such as the inclusion of ports and userids in FTP URLs. Prominent "warnings" help the novice remember common gotchas, such as "URLs cannot contain spaces."

Chapters 3 through 5 cover basic page layout, text formatting and style elements such as bulleted, numbered and ordered lists. Code-saving tips are well illustrated with "good and bad" HTML examples. You'll save a ton of revision and repetitive work by studying this chapter carefully.

Chapters 6 through 8 explore anchor references, the most frequently used HTML tags. Taylor shows how to create links to other parts of a document, external documents on one's own or a remote server, and how to include and align images. Good advice on image creation and pointers to public domain icon libraries make Chapter 8 a must-read. Taylor also emphasizes the value of creating alternative pages for non-graphics users; about 60% of surfers prefer to leave graphics auto-load turned off.

Chapters 9 and 10 are devoted to Netscape and Microsoft HTML enhancements, respectively. These include tables, client-side image mapping, font definitions, block quotes, and color specification. Mercifully, Taylor does not get into Java in this novice-oriented book.

Chapters 11 and 12 explore search engines, promotion opportunities and marketing strategies for new Web sites. How to register with the major search engines and how to construct index-friendly Web sites is covered in detail. Key sites to which you can post free announcements are another valuable element of these chapters.

Chapter 13 delves into the future of HTML, especially client-side image mapping. This final chapter is followed by a well-organized command reference, a guide to Web Presence Providers and an introduction to Microsoft's Internet Assistant HTML editor for Windows 95 users. Internet Assistant is included on the bonus disk, along with example HTML pages and an assortment of useful icons.

Taylor combines a novice-friendly technical style with real-world practical advice better than anyone we've read. This book is a classic, and we look forward to the third edition...◆



Phil Becker lives in Aurora, Colorado where he is President of eSoft, Inc. and Secretary/Treasurer of One, Inc. He sits on the board of Durand Communications and is very active in and excited by computer communications of all types. In such spare time as he has, Phil enjoys attending his favorite sports which are NHL Hockey and IndyCar and NASCAR auto racing. You may reach Phil via email at phil@plb.com

NET PROFIT

By Phil Becker

ANATOMY OF A GOLD RUSH - THE PAST SPEAKS TO THE INTERNET FUTURE

In 1896 the last big Gold Rush occurred when gold was discovered in Dawson City in the Yukon Territories. It had been 50 years since the first gold rush had been sparked by the find at Sutter's Mill, California, and most people had read about (but missed out on) the fabulous wealth that had been created in the periodic Gold Rushes of the intervening years. As a result it was reported that as many as 1,000,000 people openly made plans to travel to Dawson City so they wouldn't be left out this time.

We know more reliable details about the Dawson Gold Rush than most others because it was the most documented gold rush in history. Technology in photography had progressed to the point where many photographs of the actual rush in progress were made. Since gold rushes had happened enough times by 1896 to have created a somewhat reflective thought about how they made people behave, there were people who were every bit as interested in chronicling and observing the Dawson gold rush as in actually participating in it. Thomas Edison even had some of his early movie equipment on the scene as this rush occurred. Jack London and Robert W. Service (two famous authors of the time) were fascinated by this gold rush event, and even ended up living in Dawson City for a time (no doubt motivated at least partially by the reputation Mark Twain had made for himself by covering the California gold rush 50 years earlier).

The first item documented was that of the 1,000,000 people who made plans to go to Dawson, about 100,000 made it as far as the border of Alaska. So only one in ten who felt the pressure to participate took the first step of making the commitment to move at all. This is a pretty reasonable number and indicates the extreme intensity of the motivation to participate (success theory studies today indicate that in an average case only about one out of 70 people who want to do something badly enough to read about it ever take the first step towards their desires). The result was a significant boom for many Alaskan communities as 100,000 people arrived in a territory where towns of 100 population were rare.

Once you reached Alaska, the route to Dawson led inland to the Yukon Territory and over a pass that led to the junction of the Klondike and Yukon rivers and on to nearby Bonanza Creek where the gold had been found. It was one of the most rugged and untamed northern treks that had ever been made by large numbers of people.

While photographers recorded the rush up this pass, and Edison created films of it, Jack London staked his claim to history by renaming the pass "Dead Horse Pass" as most of the animals seen in the photographs never lived the rest of the way to Dawson. Most died right there on the pass, often as a result of the people involved rushing ahead without any planning whatsoever for what it might take to reach their destination in the cold, Arctic north with the technology of the 1890's.

At its peak, the rush was so intense, and the line of people so crowded, that if you got tired climbing up Dead Horse Pass and stopped by the side of the path to rest, it could take as much as 5 hours to get a place in line to head up the pass again when you resumed. Many side businesses were formed on the pass itself, including people who would cut steps in the ice and snow and charge people to go up the steps, bypassing the line of people going up the pass.

It is documented that of the nearly 100,000 who made it to Alaska, only about 10,000 made it through Dead Horse Pass and into Dawson on this initial rush (the town's population swelled to nearly 30,000 over the next two years, so two-thirds of those who had a shot at the gold weren't even part of that initial rush). Again, only about 1 in 10 who had made the first commitment, followed through once they saw how rough the rest of the journey would be. Many of these died or nearly died as a result of rushing forward without thinking through what the journey would require, and animals and equipment were sacrificed in tremendous numbers as a result.

In the end, only about 400 of the people who reached Dawson "got rich" as a direct result of finding Gold. A good number of these were not in on the first rush up Dead Horse Pass, but came along a bit later with a more carefully thought out plan that included having what they needed to endure the search until they succeeded. Thousands of people found gold in Dawson, but not enough to do much more than pay their way to live there and prospect.

It is again documented, however, that many more people got wealthy over the following two years providing support for those who had rushed in to find Gold. For example, one woman went to Dawson and hired men to build shacks out of packing crates. In the end she owned hotels and housing that she rented and sold to those who came for gold, and did very well indeed. Those who set up food stores, provision shops, etc. in many cases did well (especially if they planned out their business before they began), and

had a much higher "success rate" than those who rushed in without planning.

WHAT DOES THIS MEAN FOR THE INTERNET?

The lesson here is probably obvious, but even so it will be lived out again and again by people who think that if they don't act immediately they will be left out forever. The result is that they try to find out the "one simple thing" that everyone is doing and rush to do it themselves. Whether it is putting up a Web server before they figure out who they are serving with what, or putting out a consulting shingle to try to sell the one thing they know without learning the rest of how the Internet world really works, the result of "gold rush fever" should be obvious. Of every 1,000,000 people who think about it, and for every 100,000 who actually "rush in," only 400 or so will have any success at all. You might as well buy a lottery ticket — the odds are the same and it's a lot less work and worry.

But those people who slow down a half step, learn the technology as well as the marketplace, think through what they want to do and develop personal networks that allow them to observe similar types of Internet businesses as they develop will have a very high percentage of success stories.

The good news here is that online technology itself allows more people more opportunity to do just this than has ever existed before. This SHOULD result in far more success stories than have ever occurred in a single technology revolution. But here human nature rears its head.

The fear of most people is that they will not be able to learn new things fast enough to integrate them into what they know about the world and develop a business plan with them before "everyone else has already done it." This is what gives rise to the gold rush mentality of "do it now, think about it later" that causes most people who start a venture to fail.

The truth is, however, that it isn't the new technology that will give you the big edge in your business. Rather it is combining that technology with what you already have spent years learning about that type of business that will make real success stories. So in the end it is the knowledge of your existing business (that you take for granted and

somehow assume anyone can easily learn quickly) that will make winners out of those people who also learn Internet technology and can map it to their business and its customers.

So every person who invests the time to learn how the Internet really works from end to end buys a ticket to a lottery with much higher odds of winning than those who succumb to the "gold rush." Not very many people in Dawson who went in with the idea to build support businesses (such as housing and general stores) failed to build wealth. MOST of the people who rushed in for gold failed to find lasting wealth.

When you go to learn about the Internet you will find that ignorance is rampant. As John C. Dvorak said in his March *Boardwatch* column (which I strongly recommend you re-read in conjunction with this article), "Also stepping in are the pathetic know-it-all newbies who are all over the place." What he is touching on is how hard it is to get good, solid knowledge of how the Internet works in a form you can apply to your tasks.

This brings me to the part where I tell you "don't miss ONE ISPCON" in San Francisco this August 8-10th. I know it sounds like a commercial (and it certainly is) but I'm really trying to do you a favor. Most people who rush into the Internet will end up on "Dead Horse Pass" or as drifters and hard-scrabble prospectors in Dawson City, watching others succeed around them. Don't let this happen to you!

If you attend ONE ISPCON your chances of success will go up dramatically over those who don't. You will learn much more immediately useful information in three days than you will anywhere else, and you will build personal contacts that will serve you well for years to come. No other single move can increase your odds to win more than attending ONE ISPCON. If I knew of one, I would tell you about it.

It is true that to finish you must start, but starting without planning where you are going and seeing how you will get there is only marginally better than not starting. Ten thousand people on Dead Horse Pass thought that they couldn't take the time to plan, and you see how they ended up. A few hundred winners amongst thousands of losers. But as those who went a bit later with plans to win showed, learn what you need to know to win, and you will most likely win. ♦

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BOARDWATCH MAGAZINE
ONLINE EDITION



MANNING THE WIRES

by Ric Manning

MAGAZINES CHASE WEB DOLLARS

Still looking for that Internet idea that's going to make you rich? How about publishing an online magazine?

Sure, the idea has its down side. Who wants to sit at a computer screen scrolling through a long profile, an interview or a piece of fiction? I wonder how much political analysis? I'll bet even Bill Gates prefers reading *The Road Ahead* on paper.

Ric Manning writes about business technology, computers and consumer electronics for *The Courier-Journal* in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web <http://iglou.com/gizweb>

Ric was the founding editor of *Plumb* and *Bulletin Board Systems*, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including *PC/Computing*, *Mobile Office*, *PC Week* and *Home Office Computing*. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at <mailto:ricman@iglou.com>

"The (paper) magazine is a wonderful medium for transporting information," said Bob Love, the editor who supervises *Rolling Stone's* online ventures. "What we sometime refer to as our dead-tree sister is always going to have a place."

Yet traditional magazine publishers — including *Rolling Stone* — are joining and sometimes leading the rush to get online. And some of the most popular and potentially profitable Web sites are sponsored by magazines.

Want to join the crowd? Here are three ways to do it:

DRAW MATERIAL FROM A GROUP OF MAGAZINES

That's what Ziff-Davis does with *ZDNet* (<http://www.zdnet.com>), a collection of material from 11 different computer magazines, plus its new collaboration with Yahoo. Check into ZDNet and you can look up product reviews in any or all of its publications, including back issues.



Eleven Pulp Mags Make One Web Site at ZDNet

Conde Nast took a similar approach when it combined information from *Bon Appetit* and *Gourmet* to create *Epicurious* (<http://www.epicurious.com/epicurious/home.html>). The site has recipes in a searchable database where each entry can be downloaded, printed or sent to a friend's e-mail address. And you can add your own opinion by voting on topics such as your favorite beer.

Time Warner's *Pathfinder* (<http://pathfinder.com>) also finds safety in numbers. The sprawling electronic versions of *Time*, *Life*, *Sports*

Illustrated, *People* and *Entertainment Weekly* claims to have its pages viewed more than 3 million times a week.

Yet big doesn't necessarily mean bountiful. Although advertisers reportedly are willing to pay \$30,000 for a three-month run on *Pathfinder*, the service finished its first year online without showing a profit.

BUILD A MAGAZINE BASED ON SEX

Playboy's Web site (<http://www.playboy.com>) is reported to be one of the most popular sites on the Internet, even though it posts only a few articles and photographs from the magazine.



Playboy Profits the Old-Fashioned Way

Eileen Kent, head of new media projects for Playboy Enterprises, said the site draws about 4 million hits — or about 15,000 visits — every day. Kent also claims *Playboy* is one of the few magazine ventures online that makes a profit, though she wouldn't disclose any figures.

That doesn't mean that *Playboy* has all the answers for online publishing. "Everybody is learning," she said. "The digital world is evolving and we're evolving with it."

Kent said *Playboy* will soon roll out an entirely new subscription-based Web site that will offer more features, including material from *Playboy's* CD-ROMs. The new site will be designed for delivery through high-bandwidth pipelines such as cable modems.

"We want to define what an online magazine should be, can be and will be," she said. "If the Web got this far being as slow and tedious as it is, imagine what it's going to be like."

START A LOW-OVERHEAD ONLINE PUBLICATION

"We are a two-person operation and we have effectively been competing with *HotWired* and *Pathfinder*," said Steven Johnson, one of the two founders of *Feed* (<http://www.feedmag.com>). "We get noticed and reviewed along with companies that have 10 or 100 times more employees."



"It was better just to speak, and speak I did, of exercise, my body, my life, my dreams, my past, my experience with early-model Nautilus machines."

—SAM LIPSYTE FROM "MEMOIRS OF AN INFOHORE"

Web-born Feed Isn't Your Father's Magazine

Johnson and partner Stefanie Syman used personal savings and loans from family members to start **Feed** about a year ago. Most of the money goes to pay **Feed's** writers, many of whom also contribute to prestige magazines such as **Atlantic Monthly** and **Harper's**.

"We were able to launch a magazine with almost no money," said Johnson. "The flip side of that is we haven't made any money, either."

Johnson thinks **Feed's** Web-only approach is an advantage. "People are looking for the Web-native publications," he said. "They don't want to go read repurposed content from **Sports Illustrated**. When the existing giants just dump their content online, invariably that makes us look better."

In addition to offering provocative articles, **Feed** tries to connect with its audience by inviting readers to also be contributors. When the magazine organized a roundtable of experts to discuss the changing economy, it let readers add their own opinions to the dialog.

"We want to be less of a magazine and more of a community," said Johnson. "We're trying to figure out ways to productively blur the line between our readers' contributions and our contributors. We want to tell our readers they're not just off in the chat room. When you say something good, you should be on the main stage too."

Johnson also has a plan for dealing with the natural resistance to reading lots of text online. He plans to make **Feed's** articles available in Adobe Acrobat format so readers can download and print them.

Love said that's one reason **Rolling Stone** doesn't offer its articles online through its site on CompuServe. "Nobody would want to read 10,000 words on the fall of Apple in that environment," he said. "Your eyes would tire after two screens. You'd want to print it out anyway, so we save you the trouble and print it for you."

All you have to do is buy the magazine. ♦

ONLINE MAGAZINES

Want to see what online magazines are up to? Check out these sites:

Addicted to Noise
(<http://www.addict.com>)

Created by a former **Rolling Stone** editor, ATN offers rock features, profiles and reviews plus ATN's own radio show delivered through RealAudio. Recent interview subjects include Lou Reed, Pearl Jam's Stone Gossard and Oasis.

Mr. ShowBiz
(<http://www.mrshowbiz.com>)

Starwave's online-only magazine covers the same beat as **Entertainment Weekly** and **People**, but with shorter articles and with links to other online material. Regular features include a weekly summary of show business news, interactive lists of top albums and films and the Water Cooler Poll, which recently asked: "Would you care if you found out your favorite movie star was gay?"

PM Zone (<http://popularmechanics.com/homepage.html>)

All those campy drawings of space colonies and household robots from old issues of **Popular Mechanics** are online in PM's Time Machine. So are many of the magazine's practical articles such as car and truck reviews and home improvement ideas. And you can download film clips from PM's video on movie special effects.

Salon
(<http://www.salon1999.com>)

This electronic publication for the literary crowd features articles with provocative titles such as "Racism in the NFL" and "Child-birth: A Barbarian Absurdity That Must be Eliminated."

Texas Monthly
(<http://www.texasmonthly.com>)

Texas chili, Texas writers, Texas chefs and Texas talk. If it's not about Texas, you won't find it on the WWW Ranch. What you will find is a guide to Texas restaurants and night spots, listings of jobs in Texas and a virtual novel created by 30 Texas writers. "Ask a Texan" lets you pose questions online to Texas celebrities.

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MACINTOSH NEWS

by Bill Gram-Reefer

SERIOUS SERIAL SOLUTIONS

Since the advent of the PCI-based Macintosh platforms, it has taken some time for third parties to develop and release high-speed, multi-port serial cards. These plug-in cards, like their older Nubus brethren, allow you to expand your BBS system from the two built-in serial ports on your Macintosh to accommodate 20 or more lines on a single Macintosh, depending upon the number of open expansion slots you have. Creative Solutions Inc. (CSI), of Hanover, MD is well known for its Nubus offerings in the famed Hurdler and Hustler cards, in addition to an external two- and four-port box that lets you add serial connections via the Mac's SCSI port. We hear they are busy working on a PCI device and we'll pass that news along when it comes. But in the meantime, Mac administrators can look into two additional suppliers of PCI-based serial-port cards.

MegaWolf has released its first product, *Fenris*, a multi-port serial expansion card. Suited for use with the Power Macintosh line, you can connect up to 64 serial devices like modems (or digital cameras if you're into that sort of thing) per PCI card. The modular design of Fenris allows for expansion in multiples of 8 ports as required. That's right, one card, 8 to 64 ports. The Fenris supports serial speeds of 115,200 bps per port, with support for Native PowerPC drivers, MacOS and Copland compatibility. The Apple Communication Toolbox is supported as well so you can line everything up with ease. You need System 7.5.2 or later. You get to choose between DB-25 or RJ-45 connectors. Under \$100 per port, each Fenris comes with a 5-year warranty on the hardware and one-year of free software upgrades.

Meanwhile, at MacWorld Expo, KEYSpan, an InnoSys Company, introduced its Smart Serial 6, a six-port serial communications card for Mac OS-based computers that utilize the PCI bus. The Smart Serial 6 employs a 25 MHz Motorola 68360 (QUICC) chip as the processor and communications controller. This takes a great load off your CPU and helps performance and assures better data integrity by relieving the host CPU and infamous Macintosh serial ports themselves from the drudgery of handling mere data throughput. The processor supports an aggregate data rate of 8 Mbps, and through use of a 5933 PCI local bus interface controller from AMCC, provides genuine 32-bit bus transfers.

Costing about \$90 per port, the Smart Serial 6 is equal in cost-per-port to the popular Nubus cards already on the market. The important aspect about the Smart Serial 6 that advanced system operators

will find more than amusing is that it supports many protocols above and beyond RS-232. Additional protocols to be supported include: RS-422, RS-485, V.35, and X.21. The flexibility will get pretty handy as you expand your systems to support higher throughput rates like X.25, SNA, Frame Relay, and other communications technologies.

Supporting Apple's new Open Transport Networking architecture, the cards are for use with the Power Macintosh 7200, 7500, 8500 and 9500 and other Macs supporting the PCI bus. The cards are standard format PCI cards with the 80-pin edge connectors supporting the full PCI 2.0 and 2.1 bus master system with high-speed bursts through bidirectional FIFOs. Ports 1, 2, 3, and 4 support speeds up to 115.2 Kbps, while ports five and 6 tone down to just 57.6 Kbps. Additionally, you can monkey with just ports 1 and 2 to support more exotic transfer protocols, while 3, 4, 5, and 6 do just RS-232. So at least that gives you two ports that you can use for your main feeds with the other four at 57.6 Kbps to support dial-up lines, for example.

After the Mac Expo release, KEYSpan planned to update with Release 1.2 at the February MacWorld Expo in Tokyo. This first update was to include support for Apple's Communication Toolbox. A serial Extension Pack was also to be released in Japan, this enabling the use of protocols beyond RS-232, specifically: RS-422, RS-449, RS-485, V.35, and X.21 serial interfaces. In May, during the Worldwide Apple Developers Conference, KEYSpan hopes to release its Smart Serial 6 Development Kit to communications developers for the creation of special drivers and on-board applications.

In case you were wondering, InnoSys Inc., the parent of KEYSpan, since 1973 has been a leading provider of communications hardware and software to the airline and travel industries. KEYSpan, 3095 Richmond Parkway, Suite 207 Richmond, California; (510) 222-0131 voice; (510) 222-0323 fax; <http://www.keyspace.com> or <mailto:mike@innosys.com>. Creative Solutions Inc., 7509 Connelley Drive, Suite D Hanover, MD 21076; (410) 766-4080 voice; (410) 766-4087 fax; (800) 367-8465 sales. Megawolf can be reached at (203) 562-1243 voice; <http://www.megawolf.com>.

MORE CHEAP TALK

More MacWorld Expo news had Quarterdeck, newest owner of *MacHTTP/WebStar*, talking about its most recent Internet software acquisition, *WebTalk*, a real-time Internet voice chat system for Macintosh.

Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, specializing in connectivity and communications. His Online Services column appears monthly in *MicroTimes*. His amateurish web page can be accessed at <http://worldview-bbs.com>. E-mail Bill at reefer@worldview-bbs.com

WebTalk enables two-way conversations over the Internet and was co-developed by Large and Lernout & Hauspie Speech Products. WebTalk features user-controllable compression/decompression software (a "codec" in telco terminology), that allows users to adjust the voice compression as needed to compensate for poor connections. The codec's adjustable compression rates help improve voice clarity in case of line noise or loss of signal. WebTalk comes with a phone book where you can place frequently called URLs so you can access them easily and place a call with a point and a click. WebTalk also provides a defined space where you can enter your e-mail and web-page information for publication during your calls so the other party can e-mail back to you more easily.

Also in January, VocalTech introduced its own improved **Internet Phone**, expected to ship in March at a price point of just **\$99**. Internet Phone enables users to have computer assisted conversations over the Internet. Internet Phone supports both full- and half-duplex conversations. What this means is, with full duplex you can both talk at the same time. Half-duplex lets just one person talk at a time. "Over." An address book can store users' Internet addresses. Internet Phone can also be used as a helper application with most web browsers for Macintosh. Internet Phone supports Mac TCP version 2.0.6 or higher as well as Open Transport, and works over a LAN, or dial-up connections as low as 14.4 Kbps.

You would think that we could get past this whole idea of calling these sorts of conversations "telephone conversations," especially since no phone is required. Ten bucks and an undetermined increase in market share goes to the first vendor that gets past the telephone analogy and creates a more exciting branding statement. Chat, from Quarterdeck, doesn't cut it either.

Quarterdeck Office Systems, 13160 Mindanao Way, Marina Del Rey, California 90292; (310) 309-3700 voice; <http://www.quarterdeck.com>. VocalTech, (201) 768-9400 voice; (201) 768-8893 fax; <http://www.vocaltech.com>; <mailto:info@vocaltech.com>.

SELL NETCOM WHILE YOU CAN

Netcom's claim that all of its connections are 28.8 Kbps is not exactly true. I

have an old, grandfathered PNC connection and they refuse to upgrade me and thousands like me to 28.8 connections. I became a Netcom customer long before the dweebs even came up with the NetCruiser concept. Reports are the wunderkinds could never figure out how to measure usage of these PNC accounts and that is one of the big reasons they started over from scratch to produce NetCruiser from the ground up so they could bill the bejesus out of the Windows idiots now using it by the hour.

Speaking of **NetCruiser for Macintosh**, hesitantly announced at MacWorld Expo... where is it? Rumors had Netcom officials madly scrambling during the show trying to pull the ads for it. Ha!

Anyways, Netcom couldn't measure PNC account use, meaning I can be on all day and the numb nuts, supposed captains of the God Bless America Information Age, would never know unless they hired yet another brain-dead geek to watch the lights blink all day. No wonder they couldn't get NetCruiser for Macintosh out on time and heaven knows when. With Cyberdog and 10-Mbps IP access via cable coming real soon now, who the heck cares about Netcom and their can't get it to work right user interface anyways?

Netcom wishes we PNC account users would all just drop dead and go away. With such a poor attitude toward long-standing customers, phony-baloney support (See Netcom Ticket #08722), and the inability to ship even the simplest things on time, I'd very seriously consider selling Netcom short, especially since TCI, Pac Bell and AT&T have all announced retail IP service programs. These guys are gonna take such big chunks out of Netcom market share you'll think you're watching Jaws 3D.

EXCLUSIVE CAMPAIGN 96 COVERAGE

It is no secret that this column has given considerable coverage to the rapidly growing "Draft Guy Kawasaki for President" movement. While Guy's electoral exploits have orbited around the Republican presidential primaries and possible Independent connections, it is only fair to give the Democratic presidential primary contenders their due. On this note we see Bill "I-just-wanted-to-be-President" Clinton does

have some challengers within the Democratic Party's big tent. No, we aren't talking former Senator Bill Bradley, nor civil rights champion Jesse Jackson, nor even consumer advocate



Ralph Nader (he bolting the Jackass Party to run on the Green Party ticket). The stiff challenge to President Clinton's renomination comes from none other than **Pat Paulsen**. But wait, Pat's name doesn't appear anywhere on the California Democratic Party Primary sample ballot. The only candidates listed are Clinton and Lyndon LaRouche. Here is Pat Paulsen's response to this injustice in a Boardwatch exclusive:

"Do you believe Bill Jones, our (California) illustrious Secretary of State, would put LaRouche on the ballot over me? [Larouche] can't even vote for himself, a convicted felon! [Jones] said that Clinton and LaRouche were the only Democratic candidates recognized by the national news media. And, I got three times as many votes as LaRouche in New Hampshire. I still cannot believe it. Please do write me in."

Maybe Guy and Pat should talk. In the meantime, you can visit with Pat on the Internet by pointing your browser at <http://www.amdest.com/Pat/pat.html> or <http://www.paulsen.com> or [http://worldview-bbs.com/wisdom.acgi\\$patulsen](http://worldview-bbs.com/wisdom.acgi$patulsen). You can e-mail Pat at <mailto:pp4pres@primenet.com>; snail mail is Paulsen for President, P.O. Box 10 Tujanga, CA 91043; (800) 800-6961 voice. ♦



PUTTING THE NET TO WORK by Durant Imboden

ART ON THE WEB

Last month, this column discussed whether online publishing could save unknown authors from the humiliation of having their masterworks rejected by philistine editors in New York who cared more about their expense accounts than about furthering the cause of literature. The answer appeared to be “no,” at least for authors who hoped to score enough royalties to cover the expense of paper and inkjet cartridges.

In this issue, we'll explore Web opportunities for visual artists. On the surface, at least, painters, sculptors, and photographers would appear to be in a better position than their ASCII-based colleagues for several reasons:

Visual artists typically sell individual works to individual customers. It's as if the buyer were purchasing a manuscript rather than a bound book.

It's easier for a painter, sculptor, or photographer to locate a sympathetic gallery than it is for an author to find a publisher. From the gallery owner's point of view, the risk of showing a new artist's work is fairly minimal. Hanging a few pictures on the wall is certainly cheaper than printing and distributing 5,000 copies of a hardcover novel.

Unlike a self-published book, a self-marketed picture or sculpture isn't tainted by the stigma of “vanity publishing.” Many buyers enjoy the prospect of “discovering” new artists at local art shows — especially if the price is right and the work matches the color scheme of the buyer's living room.

In contrast to authors, whose books may be distributed in bookstores across the country, most artists receive little exposure outside of their own regions. The Web opens up new territory for the unknown artist — literally as well as figuratively.

Scott Fisk, who operates a virtual gallery called *Jackovacs* at <http://www.netm.com/art>, believes in the Web's potential as an environment where artists can earn recognition for their work. “As a graphic designer, I quickly discovered how hard it was to find a place to put my artwork on display,” says Fisk. “So I created Jackovacs to give artists a chance to show off their work worldwide, for free.”

Fisk founded Jackovacs late in 1995, using his employer's Web site to host his artist clients. Fisk charges nothing to post scanned photos of works but is selective in what his online gallery displays.

Fisk admits that displaying works isn't necessarily a path to sales and earnings for artists or the gallery. “Most of our artists post their work to be seen and not to sell,” he concedes.

Paris Art, at <http://www.paris.org/ParisArt>, is another not-for-profit display milieu. The artists and galleries featured in Paris Art are as diverse as the art world itself. With names like Dana Briggs, Peter Klasen, Sotchivko, and Monika Woltering listed among the resident artists, it's clear that Paris Art is no bastion of French cultural nationalism. “The project is not about French artists; it's about artists living in Paris,” Norman Barth explains. “As you can imagine, there are people from all over the world creating in Paris.”

According to Barth, Paris Art is averaging 20,000 accesses a month after seven months of operation. This is modest compared to the 3,000,000 monthly accesses registered by Les Pages de Paris as a whole, but the organizers are pleased with the worldwide attention that their artists and galleries have received.

“We've had e-mail from as far away as Malaysia,” says Barth. “One art dealer in New York has contacted an artist through the project. But selling art online isn't our primary focus-expression, presentation, and documentation of the Paris art world are our main goals.”

The Sculptor's Society of Canada may not be on the Web for profit, but its members are. The SSC, an artists' organization founded in 1928, maintains home pages for some two dozen of its 140 sculptors at <http://www.1global.com/sculpcan>.

The SSC, which also operates an exhibition gallery in Toronto's Exchange Tower, charges \$75 a year for membership. Active members are given free space on the organization's Web site. Morton Katz, an architect and professional sculptor, volunteers his services as Webmaster.

Artplace Inc. takes a different tack, and is an example of a business that could be cloned by ISPs who know the difference between a Titian and a Tintoretto. Doug Simpson, Artplace's owner, rents server space from an Internet service provider in Denison, Texas and sublets it to artists. His virtual gallery's URL is <http://artplace.com>.

Artplace charges \$20 a month for “gallery” rental, plus \$5 a month for e-mail forms or \$15 per month for postal delivery of inquiries. Artists with more than \$25,000 in sales can opt for a straight 10% commission arrangement. Individuals or galleries with their own Web sites can be connected to Artplace for \$5 a month or \$50 per year.

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network. His credentials include published novels, articles, and short stories; fiction editing and staff writing for *Playboy*; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. Mailto: Durant_Imboden_MSN@msn.com on The Microsoft Network or writing@msn.com on the Internet. The author is not an employee or spokesman for Microsoft.

Simpson concedes that sales are "pretty low" on the list of benefits for participating artists. "The major benefit is exposing an artist's body of work to agents, dealers, galleries, or other intermediate services," he says. "At the same time, it gives the direct buyer or collector an opportunity to view and purchase work that these same agencies haven't picked up or are unwilling to advertise. The site also works as a visual newsletter that lets artists show new work to their established clientele. This is much cheaper than mailing full-color photos or brochures."

He adds: "The major drawback is that you lose the high resolution and scale of the work on the Web. But the advantages far outweigh the disadvantages. There are opportunities available through Web exposure that some struggling artists will never have if they try to peddle their wares on their own." Globalization of an artist's reputation is another benefit, according to Simpson. "We're getting responses from artists and galleries in Moscow, Japan, Hawaii, the United Kingdom, and other places. Without galleries that will promote them outside their local areas or regions, artists will achieve national or international exposure only by chance. The Web increases that chance exponentially."



Ruth Kolman Brophy's
"In Moonlight"

Kaleidospace, at <http://kspace.com>, was founded by Jeannie Novak in 1994. Like Artplace, Kaleidospace rents space to artists — but it takes the "online gallery" model another step by offering niceties like 3D or video display of sculptures and nontraditional artworks.

Kaleidospace's services include secure online ordering via a Netsite Commerce Server. The company also accepts conventional forms-based ordering, tele-

phone orders, and fax or mail orders on behalf of artists represented in its galleries. A weekly "Kaleidospeak Chat Room" is intended to keep customers and prospects coming back for the latest new artists, artworks, and promotions.

Not every artist is a joiner, and many visual artists would rather stay independent than rent space in a virtual gallery. One artist who has chosen to create her own Web site is Paulette Jellinek, whose PJ Art Gallery is at <http://www.awa.com/art/pj/paulette.html>.

Jellinek is a Pratt Institute graduate who specializes in abstract paintings and landscapes. Her work has been exhibited in Pennsylvania, California, Israel, and Japan.

"I was initially motivated to put images of my paintings on the Web by the thought that someone, anywhere in the world, even on a remote mountaintop, might see my paintings," she says.

Jellinek is skeptical about the Web's commercial possibilities. "I think the Web will only become a significant force in the marketing of artworks if galleries, museums, and print materials die out and computer-generated art becomes the chief medium of artistic creation." Still, she concedes that the

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Web has its place. "The paintings and collages on a Web site may look different than the originals, and I may prefer the originals, but the virtual reality is a reality too... it's much better than nothing, and maybe it will lead some to see the physical version."

Ruth Kolman Brophy, an Austrian-born artist who now lives in Minnesota, has recently begun publicizing her paintings, sculptures, and children's-book illustrations at <http://www.winter.net.com/~rubro>.

"It seems to me that most creative types are exhibitionists at heart," Brophy says. "We want our work to be noticed, and we want to communicate with our viewers or readers. The process of actually making the work is satisfying, but the next step is to connect. The Web is an opportunity to do this directly. No gallery system, no museum curators, no slide submissions. I'm not sure that any sales will result from this experiment. But then, sales are difficult to achieve no matter where the venue is."

Brophy describes most artists as "dedicated Luddites," adding that "doing a home page on one's own seems tantamount to building one's own car to most

people at this stage. But I'm convinced that this will change in the future. And, of course, there are many artists online already. It's wonderfully exciting to be working in a new medium. It's democratic, anarchic, and chaotic... in other words, a process that's perfect for artists."

For a professional's view of art on the Web, I went to Janine Cirincione of The Microsoft Network's *ArtLine* Forum. Cirincione is a curator and artist who, until recently, was a partner in the Jack Tilton Gallery in New York City's Soho district. She has lectured on art, technology, and new media at universities, museums, and conferences throughout the U.S. and Europe.

"I don't think there will be any serious art commerce on the Web for some time," Cirincione says flatly. "Most art is purchased in galleries and auction houses that offer very personal service. Seeing the art in person is important to most buyers, and having a relationship with a knowledgeable and reputable dealer is a must when it comes to purchasing expensive paintings and sculpture. It's also a great pleasure to sit in

the fancy back room with the glass of Pellegrino. This is such a tradition in art buying, and I don't know why anyone would give it up."

Cirincione believes the Web may serve a similar function to art catalogues. "You can see reproductions of the works you're interested in and get information and prices," she explains. "But you'd still want to come in for a close personal look before buying."

She concludes: "Everyone is scrambling to figure out how to commercialize the Web, and the art world is no exception. But making the Web profitable is relatively elusive for the moment, and I do think there will be additional complications specific to the art world and art market. The art world is one of the last unregulated markets, where many transactions are based on simple handshakes and 'gentlemen's agreements.' Its greatest commodity is the 'object.' It isn't clear how to translate these values into a form that will function well in a system [the Web] that has such broad and public distribution, and where objects play a less significant role." ♦

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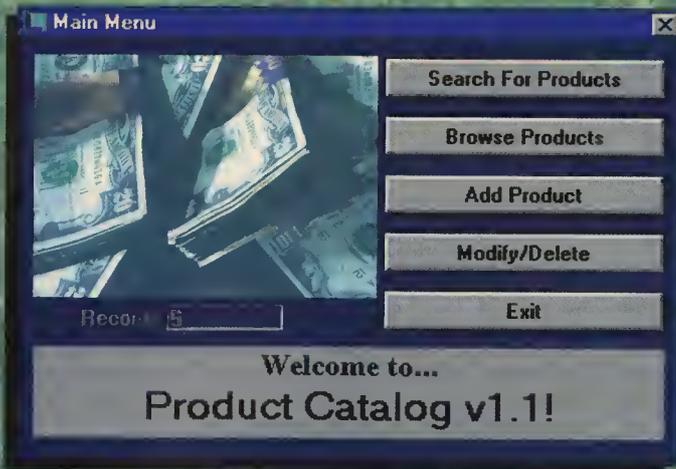
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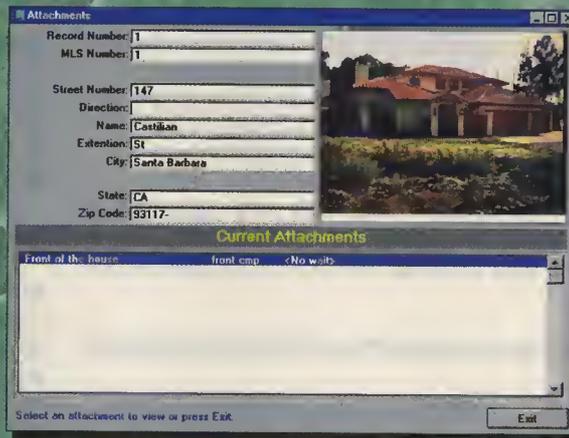
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MICROSOFT GETS SERIOUS

Microsoft and partner UUNET, in an effort to boost their Internet presence throughout the world, are accelerating deployment of their network infrastructure to thirteen countries in addition to the U.S. and Canada. UUNET will also offer Microsoft's Internet Information Server as part of UUNET's Web server hosting business. UUNET will support Microsoft's Internet Explorer as its preferred Internet browser.

Microsoft also finalized an agreement with MCI to help bolster the presence of the Microsoft Network. Besides the new "MSN from MCI" online network and MCI's acceptance of Microsoft's Internet Browser as its corporate standard, MCI will provide Internet World Wide Web hosting services so businesses can build and maintain outposts in cyberspace. Microsoft and MCI will jointly develop and market audio, video, and document conferencing services via MCI's conferencing capabilities. Customers will then be able to order the conferencing services through the Microsoft Network.

Finally, both companies will offer Integrated Services Digital Network (ISDN) services for high-speed dial-up connections over telephone lines. The ISDN services, provided by MCI, can be ordered online through (you guessed it) the Microsoft Network.

For more information about this new partnership, visit MCI's site located at <http://www.mci.com> or Microsoft's site at <http://www.microsoft.com/corpinfo/>

AOL DEVELOPS CONTENT MONITORING FEATURE

The biggest problem with online services is wasting time visiting forums where nothing has changed: no new files, messages, or notices. To help you decide whether to visit a particular forum or not, America Online has licensed First Floor's Smart Catalog technology that lets AOL subscribers monitor their favorite content areas for new and changed information — a custom feature not currently available on any other commercial online service.

By using this feature, you won't have to waste time digging through your favorite forums all by yourself. America Online has already tested the Smart Catalog technology for their GNN Internet service. For more information about First Floor and their Smart Catalog technology, visit their Web site at <http://www.firstfloor.com>.

COMPUSERVE, AMERICA ONLINE AND THE ACLU VS. THE UNITED STATES

CompuServe and America Online have jointly filed a lawsuit challenging the constitutionality of the

Communications Decency Act. Specifically, America Online and CompuServe question the vagueness of the CDA's indecency provision.

The American Civil Liberties Union (ACLU) has already filed a separate lawsuit, seeking a restraining order against the "indecency" provision on the grounds that it criminalizes expression that is protected by the First Amendment.

MOTOROLA SIGNS UP COMPUSERVE, AMERICA ONLINE, AND PRODIGY

Motorola has developed a new family of high-speed data products, called CableComm, which allow users to access online services over cable TV lines at speeds up to 10 Mbps. In an effort to get someone to use CableComm, Motorola has signed an agreement with CompuServe, America Online, and Prodigy (no word on signing up the Microsoft Network, though).

As the speed of phone lines reaches its limits, Motorola hopes that cable TV lines will be able to handle the high speed necessary to deliver multimedia services to online service subscribers. Will cable TV lines be the future of connecting to the Internet? Or is this a dead-end technology that will suck the life out of Motorola and their allies?

DO YOU KNOW WHERE YOUR KIDS ARE ONLINE?

Atif Janjua, a former security guard in Houston, was recently jailed for allegedly attempting to lure teenage boys to have sex with him through an unnamed computer online service. Constable Dick Moore said his office began investigating Janjua after reports that a 15-year-old boy received sexually explicit images of teenage boys through an online service. Police claim Janjua obtained the 15-year-old's telephone number and went to his school to meet him, but the boy was sick that day and had gone home early. Computer files seized at Janjua's apartment indicated that he had corresponded by computer with several other youths, although it's unclear if Janjua had talked or met with any of them. Authorities seized Janjua's personal computer, which they said contained more than 3,000 images of teenage boys in sexually explicit poses. (Perhaps posing in Calvin Klein ads?)

LOVE AND WAR ON AMERICA ONLINE

With nearly half of all marriages failing in this country, it's inevitable that the woes of divorce would spill over into the online world. John Goydan has the dubious honor of being the first man to file for divorce after accusing his wife of carrying on a "virtual" affair with a married man through America Online.

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672 @compuserve.com or bothekat@aol.com or bo_the_cat@msn.com

Goydan claims that his wife, Diane, was exchanging electronic love letters for months with a married man in North Carolina whose e-mail name was "Weasel." One of the e-mail messages that John claims his wife sent to "Weasel" said, "I love you dearly. XXOOXX." In return, the "Weasel" replied, "I gotta tell you that I am one happy guy now and so much at peace again anticipating us. I love you dearly. XXOOXX."

Goydan first discovered his wife's "virtual" affair last October when he caught his wife sending X-rated messages using the couple's home computer. At that time, Diane Goydan promised to break off her "virtual" relationship, but according to John Goydan, the relationship did not end, and his wife continued to correspond with her Internet lover, apparently unaware that her e-mail could be retrieved later.

For three months, John saved various amorous messages and love poems that Diane posted via America Online. John Goydan didn't let his wife know he was on to her, but when she arranged a secret rendezvous with "Weasel" at a bed and breakfast in New Hampshire, John decided he'd had enough and filed for divorce, seeking custody of the couple's two children.

In retaliation, Diane Goydan has filed a countersuit, alleging defamation, invasion of privacy, and violation of state wiretap laws by John Goydan. Diane claims that the America Online account was in her name and that her relationship with "The Weasel" was "romantic daydreams." She also claims that she did not commit adultery because she never had sex with her electronic correspondent.

AMERICA ONLINE HITS 5 MILLION MEMBERS AND GROWING

America Online said its subscriber base has gone up ten-fold in the past two years, and now stands at more than five million members. In addition, the company reported its revenues more than tripled in the three-month period ending December 31, 1995, hitting a record \$249.1 million with income reaching \$10.6 million. A year ago, AOL took a loss in the same quarter after it recorded a \$42.8 million charge.

America Online also claims it's the world's leading Internet provider, processing more than 28 million hits on the World Wide Web and delivering e-mail to 4 million people, half of those messages coming from the Internet. In

addition, AOL members read five million Internet newsgroup messages every day.

AOL also said total hourly use was 77 million hours, with significant growth registered in the Personal Finance, Sports, Games, Kids, and News content areas.

SPEND LESS TIME ON PRODIGY WITH NAVSTAR

Dvorak Development, developers of the popular *NavCIS* program for CompuServe, recently announced *NavStar*, a Windows-based off-line navigator for the Prodigy. By working off-line, *NavStar* drastically cuts online time and makes Prodigy even easier to use.

NavStar supports over 100 Bulletin Boards, E-mail, News, Financial and Weather services on Prodigy, with features like a built-in spell checker, message font, auto-quoting and graphical weather reporting. By using *NavStar*, you can quickly jump to the services you use most, grab the information you need and log off without bothering to use Prodigy's own clumsy communications program.

To learn more about *NavStar*, Prodigy users can jump to **NAVSTAR** on Prodigy, or visit Dvorak's web site at <http://www.dvorak.com>.

H&R BLOCK SPINS OFF COMPUSERVE

H&R Block has spun CompuServe off as a separate division, allowing rabid high-tech investors to buy shares of CompuServe instead of buying shares of H&R Block.

Many H&R Block investors contended that CompuServe's true value was not adequately reflected in the H&R Block stock price, especially compared with rival America Online Inc. While America Online's stock hovers around \$50 a share, H&R Block hovers around \$40 a share. By spinning off CompuServe as a separate company, investors hope that their shares in CompuServe will skyrocket.

THE FUTURE OF MAGAZINE PUBLISHING?

Omni and *Longevity* magazines are going out of print and moving to the World Wide Web, citing increasing paper and postal costs rising by 60 percent and 34 percent respectively. Bob Guccione, founder and chief exec-

utive officer of the two magazines claims that the magazines had been "marginally profitable" during their print history, but hope that the move to electronic publishing will be a more profitable one.

Bob Guccione's *Penthouse* magazine is already on the World Wide Web, which generated more than \$1 million in revenue in 1995. Guccione claims that if the *Penthouse* site charged a penny or a nickel per hit, it could make a substantial income because the site receives three million hits a day. "And you don't have to produce paper, worry about circulation, and pay distributors, wholesalers, and retailers," he said.

He likened the new payment system to pay-per-view television, where Net surfers can buy content on a hit-by-hit basis, instead of paying subscription fees for longer periods of time. Both *Omni* and *Longevity* magazines have been on America Online, but Guccione said if paper costs come down, magazine versions of *Omni* and *Longevity* might return to newsstands and mailboxes.

So is the printed magazine dead and the electronic magazine the wave of the future? For magazines like *Penthouse*, the answer may be yes because a computer screen lets you see an entire centerfold so you can keep both hands free for a change. ♦

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This is analogous to a McDonald's restaurant suddenly faced with 30,000 customers on a particular day. There may in fact be some congestion on the roads leading to the parking lot but there really isn't anything wrong with the roads. And the McDonald's proprietor isn't complaining - he sold ALL his hamburgers. But if you are one of the 30,000 customers, it sure is getting hungry out here.

So there ARE some serious growth issues in Internet infrastructure. They just don't any of them have anything to do with bandwidth.

ACCESS BANDWIDTH

The more in-your-face bandwidth issue is that of access bandwidth. Everyone I talk to believes that most businesses have T1 lines and that most home users have 28.8 kbps dialup links. It isn't so. Most businesses that do have a link to the Internet, perhaps 80% of them, have a 28.8 kbps dialup connection. This is partly a huge disparity between media hype over the Internet, some confusion between the World Wide Web and the Internet, and finally infrastructure difficulties.

The fact is that not all, most, or even a significant number of businesses are actually on the Internet the way we think. Again and again we find that while the web has all the sex and sizzle, what people really need Internet connectivity for is electronic mail - the least sexy but most used service in the game. And for electronic mail, a 28.8 kbps link is actually overkill. You can service relatively huge organizations, with largish local area networks, with virtually immediate speed, with a 28.8 kbps connection to the net. You can even do some modest file transfers using ftp. In fact, you can fill the bill for 99% of what 99% of the businesses in this country might ever need the Internet for with a 28.8 kbps dialup link.

What about all the businesses setting up web sites? Actually, we come across quite a few 28.8 kbps linked web sites if you can believe it. But it isn't really the way to do it. Most businesses who want a web site, want it on the local LAN for use of the employees. This doesn't require any link at all to the Internet. For those who want a publicly accessible site on the Internet, hosting it in

house rarely makes sense. Most Internet Service Providers will host one on their local machines for fairly trivial fees - anywhere from \$50 to \$150 per month and rarely more than that. The businesses can even access the directories containing their HTML documents directly over their 28.8 kbps links, make any changes they like, and still have the web site proper located on a server at the ISP that has excellent T1 or T3 connectivity to the network.

So in spite of all common knowledge and lore to the contrary, the VAST majority of business connections to the Internet are still very low speed. In fact, it may lag home use. People dialing from home want access to the World Wide Web in a pretty big way. Businesses are somewhat less driven to have their entire work force browsing the web all day.

In a world of Terabit demonstrations, how can the vast majority of Internet access be at 28.8 kbps and below? Nothing has changed. The telcos have had the off the shelf technology to put a fiber link to your home for over 10 years. There are several other off the shelf technologies that can deliver about 6 Mbps connections TO your home using the existing copper in the ground with 600-700 kbps return link speeds - most notably Asymmetric Digital Subscriber Loop or ADSL. This is similar to ISDN in that the telco plugs an ADSL card into the Central Office switch frame for your line, and you must purchase an ADSL adapter for your end of it. If universally deployed, most estimates of actually running fiber to every home in America run to the \$400 per subscriber level - less than most of us have spent on modems - or something like ISDN or ADSL

Yet Integrated Services Digital Network (ISDN), which was originally described in 1978, and doesn't even require fiber, still isn't available in most areas. Pacific Bell and Bell Atlantic are doing the best work here, but still PacBell has about 60,000 lines total and Bell Atlantic some 140,000. US Worst and Soutworstern Bell have neither broken 10,000 lines. Why?

Would you believe that the 56 kbps leased lines we mentioned earlier in this article are still a big line of business for the local telephone company? These leased lines are typically priced at \$200 to \$450 per month. The original concept for ISDN was to price it at 1.5 times the price of a Plain Old Telephone

Service line. POTS lines are typically \$20 to \$35 per month for business service. ISDN would then be priced at \$30 to \$70 per month. Why would a business pay \$400 per month for a leased 56 kbps line if they could simply subscribe to an ISDN line at each location and link them whenever they needed them? The answer is they wouldn't. Introduction of any of these technologies immediately cannibalizes a significant line of business for the telephone companies. And they have never seen any indication of a huge consumer market for ISDN or other data products to replace it.

This all arises because the price of the legacy 56 kbps service never had any relationship whatsoever to the cost to deliver it. The telcos were basically charging for air and getting it - with the full faith and assurance of the U.S. Government, along with each state Public Utilities Commission, that it was a GOOD deal for the public.

This is actually WORSE than I paint it. In most areas, the technological difference between a 1.544 Mbps T1 leased line and a 64 kbps ISDN line is essentially nothing. In some Ameritech installations, they actually used the T1 card at the central office and switched 23 of the channels off. It reminds me of the days in the early '80's when Southwestern Bell used to charge a couple of bucks for touch tone service when every single line in the area already had it installed and turned on. When it became "legal" for you to plug your own touch tone phone into the wall jack, many were surprised at how quickly the telco changed their service to touch tone. It almost seemed like you could just plug one in and it worked.

So ISDN is simply unavailable in many areas, priced at \$65 per month and up in others, and there hasn't been a big panic among telcos to do otherwise.

So for many years, we were forced to rely on telephone companies to provide the infrastructure to communicate, while the extant legal and economic structure maintained every possible disincentive for them to improve it. The result? No universally deployed improvement to the telephone system at all in the past 15 years beyond completion of the deployment of touch tone telephone service - just completed two years ago. Telephone companies have been discussing the addition of three keys to the touch tone keypad for the

past eight years that I'm aware of. It apparently simply can't be done.

Fortunately, there is hope on the horizon. In a 1988 editorial, we noted that this situation would never improve until we broke the local loop monopolies. I recall I noted two things at the time. First, we should let anyone with a 1964 Chevy pickup truck and a rusty pair of pliers BE a phone company if they wanted to. And second, I predicted the end of metered per-minute charges for long distance service.

With the Telecommunications Act of 1996, the first may become true. There are a lot of issues surrounding interconnections, co-location, and telephone number portability. Frankly, this is NOT the year I would want to be working in the FCC offices. Congress doesn't HAVE enough money to make this an easy task. But it marks an historic change in direction toward competition in the local loop. AT&T has already filed to offer local telephone service in all 50 states. MCI is already fighting with existing local RBOC's charging them with dragging their feet on interconnection issues. And the RBOCs are already not only pulling every crappy trick in the book to slow the trend, but at the same time trying to work into each other's territories. Southwestern Bell has even made a \$24 billion bid for Pacific Telesis. An industry eating itself, it will likely get ugly before it matures into a thing of beauty, but it is happening and if the first 30 days after the signing of the bill are any indication, it is happening very fast.

So with regards to final mile ACCESS BANDWIDTH, I look for cable tv companies, long distance telephone companies, local telephone companies, and even brazen entrepreneurs in pickup trucks to start knocking on your door offering everything up to and including 155 Mbps Synchronous Optical Network (SONET) connections at \$30 per month before it is all over. By Christmas? Not likely. But it will happen. And bandwidth across the board will increase by at least one order of magnitude every two years.

	Backbone	Home Users
1996	45-155 Mbps	28.8 kbps
1998	500 Mbps	288 kbps
2000	5 Gbps	2.88 Mbps
2002	50 Gbps	28.8 Mbps
2005	500 Gbps	288 Mbps
2007	5 Tbps	2.88 Gbps

As you can see, about the year 2005, things would be moving along pretty nicely. Also, about the year 2000, video over the net - very high quality video along the lines of high-definition television-start to look very real. I'm seeing visions of digitized versions of servers with every movie ever made available for a buck - with huge search engines to help you find the specific scene in the specific movie where the term "make my day" first appeared.

The ultimate irony, for me personally, is that the Internet grew from the grassroots as a workaround to bypass the telephone companies. And voice over the Internet will kill the concept of per-minute charges for long distance telephone service.

The bottom line message is that bandwidth isn't really an issue. But it will require some time to become ubiquitous and satisfying at an attractive price. Develop video over the Internet, audio over the Internet, huge graphics, or whatever your mind can conceive and believe. The bandwidth is there when sufficient numbers of people are willing to demand it, pay an additional modest sum to get it, and have a use for it. And for useful access to it, competition in the local loop is a gotta have. The year 1996 is when we started to get it.

FINALLY - A WORD ON CAPACITY

We earlier mentioned the difference between bandwidth and capacity. Bandwidth is essentially the instantaneous burst speed of data down the pipe and is linked to the "size" of the pipe. But capacity is more a measure of quantity of data handled with obvious links to the number of users online.

You CAN increase capacity by increasing bandwidth. But it isn't precisely linear and isn't the most efficient way to do it. By way of example, many Internet Service Providers start out with a T1 line. As their needs grow, you might expect them to graduate to a T3 link. But more typically, they simply add T1 lines as needed. The upgrade is more affordable, more incremental, and works just as well to increase capacity. But burst bandwidth never increases this way.

Similarly, the Internet, which did offer one backbone, now consists of at least 18 national backbone operators. At whatever speed, this is a fairly signifi-

cant increase in capacity. But beyond this, a statistically significant percentage of Internet traffic doesn't transit the backbones at all.

Each time a small office or company leases a line from a telephone company to reach an Internet Service Provider port, they have just extended the Internet by precisely that number of linear feet. In the Denver area, for example, there are probably today as many linear feet of "Internet" within this one metropolitan area, as there are in any of the national backbone structures spanning the continent. There are several thousand nodes with 15 to 25 mile links here as opposed to a national backbone of 20 nodes each linking distances of 300 to 3000 miles. This is inherent in hierarchical structures. Simply put, it's why trees grow leaves on the ends of the branches. You can have more leaves that way.

So despite the fact that demand for Internet connections is impressive, capacity has already, is, and will continue to expand as well. The pressure points and breakdown areas appear to be entirely server located - Domain Name Servers, web servers, mail servers, all seem to be operating at the limits and the Internet is at this point barely operable - it shakes, rattles and rolls down the road like a 1954 Roadmaster at 90 miles an hour. It's all hanging together by a thread. But the bandwidth and capacity of the links aren't really an issue, nor are they what cause the perception that the Internet is clunky and broken. More importantly, they are not appropriate concerns retarding the deployment of sound, video, or whatever other application you can conceive.

Jack Rickard
Editor Rotundus

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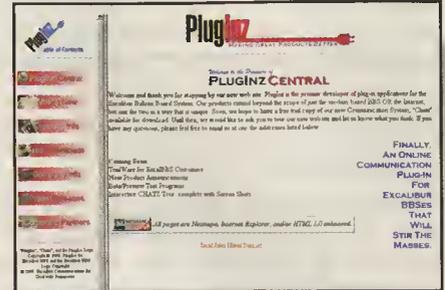
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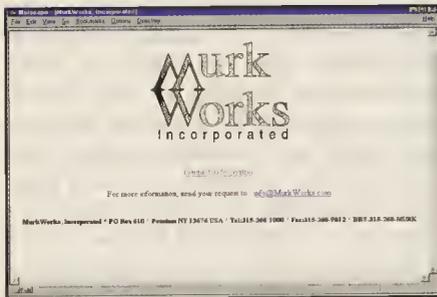
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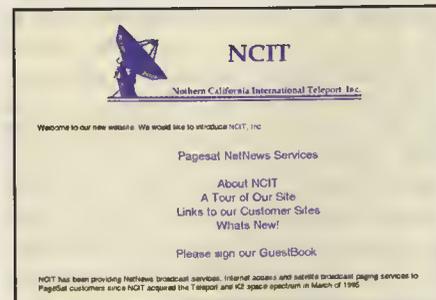
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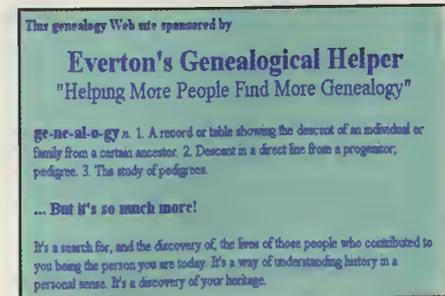
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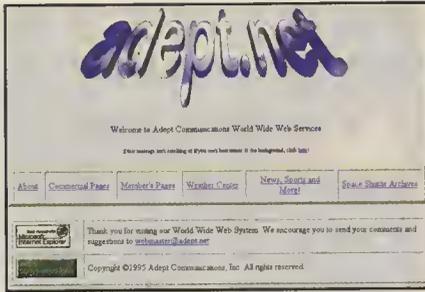
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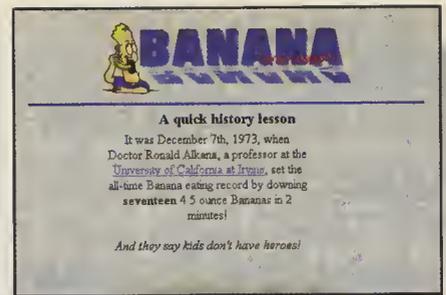
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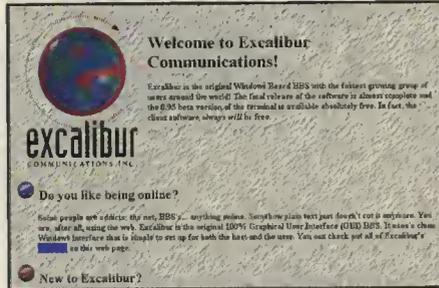
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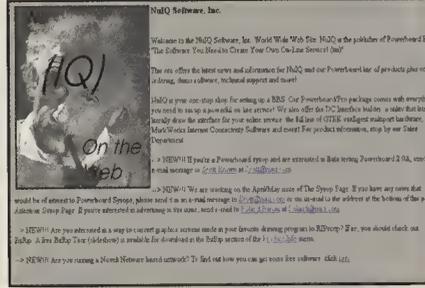
<http://www.banana.com>

Banana Programming: Developers of BananaCom, widely considered the world's easiest-to-use terminal program. Operators of the Montana Banana BBS.



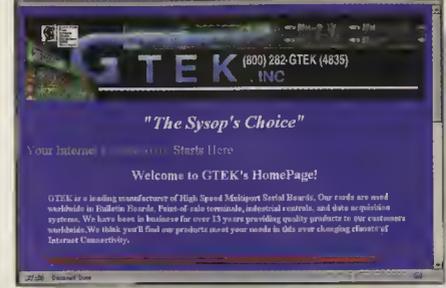
<http://www.excalbbs.com>

Excalibur is the original Windows Based BBS and now has full internet connectivity. All it takes is a simple internet connection and you can wire your BBS to the world. See why Windows Magazine named Excalibur BBS to its 1995 Win 100.



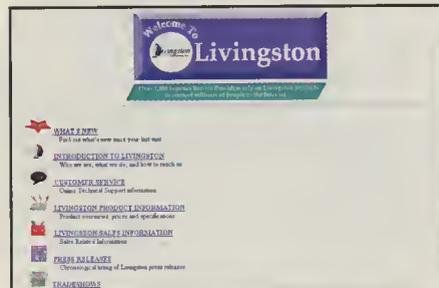
<http://www.nuiq.com>

NuIQ Software, Inc.: Makers of "Software to Create your own on-line service(tm)," NuIQ offers the Powerboard BBS software package. If you're looking for a complete package you can get up and running fast, check out our software.



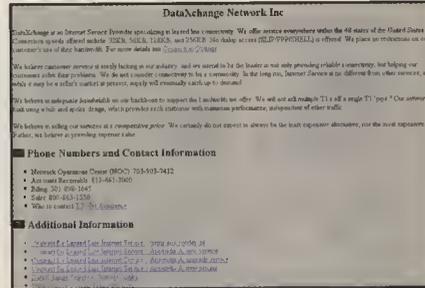
<http://www.gtek.com>

GTEK is the leading manufacturer of High Speed Multiport Serial Boards. Our cards are used worldwide in Bulletin Boards and data acquisition systems. We have been in business for over 13 years providing quality products to our customers worldwide.



<http://www.livingston.com>

Livingston: Over 1,500 Internet Service Providers rely on Livingston products to connect millions of people to the Internet.



<http://www.dx.net>

DataXchange provides dedicated leased line service (56Kb, fractional T1 and T1) in the 48 contiguous states. News (usegroups), DNS services, and award winning 24hr. customer service are included.



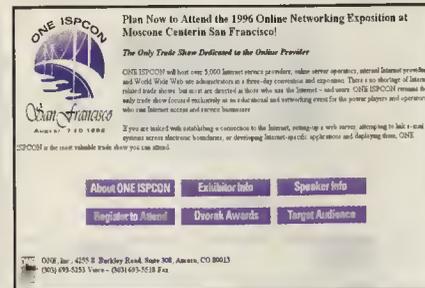
<http://www.kirbynet.com>

Kirby Information Systems, Inc.: High Quality Internet Service Provider offers total & unlimited access at value price to South-Western CT also WebPage Development and Computer Consulting, Networking and Repair Services.



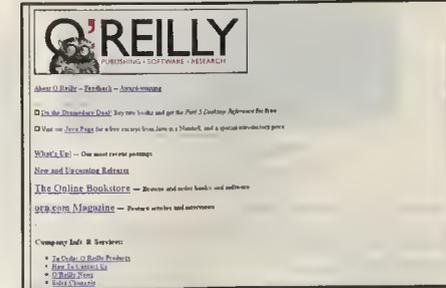
<http://nmol.com>

ProDesign: Specializing in professional business applications and custom software development for the Worldgroup and Major BBS platforms.



<http://www.ispccon.com>

Online Networking Expositions, Inc. (ONE, Inc.) Since 1991, has been responsible for all logistics and management of ONE BBSCON. The 1996 convention and trade show has been renamed ONE ISPCON, and will host over 5000 ISP's, Online Service Operators and WWW site administrators. The 1996 show will be held in San Francisco, Aug. 7-10, 1996.



<http://www.ora.com>

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ONE-PAGE RESEARCH LINKS

by David Hakala

My browser's bookmark file is a mess; dozens of bookmarks to sundry research tools and I can never keep them neatly organized in folders. The **Research-It!** page at <http://www.iTools.com/research-it> features one-stop access to dictionaries, a thesaurus, acronym finders, language translators, maps, zip code directories, 800 numbers, and more. **Bartlett's Quotations** and the **King James Bible** are a click away. I can translate words from English to French to Japanese and back again – even conjugate French verbs. Anagrams – words rearranged to form new words – are easy. “Microsoft” equals “Foci Storm,” “Comfort Is” and “Cost From I,” for example. Browsable

maps of the U. S., Canada and the world at large provide different perspectives on physical and Internet geography. Three up-to-date area code and ZIP code directories are available, plus AT&T's 1-800 directory. Financial data sources include stock ticker symbols, currency exchange rates and stock quotes. I can look up US Postal Service rates and track a Federal Express or United Parcel Service package on one screen.

Research-It! is part of the iTools collection, which includes the FindIt! and PromoteIt! pages linked to the Research-It! site. Find-It! combines search engines for Web, newsgroup and shareware libraries. PromoteIt! offers one-form submission of your Web site description to dozens of search engines and “page of links” sites. All in all, a most useful bookmark! ♦

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DIRECT DIAL

by David Hakala

WINDOWS ONLINE – HARD WORK PAYS OFF

David Hakala first appeared in *Boardwatch* in March, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at <mailto:david.hakala@boardwatch.com> or at (303)973-6038.

Frank Mahaney picked a winner in November, 1990, when he started the *Windows OnLine BBS* at (510)736-8343 (Danville, California). As I wrote in our November, 1991, issue, “Windows has created a whole new genre in BBSland. Frank Mahaney and company are doing a fine job of collecting, sifting and organizing this wave of ‘Windows stuff.’” The wave has become a tsunami, and WOL has ridden it to well-earned success.

Five years ago, WOL sported 1,300 Windows files whose descriptions filled a 500 Kb compressed file list. Today the entire WOL collection includes 100,000 files; the compressed file list is 6.8 megabytes long! One reason for the huge file list – and WOL’s success – is that most file descriptions are unusually detailed, allowing precise and complex search strategies. WOL also offers DOS and OS/2 files, including fonts, clipart and other graphic files.

To help members cope with this immense database, WOL offers a Custom List option that lets a user select some of the 500 file directories, choose keywords and specify a cutoff date for new files. The door program then assembles a customized file list and compresses it for downloading. There are also prepackaged file lists for DOS apps, Windows 3.x apps, fonts and other broad categories.

Download demand is heavy on this megalibrary, and WOL stays abreast of it with 26 dial-up lines sporting US Robotics 33.6 Kbps “v.34bis” modems.



**Frank Mahaney,
Sysop and E-Publisher**

The system is also accessible via telnet: //199.3.100.146 – though that IP number will change in the coming months as Windows OnLine changes ISPs from Concentric Network to another vendor.

In July, 1995, WOL added SLIP/PPP service for its BBS members. The direct Internet connections were free of charge during a six-month shakedown

period. In January of 1996, WOL ditched its traditional BBS pricing scheme in favor of a bundled BBS/Internet program priced at **\$9.95** per month for unlimited access to the Internet and one of the biggest, best maintained file libraries on the Net or off.

Mahaney's thoroughness is also reflected in the Internet access software package WOL provides. It's one of the few truly "self installing" kits I've seen, requiring only the barest input from the user (access phone number and IP address for SLIP access, not even an IP address for PPP access). Winsock scripts for automated SLIP or PPP connections are available in Win 3.x or 95 flavors. Even manual logins are made easy, with four options at WOL's main menu to select a SLIP, PPP, normal PC Board or ROBO/ICOM mode.

The last is an unattended-update program that logs on, grabs new mail and messages from specified conferences, downloads a user-defined list of new files and logs off.

WOL has "about 2,500 paid members and a total of 7,000 users," says Mahaney. "90% of the interest from WOL callers, on the BBS, is for files and e-mail. Not conference

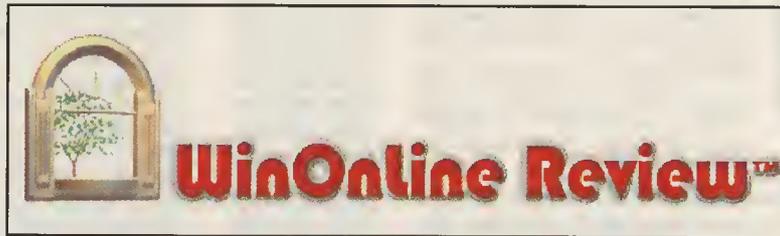
mail." That observation leads Mahaney to consider dropping the 2,000 RIME, INTELEC, SMARTNET and ILINK echomail conferences WOL maintains (at considerable effort) in favor of 15,000 USENET newsgroups.

WOL also has a web site at <http://www.wol.cris.com> (again, subject to change). The Web site devotes a page to the

BBS, but it is mainly a showcase and download archive for the Windows OnLine Review (WOLR), a stunning multimedia e-zine devoted to Windows applications and users. Each month, WOLR's freelance writers review Windows shareware and commercial apps, opine humorous and ponderous thoughts on cyberspace,

and generally provide an excellent read. You can download back issues and a cumulative index from WOL's web site.

In 1991, I wrote, "Employing professional writers to keep members abreast of current events in the Windows world is a unique and valuable twist. The scope, currency and quality of (WOL's) shareware libraries is outstanding. This system will do very well." It's always gratifying to be right, and to see hardworking people who offer uncompromising quality service reap their just rewards. ♦



**Windows OnLine Review:
World Class Multimedia E-Zine**



148 Occult and



Phillip Hansford has operated the Mysteria BBS in Tujunga, California, since 1986. The two-node Maximus system at (818) 353-8891 isn't a commercial venture; Hansford modestly asks callers to donate \$6 for 6 months worth of access (2-1/4 hours per

day), including FTP, telnet and Finger Internet services. Mysteria is a social board sporting 92 echomail conferences, with special emphasis on occult and metaphysical topics: Zen Buddhism, Odinism, Wicca and pagan rites, atheism and other controversial subjects. UFOlogy and conspiracy theories also flourish at Mysteria. We found a text file describing "the ritual use of peyote."

Hansford is quietly curious about life, the Universe and everything - including the Internet. His Web site at <http://www.ktb.net/~phil> is a humble but informative affair, erected because he "just wanted to see how this works." The site offers links to other Web sites dealing with astral projection, altered states of consciousness, the Cabala, alchemy, voodoo and so on.

Hansford maintains a list of North American BBSs dealing with these and other occult and metaphysical topics, updated once a month. Following is the March 1, 1996, edition. You can download the latest list from the Mysteria BBS or Hansford's Web site; by sending an empty Internet e-mail message to <mailto:list@mysteria.com> or via the Fidonet File Request service, file name **OCCULT**. Updates and additions to the list may be sent to Phil Hansford at the BBS; <mailto:phil.hansford@mysteria.com> or Fidonet netmail to 1:102/943.

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(205) 270-8489 Montgomery Forbidden Realm
(205) 277-3882 Montgomery Idea Board

ARIZONA

(602) 482-1851 Phoenix Rock Beyond the Billow
(602) 982-3578 Mesa Rose Cross/1

ARKANSAS

(501) 574-1124 Camden Redbeard's Place
(501) 646-5812 Ft. Smith Rainbow Connection

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(408) 847-7910 Gilroy UFO BBS
(415) 512-9423 San Francisco CyberNET
(415) 927-2435 Mill Valley Citizen's Intel. Acc.
(510) 261-6567 Oakland Sir James
(510) 524-3649 Albany PolySak Project
(510) 886-9393 San Leandro Castle Anthrax
(916) 729-0304 Sacramento Northern Lights
(916) 944-2257 Sacramento My Stars

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(310) 421-7056 Lakewood Echos of Enchantments
(310) 545-5611 Manhattan Beach Ursa Major II
(310) 823-3609 Los Angeles Compu-Net
(310) 944-2327 Whittier Mega-Rom
(619) 364-0033 Yucca Valley Satsang

(619) 447-5010
(619) 721-1828
(619) 747-4048
(818) 240-0157
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(818) 353-8761
(818) 700-9591
(818) 753-0326
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(904) 383-0907
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N. Hollywood Sacred Spaces [9pm-6am
Pacoima UFO Magazine BBS
Van Nuys Circle of Light
Rubidoux New Age Connection
Pomona Twilight Zone
Pomona Witch's Cottage

Denver Rain Forrest

Denver World Peace

Colorado Sprgs Crystal Cave

Colorado Sprgs Celestial Light

Colorado Sprgs Operation Insanity

Ft. Lauderdale Summerland

Hollywood Pagan's Way

Titusville SS Explorer

Rockledge Sojourner's Realm

Tampa Beyond the Rainbow

Mount Plymouth Gaia Hypothesis

Jacksonville Topcat

Doraville Gray Area

Atlanta Paradigm

Lawrenceville Star PIN

Albany Inner Life

Centerville Mother's Kitchen

Kauai Kauai-1

Chicago Krishna Yoga Foundation

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Chesterfield Astralite Productions

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Bossier City Burning Times J

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(201) 434-3694 Jersey City BaphoNet
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(304) 429-1496 Huntington Field of Dreams
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(715) 362-3895 Rineland Old Frog
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DVORAK ONLINE

by John C. Dvorak

NAGWARE VS CRIPPLEWARE AND THOUGHTS ABOUT THE NET

Many of you are aware of a small development group in Denver called Dvorak Development. Essentially over the past few years they've perfected offline reader technology, working mostly with CompuServe and more recently with Prodigy. This all leads to the Newsgroup OLR being alpha tested currently. You may want to find out more and get samples from <http://www.dvorak.com>. I'd advise any newsgroup junkie to get on the beta list for OUI — a killer product if I do say so myself. But enough plug-olas.

An issue came up regarding how to deal with having someone beta test a product and then getting them to upgrade to a real version. It's an argument I have with the Dvorak CEO and with just about everyone who tries to make this transition. Here are my thoughts for you out there trying to sell shareware or sampleware or betaware or whatever.

There are a number of options generally in play. They are all given the various -ware suffixes. Crippleware, nagware, etc. I have mixed feelings about these techniques and believe that each has its place. I've been using Ray Gwinn's OS/2 shareware Com port program for about a year and never get around to either plugging it (it's great!) or calling the guy to get a real copy. The shareware version he sent me (gee, thanks Ray!) is nagware. It works but I have to endure a message along with a 30-second-timer which counts down during boot. This time waster is done to encourage people to sign up and pay Ray. As annoying as it is I prefer it to the time-based alternatives where the software suddenly drops dead and is unusable. A variation on this theme uses a counter which counts the number of times you've used the software — then kills it after a certain number of uses.

The timer-till-death software can usually be re-installed to reset the timer and most of the time you can get the time-based drop dead software to load by changing the clock date and time on your machine. But it's a pain. I personally find the drop-dead software to be more annoying than nagware. Situations occur where you have a machine at a remote site and you have to use the software for something important. You didn't realize it had died and you go to the site and find yourself out of luck. This software can only be dubbed inconsiderateware. I think that a potential customer shouldn't be hung out to dry. If anyone out there thinks this endears the customer to your brand — think again.

Now nagware has its detractors. The detractors are encouraged to complain by weird stunts like the one

pointed out to me by former Association for Shareware Professionals, Rob Rosenberger. He writes, "A shareware author has devised an interesting new technique to nag users for money. He modifies the boot record (!) so it displays a please-register message every time the computer boots up. A user doesn't even have to use the program to get this guy's nag screen! Thought you'd find it interesting." Eeeeh! I really don't like the idea of a boot record being messed with. I can see how some complex customized boot manager could be ruined by this technique rendering the computer useless.

Let's move on to crippleware, another bone of contention. Crippleware is typically a form of sampleware or demoware or even shareware that is incomplete. Something has been disabled. You hear things such as "It's fully functional except for the fact that you can't save or load a file or print." In other words, useless. Sometimes it has limited use. "Yes the database is fully functional but can only handle three records." It's amazing to me how often this kind of stuff is sent to reviewers. Many software companies are fearful that a reviewer might actually take a liking to a program and use it permanently. It seems to me as if that's exactly who you want to seed with functional copies: guys who use it as a standard of comparison. But you'd be surprised how many nickel-and-dime mentalities see it as a lost sale! As if a reviewer ever buys anything. I try to make it clear to companies that crippleware should never be shipped for review. It's typically compiled separately from the shipped commercial product and each different recompile of any code with such changes can create bugs not present in the commercial code. I won't look at the stuff.

Probably the most traditional form of shareware can now be described as guiltware. You don't nag the user with a locked up screen. You simply run a guilt trip on them suggesting that if they like the product so much they really should pay for it. A counter here can help. "You've used this product 1095 times! Please register." Many times guiltware degenerates into beggarware or, worse, thugware. Beggarware send messages begging the user to pay. A variation of this is whineware where the software sends whining messages. Thugware is the software that threatens the user with a curse or lectures the user on and on about how the user should pay (or else!).

While the days of plain vanilla shareware seem over, there is still a huge market for inexpensive solutions. Shareware does have to offer something that compares favorably (or is even better) than commercial products selling at CompUSA. At the lowest end it should obviously be better than freeware or public domain products. With the emergence of Java as the

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "Inside Track" column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*. John can be reached at <mailto:dvorak@aol.com>

programming language *du jour* we'll see a flood of freeware which will establish a low-end by which shareware and commercial packages must be compared. I don't, for a minute, think that Java is going to revolutionize anything. When you hear it chatted up you hear the *deja vu* chit-chat of the early 1980's. There is a lot of idealism and wishful-thinking surrounding Java. In fact it's just a new road for shareware. And that means we can expect the same cycle to begin again. It starts with idealism (freeware) and the emergence of shareware. I suspect it will be called something new like voluntary fee Javaware or some such thing. It will eventually evolve into crippleware, nagware and all the rest of it — but with new names. Look for Expirationware, Renewalware and a host of new names. Shareware authors could do worse than look at their own history and hop over to the Internet side of the street and reinvent the wheel with Java and sell it as some new idea.

A SUMMARY THOUGHT

I made my points about shareware but should mention some other thoughts and observations about the online situation in

DVORAK'S RECIPE NOOK

The Great Caesar's Salad Debate

This debate is actually over a \$100 sucker bet that I fell prey to with Gateway2000 executive David Prais, a guy with a stranglehold on gourmet trivia. It was over whether Caesar salad was actually invented in Tijuana by Caesar Cardini in the 1920s. Not being a fan of old-fashioned salads this story eluded me as I made the bet with Prais who had obviously heard the story. It just seemed too dumb to be true. I later found it easy to document the tale — much to my chagrin.

Cardini was an Italian-immigrant restaurateur, who, supposedly on the night of July 4, 1924, concocted the recipe in an emergency. By the way, many recipes caught in the folklore loop seem to be concocted "out of an emergency." Cobb, for example, is another with a similar history. Anyway, the restaurant was packed and people wanted something and he threw together the salad and named it after himself — Caesar. A few months later the salad, now on the menu for some unknown reason, was discovered by some Hollywood stars slumming in TJ and their raves made it the legendary super-salad it is today. It's just too corny to be anything but an embellishment of reality.

Cardini essentially took some local romaine lettuce and threw on it some lemon juice, olive oil (garlic flavored), parmesan cheese, a raw egg, Worcestershire sauce and croutons. In fact, this is not that weird a recipe except for the Worcestershire sauce. Many people are aghast at the raw egg, but this was a fairly common ingredient in salads around the turn of the century. It later transgressed into mayonnaise (which I discussed in regard to salads a few months ago) and has mostly disappeared from today's salad dressings.

You should note that the original recipe for Caesar salad does not contain anchovies. Because of this lack I am suspicious of this recipe. Few recipes for this salad are without anchovies, yet the "original" does have them. Maybe the readers can help me with whatever folklore they can uncover. One source has it that Alex Cardini, Caesar's brother said he served

general. The Internet people coming into the scene of late have no notion that nothing going on is that new. It's just finally found itself. Those of you with plenty of experience have a huge advantage if you realize that the Internet and the Web is no more a fad than talking motion pictures were when invented. Those who recognized the transition for what it was were the ones who profited.

Too many of us in the BBS community have failed to quickly realize that for all practical purposes the BBS as we knew it a decade ago is as dead as silent movies. Everything is the Web and there is no time to waste making a transition. Jack Rickard has been doing more than hinting about this shift, yet far too many BBS operators have sat still watching their numbers decline while a kid with a Web server takes away their customers. The Web is the next iteration of the BBS scene. But like the shareware issue the name has changed and newbies are crawling all over the place. And, yes, some of the newbies got in early and are gloating over their supposed insights. So what? Online experience is online experience and everything everyone learned in the traditional BBS community can be used once you jump in. My advice: jump. ♦

what he called an "aviator salad" in the Italian Air Force with similar ingredients as Caesar's. He passed the recipe on to Caesar. His recipe included anchovies. It's possible that Caesar, not having anchovies, substituted the Worcestershire sauce, which has anchovies as an ingredient. But how then did anchovies get back into the recipe later if the invention never had them? And except for the Worcestershire, the dressing was not that unusual for its day.

Other references go back to 1918, indicating the recipe may have been invented earlier and knocked-off by Caesar. The most interesting is a story that floated around that the exact Caesar salad recipe, anchovies and all, was being used in a Balboa/San Diego restaurant just before it was introduced by Cardini. Until I can prove that, I'm out \$100.

Caesar Salad (typical)

Romaine Lettuce	Worcestershire Sauce
Olive Oil	Raw Egg
Fresh Garlic	Real Parmesan Cheese
Pepper	Croutons
Salt	Anchovies (optional)
Lemon Juice	

To be done right this should be prepared with an audience at the table. Chop up the hearts of a romaine lettuce and put them in a wooden bowl that has been rubbed with garlic and lightly salted. Drip on some top quality olive oil and the juice of two lemons. You may want to squeeze the lemons right on the spot. Crack an egg over the lettuce. Wash the egg first to minimize the possibility of salmonella. Toss thoroughly to blend the egg and oil. Shake some Worcestershire into the blend as you toss. Add a tablespoon or more of parmesan cheese (or grate right on the spot). Toss again. Grind in some pepper and throw in the croutons and anchovies. Give a final toss and serve.

As the guests eat the salad read them this column.

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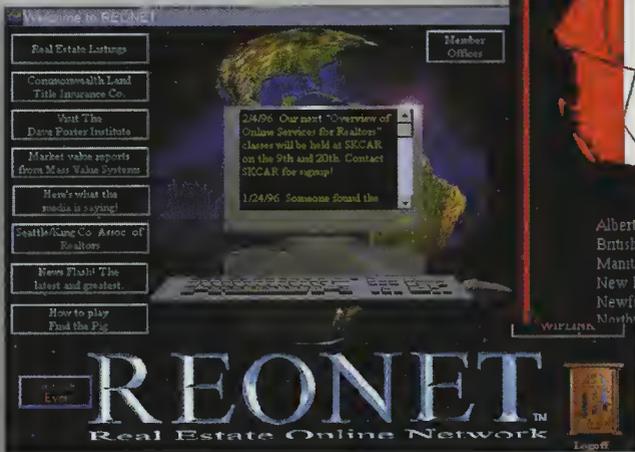
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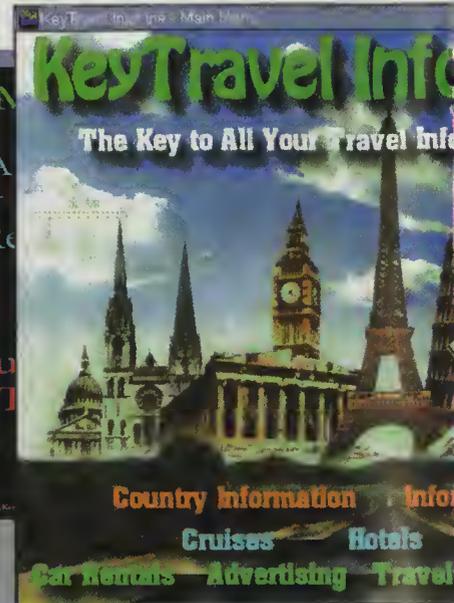


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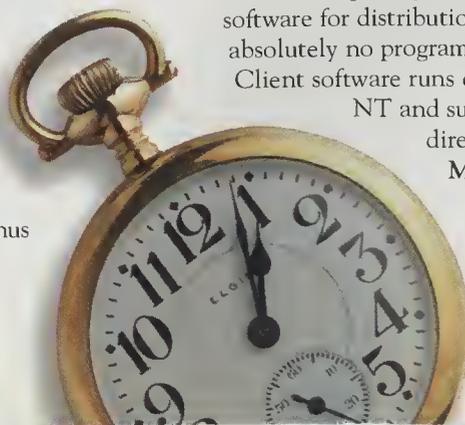
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Success as an ISP

Materials Required: MINDWIRE NT™ and the IPAD™



MINDWIRE NT

Online Gaming

▶ COMPLETE SCALABILITY

MINDWIRE NT Server is a completely scalable, 32-bit, multithreaded NT service. It uses genuine operating system-level threads to support hundreds of simultaneous users. MINDWIRE NT also supports MS SQL Server as its back-end database.

▶ COMPREHENSIVE SOFTWARE DEVELOPMENT KIT (SDK)

For fast development of new client applications, the MINDWIRE NT Software Development Kit includes an Internet OCX which makes MINDWIRE programming as easy as click and drag. MINDWIRE NT also supports existing development tools such as Visual Basic, Delphi and Visual C++, eliminating the learning curve to understand a new programming language.

▶ IPAD SUPPORT

MINDWIRE NT includes full support for eSoft's Internet Protocol Adapter (IPAD). The IPAD is a single device that integrates all of the necessary components for a full Internet presence, including a router, terminal server, and a suite of Internet clients and servers. Its simplicity allows users to successfully install and operate an Internet site without specialized expertise.



[Think it Real.]



Tel ▶ (805) 961 8700

E-Mail ▶ sales@durand.com

Web ▶ http://www.durand.com



Call us today at (805) 961-8700 x201
and request your copy of the ISP Checklist. Its an
easy to follow brochure of everything you need to
get up and running.

Internet.

The Web is fine if you just want to display your home page. But what good is telling the world about yourself if the world can't talk back? Suddenly the so-called superhighway feels more like a one-way street.

Interact.

Excalibur, the first graphical online communications server for Windows™, puts you in the fast lane with more control, more graphics power and



more places to go. As the Administrator, you get the *enhanced host side security* and interactivity of your own online service,

while your users get the browsing ease of our free *winsock compliant Internet terminal*.

And with third-party plug-ins, the possibilities are endless. You can even become your own Internet Service Provider!

Excalibur is completely self-

contained, providing a bi-directional protocol, E-mail, multiple



file and message bases, chatting, previewing, uploading and downloading. All over the Net and to dial-in users. *All at unmatched speed.*

Hundreds of Excalibur online servers are sitting on the Internet, just waiting

for you to explore them with our *free terminal software*.

Isn't it time to get interactive? Modem in to Excalibur today for an online demonstration: 918.496.8113. Or call toll-free: 800.392.2522.



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