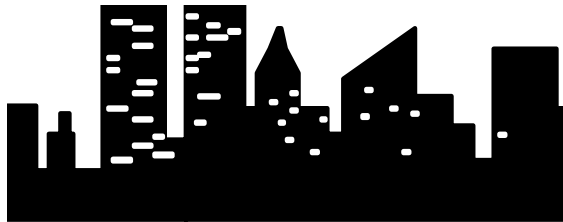


Windo Watch



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Because of its size, the many images, we have placed Herb Chong's latest article Behind the Scenes: Creating Computer Art in Part B of this issue. WWIN210.PDF

Happy Chanukah.....



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Merry Xmas

Have a Wonderful New Year!

The *WindoWatch* Editorial Staff

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The Editor's Soapbox

More on Privacy!

We've talked about violations of privacy as well as questions of who, if anyone, should legally be able to access private information belonging to thee and me. We have not yet discussed information which has been accidentally made public. If one were paranoid one could call a lawyer, run a full page advertisement, organize a boycott and generally create a stink!.

Can't happen you say? Well friends, it did and to me!

I was doing a routine search to make sure that earlier links had been corrected leading to our new page. Imagine my chagrin when I found personal information about my business affairs available for anyone to snag. This was information I had provided online to a well known and respected magazine in order to receive their free subscription. You know the deal! In order to receive the publication you must provided them with information about you and your business. How it happened to be made available to the bot making a routine run is not so obvious given the assurance of a secure server and the dubious unbroken gold key of my browser. Indeed!

Take a look at my piece [Searching for the Middle Ground](#) in this issue of *WindoWatch* where we talk about invasions of privacy that seem to be calculated and I believe quite dangerous. My good friend Dan Christle takes a more benign view in his [Cookies in the Oven](#), this issue as well.

We have another pair of articles of a more historical bent. The notion that the conceptual framework of the computer had been thought out well before the mechanics were invented must give modernists pause. Russ Jensen and David Kindle, both new to *WindoWatch*, have contributed articles; one on Charles Babbage the other on Abigail Ada Byron King. Very ego deflating when looking at our place in computer history.

And finally, the holidays are here again and those of us associated with *WindoWatch* want to wish our friends and supporters the Happiest Chanukah, the Merriest Xmas, and the most peaceful New Year ever! (To the table of contents)

EDITORIAL

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Making a Web Page Your Own - Colours and Backgrounds

Copyright 1996 by Gregg Hommel

But first, a word from our sponsor !

As of this issue, we have some space of our own on the WindoWatch Web site. We're going to use it to store various useful items. - at least, I think they are useful. As example, one thing we will be able to do is view the Practice Page we are working on, in it's various iterations. I will also try to make available the source code in a ZIP file you can download. As we get further along, it will become much larger than it is currently, so we don't have to keep repeating it in every column or every time we make a change. Additionally, I will also make available as many of the various graphics files we refer to here. I am sure that we will find many other uses for the space.

To get there, you don't have to go through the WindoWatch Home Page <http://www.windowwatch.com>, point your browser at

<http://www.windowwatch.com/tutorial/>

and from that page, you will find links to the sample pages, and to the files you can download.

One last thing... I was lacking in time for this issue, so the above page doesn't look like much at all. Matter of fact, it's almost as bad as our current Practice Page, but it will get better. As soon as the senior editor of this slave ship... er, I mean, magazine, gives me some free time, I will pretty it up, and make it a lot easier on the eyes when you

come visit, - at least, I hope it will be so and you do! (*What I put up with from the talent!-lbl*)

Now that the commercial is over !

Before going much further with exploring HTML files, there is one thing that I am sure may have crossed your minds and that we should, at least briefly, discuss are HTML editors.

I know that I have already said that HTML files are basically plain ASCII text files, but even at this early stage, when you look at them, it should be obvious that plain though they are, they are not simple. They require a knowledge of the tags involved, and some way to remember all of them. Fortunately, this is not really necessary as there is a whole market built up around the need for HTML authoring software, much of it designed to shield the user from any need to actually know or understand HTML code. The various products available range from fairly simple, freeware or shareware offerings, through heavy duty commercial packages. And, as we've come to expect in this industry, users of each product swear by the one they use. Power users even continue using Notepad, and insist that the only *pure* way to write an HTML file is manually.

I was going to discuss this now, but have changed my mind. With the simple pages that we are doing, it is enough to use any text editor, even Notepad. Later, when we are getting into the heavy duty tags, like frames and tables, and so on, we'll break for a discussion of editors, but doing so now I suspect is just a little too early in the game.

So, on to the main event!

We now have a simple HTML file, and have it in a text editor. But we haven't yet discussed saving it. When doing so, it helps to know how a Web browser sees a file, and some tricks that Web sites use.

The first thing you should remember when saving an HTML file is that the Web browser which interprets it for display over the Internet isn't actually all that bright. For the browser to know that the file is something it can display, normally, it looks for one of two extensions on the filename.. .HTM or .HTML, depending upon the OS in use. In most cases, if you have the choice, use the .HTML extension, as this is the most common on Web servers, which are often Unix or Win NT, and allow for longer than three character file extensions. If you are using Win95 on your system, you can even use that extension for these files, since it also supports more than three characters in the extension of a file.

But that leaves the name itself out of the discussion. Again, convention comes into play and saves us from having to think too much ourselves. On most Web servers, when a remote connects to it, and goes to a URL, without specifying a filename or page name to load, the server will display a default file as the first page, even on a multi-page site. This default file is generally called either DEFAULT.HTML or INDEX.HTML, depending upon the server. You can ask your ISP which one is in use on your server, but for now, we'll use the default for my ISP, or INDEX.HTML.

What this means is that, if you tell your browser to go to

<http://www.ionline.net/~gregghom> you will find my home page URL, as I normally give it to people. What you will actually get, and

see displayed in the status line of your browser, is

`http://www.ionline.net/~gregghom/index.html`

This is cleaner because it means that I can use a shorter URL for my home page when sending it to someone. There is less chance of my creating errors when I send it to them, or of them making mistakes typing it into their browser. Better still, I know that they will get the page I want them to start out with, when they visit my site.

With that out of the way, and our file named, and saved, let's go on to start to make it more our own.

By default most browsers display a page, without other instructions to the contrary, using a plain, dull grey background and black text. That isn't all that bad from the point of view of clarity, even though many folks find it boring preferring to stamp their own personality on their page.

We'll start with the background of the page. I have no objection to the default grey colour, preferring it, as it makes the text more distinct for these old eyes. Even so, many people would rather have something a little more colourful, and for purposes of this discussion, if we left it at default we'd have nothing to talk about. Since I don't expect to leave the page this way for long, we are going to make our page background Aqua.

Most commonly, HTML uses colour information in hex format numbers, so that's what we'll use here. The hex format code for Aqua in HTML is #00FFFF **with the # sign an HTML indicator that the following information represents a hex number.**

But what do we do with it and how do we use it ? Actually, it is fairly simple, when you know a little more about HTML tags, and when you

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look at this code logically. Tags, as noted earlier, are not quite as simple as I have made them out to be. Even those I have used in the previous column are not as simple as I presented them. Many HTML tags not only consist of the tag information itself, but also arguments for that tag, or operational parameters, if you will. **As a result, in reality, rarely will you see <BODY> as a tag in the source code of a page, without other parameters included within the <> brackets.**

Looking at this procedure logically, we are trying to change the background colour of our page. As noted earlier, what most people will see displayed as our practice page, is actually enclosed in the **HTML <BODY></BODY>** construct. In other words, it is the *body* of our page, i.e. that portion displayed in the browser window when a user looks at the page. Therefore, logically, to change the background colour of that displayed window, we would need to change the background colour defined for the body of our page. And that is indeed, exactly what we need to do, using the **BGCOLOR** parameter of the **<BODY>** tag.

This is one of those *arguments* or *parameters* to the **<BODY>** tag, and it specifies, to a browser, that it is to interpret the background (BG) colour of the page displayed to whatever hex numbers follow the *argument*. So, in our case, we would need **BGCOLOR=#00FFFF** as the *argument* to change the background colour of our page from dull grey to aqua.

When using arguments or parameters to an HTML tag, they must always follow the tag itself. In other words, the first thing that the browser/interpreter must see, after the opening < of the tag, is the tag itself, and not any of it's parameters.

(Please note : The resulting lines of code/text will by necessity at times be much shorter than is allowable in HTML, and may result in the wrapping of one single line to the next one.)

```
<HTML>

<HEAD><TITLE>The WindoWatch Tutorial Practice Page</TITLE></HEAD>

<BODY BGCOLOR=#00FFFF>

This is our very first practice page for this HTML tutorial. <P>I
know that this isn't much to read, but it is our first page, and we
needed some practice at writing the text for the body of our
page.</P>

</BODY>

</HTML>
```

Not much of a change, but we have begun to stamp the page with some personality even tho' it's such a horrible colour ! And we can add even more to it, by using three other parameters of the **<BODY>** tag, **TEXT=** , **LINK=** , and **VLINK=** . These three parameters change the display colour of the body text, the colour of any links to other Web pages on our page, and the colour of the text for those same Web pages after we have visited them, in that order.

For purposes of this exercise, and again, because we won't be leaving them this way for long, we are going to set these to black, maroon, and navy blue, respectively. Before you say a word, I know what this will look when displayed by a Web browser, rocket science it's not, but

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our objective is to examine the parameters, and what can be done with them. So we let this atrocious colour scheme ride for now and our code looks like this.

```
<HTML>

<HEAD><TITLE>The WindoWatch Tutorial Practice
Page</TITLE></HEAD>

<BODY BGCOLOR=#00FFFF TEXT=#000000 LINK=#7F0000
VLINK=#00007F>

This is our very first practice page for this HTML tutorial.
<P>I know that this isn't much to read, but it is our first
page, and we needed some practice at writing the text for
the body of our page.</P>

</BODY>

</HTML>
```

We now have a Web page that is a lot less forgettable than our original, default page, even if it is so because of the horrible colour scheme. You'll find this page linked to our Tutorial page as UGH.HTML. And we haven't really done a lot more than we did with our original page, other than add some parameters to one of the tags.

Be assured that we aren't going to leave the page looking this horrendous for long. Even I wouldn't do that. Personally, I don't like playing with the default colours on a page, since doing so can be quite tricky, and can lead to very unexpected results. Each browser has it's own interpretation of what something like, Aqua, for instance should look like. Indeed, each video display card used seems to as well. As a

result, I have always found that using colour changes, as the above examples, can result in your page being even more horrific when viewed by someone else using another Web browser, and a different video card, or display resolution on their home system.

My preference to setting page colours is to use a background graphic for the page, instead. You've all seen them... pages that seem to be written on parchment, or have a basket weave texture to them, or perhaps something similar? When I was writing my first home page, I wanted something different from the standard grey background, but I am not much of a colour person. I have little or no colour sense when it comes to what displays on a computer screen, so I am not very daring when it comes to using colour. And, as I noted earlier, personally, I find the grey background with black text combination generally easier to read.

So, I decided to stick with basic black text, but to change the background it appeared on. After considerable investigation on the net, I found a small graphic that I thought was suitable. You see, some while ago, I had a small personal company, called “Computer etceteras”. Whenever I wrote a letter for that company, I used a logo that I designed in CorelDraw, and put it, via Laser, on some paper that I had here, using that as my letterhead. The paper had a grey parchment look to it. This is the graphic I found, the small grey parchment-looking one, that I thought looked more than a bit like my letterhead, if only to me. It established a level of continuity between earlier communications, and this new form of communication, the web page.



As I have emphasized this graphic is small (9,007 bytes). The reason for this is display speed. On the Web, everything takes time, and I figured the less time that my page took to load and display on a remote, the less chance there was that they would grow tired of waiting and head elsewhere. So I went looking for small graphics to use, rather than larger ones, trying to keep images down to around 10K in size, if possible.

So, how does a background graphic work, you ask? (And even if you didn't, I am going to tell you anyway..)

Background graphics are very much like the wallpaper graphics often used in Windows, for those of you familiar with those. They are smaller graphics files, with no clear cut edges, or edges that could easily blend into another copy of the same graphic placed on any side of it. And they are then tiled so that a single graphic file is repeated over and over to completely fill the background of the "page". Your browser only needs to download the small, original image file, and then it uses the cached copy of that to fill in the background tiles.

When using these in HTML, it is even easier than setting colour options for the page. You simply specify the graphic file with the **BACKGROUND=** tag parameter in the **<BODY>** tag, and HTML does the rest by tiling the graphic to fit. On my Web site, I store all of my graphic images in a sub-directory of the main directory, called **\Images**, which you will see in the code to follow.

However, this brings up an interesting point... compatibility between HTML files at source, and on a Web site. On my home machine, I store my basic HTML coded files in my **\Data\HTML** directory. Now, under that directory, I have another, named **\Images** (i.e. **\Data\HTML\Images**). The reason? I don't have to change the code I

upload to my Web site, to account for a different directory structure. By duplicating the Web site directory structure here on my system, I save myself some hassles with worrying about changing code to match the structure when I upload it.

So now the code to display, the final for this column, our test page which you'll find on the Tutorial Page as NOTBAD.HTML.

```
<HTML>

<HEAD><TITLE>The WindoWatch Tutorial Practice
Page</TITLE></HEAD>

<BODY BACKGROUND="Images\wall.gif">

This is our very first practice page for this HTML tutorial.

<P>I know that this isn't much to read, but it is our first
page, and we needed some practice at writing the text for
the body of our page.</P>

</BODY>

</HTML>
```

The only item I changed from default in the body display of this page is the background. I left the display text, link text, and visited link text at whatever defaults the Web browser wanted to use. These are normally quite valid with a grey background page, and in spite of the graphic in use, that is basically how my web page remained.

Next time, we are going to work on the body itself, adding more text, some links to other pages, and perhaps even some other simpler HTML code, preparatory to heading after the big game we promised you from the beginning, frames!

Gregg Hommel has been writing tutorials for [WindoWatch](#) beginning with his WASP tutorials in issue one. Well known to BBSers, Gregg hosts several Ilink and Rime conferences. He serves on the [WW](#) Editorial Board, has provided consulting services for several major communications software houses. Gregg can be emailed to gregghom@ionline.net

Taming of the Wild DNS

Copyright 1996 by Jim Plumb

DNS Theory

Not to get into this too deeply, but everyone who has set up or attempted to set up an Internet connection has had to supply an IP address for a DNS server. DNS means Domain Name or Naming Service. Its purpose is to provide name information for computers and other systems on a TCP/IP network, of which The Internet is the mother.

Name Servers do just that, handling requests to resolve network host names and host addresses. When one computer wants to talk to another computer on a TCP/IP network, they use IP (Internet Protocol) addresses, which are in the form of 111.222.333.444. Usually though, people know computers by their names and not numbers, so if they want to get to *www.joes.com*, that's what goes into the browser. This is where the DNS server comes into play, as the browser requests the address for *www.joes.com* from the DNS server you specified, the server looks it up in its files or else knows where else to look, finds the IP address, returns it to the browser which can then communicate to *www.joes.com*.

DNS servers form their own sort of network: as one server gets updated host information, it is passed on to other DNS servers. There is a DNS hierarchy beginning with the root name server, then the root domain servers (com, edu, org, uk, au, etc.), and down from there,

with servers for the domains making up each of the root domains (ibm.com, sun.com, etc.). This relates only to the Internet. There are many companies/organizations with their own private TCP/IP networks, and are not on the Internet.

A Decision is Made

DNS is not the only facility for resolving host names and addresses. The easiest method is the use of a host table, which is merely a list of IP addresses with corresponding host names and aliases. With a small private network, and in the beginning, the Internet, a host table works fine, but you need a host table on each computer in the network. And if the host table needs to be updated, all the host tables need to be updated. So you can see this would never do on the Internet and thus was born DNS and why I got involved with DNS.

Part of my job deals with just this sort of administrative tedium, and with the number of computers in my network constantly increasing, updating individual host tables got to be too much. It was time to set up a DNS server.

I had originally planned on using one of my Sun machines as the server, but an attempt was aborted because it was taking the server off line due to all of my hacking around to get it working. One thing I didn't realize at the time was how dependent DNS is on the Internet. It supposes you are on the Internet, and wants to know about that hierarchical world.

When I next attempted this I decided to look at it from the NT point of view, knowing that my workstation wasn't any linchpin in the network, so wouldn't be missed if it needed rebooting, or if it crashed for *some strange reason*. Research provided me with only two possible

choices for DNS servers, a freeware product, BIND 4.9 and a commercial product MetaInfo DNS 2.0

To make a long story short I tried both products but couldn't get either to work. BIND I liked for price and MetaInfo DNS I liked for its GUI interface. I was hoping for an idiot proof way to setup DNS and MetaInfo appeared to be the way to go but it wouldn't work.

After abandoning the project and banging my head against the wall, trying it again and doing some more banging, it finally dawned on me: I was installing DNS into a private network and it wanted to be on the Internet. I was telling DNS my domain was dp.com and so it went looking for the com name server and there was none to find. It was also looking for the root name server and there was none! Oy! It appeared I needed to setup my own root server if this thing was to work and I got confirmation in the tcpip newsgroup from others who had gone through similar jumps. An internal network is a microcosm of the Internet, if you do TCP/IP.

More head banging until I got a root name server setup on a Sun. I had a clue how to do it now and it didn't take too much hacking. I'm not going into the details of it here.

It was now time to roll the drums and try to install DNS 2.0 again. I shortened the domain to leave off the *com* part and it worked!

Installing and Setting Up MetaInfo DNS 2.0

This is about as close to idiot proof as you can get. Installation was very simple. I was asked if this was a primary name server, my domain name and the IP address of my PC. You get a choice during installation of setting up your machine as the primary, secondary or a cache server. I set up both a primary and secondary server, enough for my small network. DNS 2.0 comes with a Configuration Manager

GUI. It is also called a Web Browser. You can also do your configuration the old fashioned way, by using a text editor. By the way, BIND comes with a neat little utility that will create configuration files out of a host table, which you could use to help with your setup. Part of installation is starting DNS. DNS runs as an NT service and can be set to start automatically or manually.

Take a look here at your primary login screen.

The screenshot shows a Netscape browser window with the address bar set to `http://localhost:2600/dns-config/login`. The browser's menu bar includes File, Edit, View, Go, Bookmarks, Options, Directory, Window, and Help. The toolbar contains buttons for Back, Forward, Home, Reload, Images, Open, Print, Find, and Stop. Below the toolbar, the location bar shows the same URL, and there are buttons for 'What's New?', 'What's Cool?', 'Destinations', 'Net Search', 'People', and 'Software'. The main content area displays the 'MetaInfo DNS Configuration Utility' interface, which includes a copyright notice for 1996 MetaInfo, Inc., a 'METAINFO' logo, and several tabs: 'DNS Service', 'Security', 'Primary Domains', and 'Secondary Domains'. The 'Primary Domains' tab is active, showing a status of 'Ready' and buttons for 'Save to Disk' and 'Restore'. Below this, there are sections for 'Add New Domain' and 'Add Subnet to Existing Domain'. The 'Add New Domain' section has input fields for 'New Domain' and 'Initial Subnet', and an 'Add Domain' button. The 'Add Subnet to Existing Domain' section has a dropdown for 'Domain' (set to 'dp'), an input field for 'New Subnet', and an 'Add Subnet' button. At the bottom, there is a table titled 'Existing Primary Domains' with columns for 'Domain', 'Subnet(s)', and 'File Name'. The table lists the domain 'dp' with subnets '198.99.141', '218.99.141', and '158.97.238', and a file name 'dp.db'. A 'Configure Domain' button is located to the right of the table. The browser's status bar at the bottom shows 'Document: Done'.

Domain	Subnet(s)	File Name
dp	198.99.141 218.99.141 158.97.238	dp.db

I have three subnets in my domain. I push the Configure Domain button and I can add/delete change host entries in any of those subnets (below). Here you can see how easy it is to add a new entry.

MS-DOS

Microsoft(R) Windows NT(TM)
(C) Copyright 1985-1996 Microsoft

C:\WINNT\system32>ping micron6

Pinging micron6 [198.99.141.1181 v

Reply from 198.99.141.118: bytes=3

Reply from 198.99.141.118: bytes=3

Reply from 198.99.141.118: bytes=3

Reply from 198.99.141.118: bytes=3

C:\WINNT\system32>ping micron1

Pinging micron1 [198.99.141.1021 v

Request timed out.

Request timed out.

Request timed out.

C:\WINNT\system32>ping micron2

Pinging micron2 [198.99.141.1101 v

Reply from 198.99.141.110: bytes=3

Reply from 198.99.141.110: bytes=3

Reply from 198.99.141.110: bytes=3

Reply from 198.99.141.110: bytes=3

C:\WINNT\system32>ping micron3

Pinging micron3 [198.99.141.1141 v

Request timed out.

Request timed out.

Request timed out.

C:\WINNT\system32>ping micron5

Pinging micron5 [198.99.141.1171 v

Reply from 198.99.141.117: bytes=3

Reply from 198.99.141.117: bytes=3

Reply from 198.99.141.117: bytes=3

Reply from 198.99.141.117: bytes=3

Netscape - [Host to Address Mapping]

File Edit View Go Bookmarks Options Directory Window Help

Back Forward Home Reload Images Open Print Find Stop

Location: http://localhost:2600/dns-config/hosts

What's New? What's Cool? Destinations Net Search People Software

MetaInfo DNS Configuration Utility - Copyright © 1996 MetaInfo, Inc.

METAINFO

Primary Domains Addresses Aliases Mail Servers Name Servers

Host to Address Mapping

Domain: dp

Please enter the Names and IP addresses for Hosts within the **dp** domain. Click Add to update the list of defined addresses.

Status: Address record mapping host **micron1** to IP address **198.99.141.102** successfully **added**.

Save to

Add New Record:

New Host	Domain	IP Address	Subnet
micron5	dp	117	198.99.141

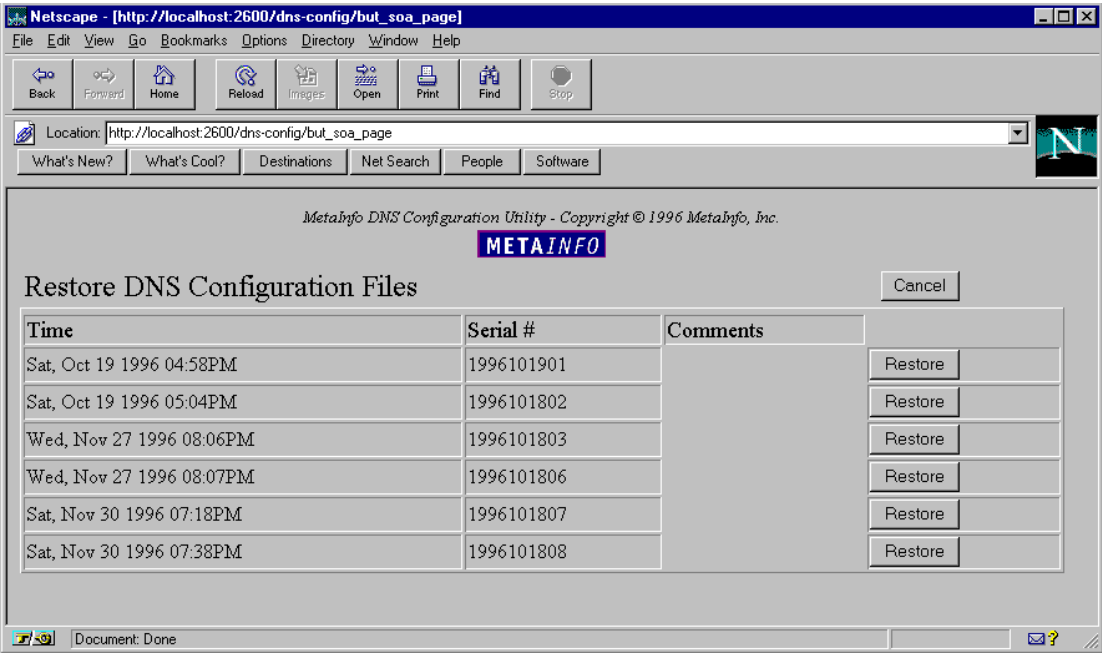
Defined Hosts

Defined Hosts	Domain	IP Address	Subnet
localhost	dp	1	127.0.0

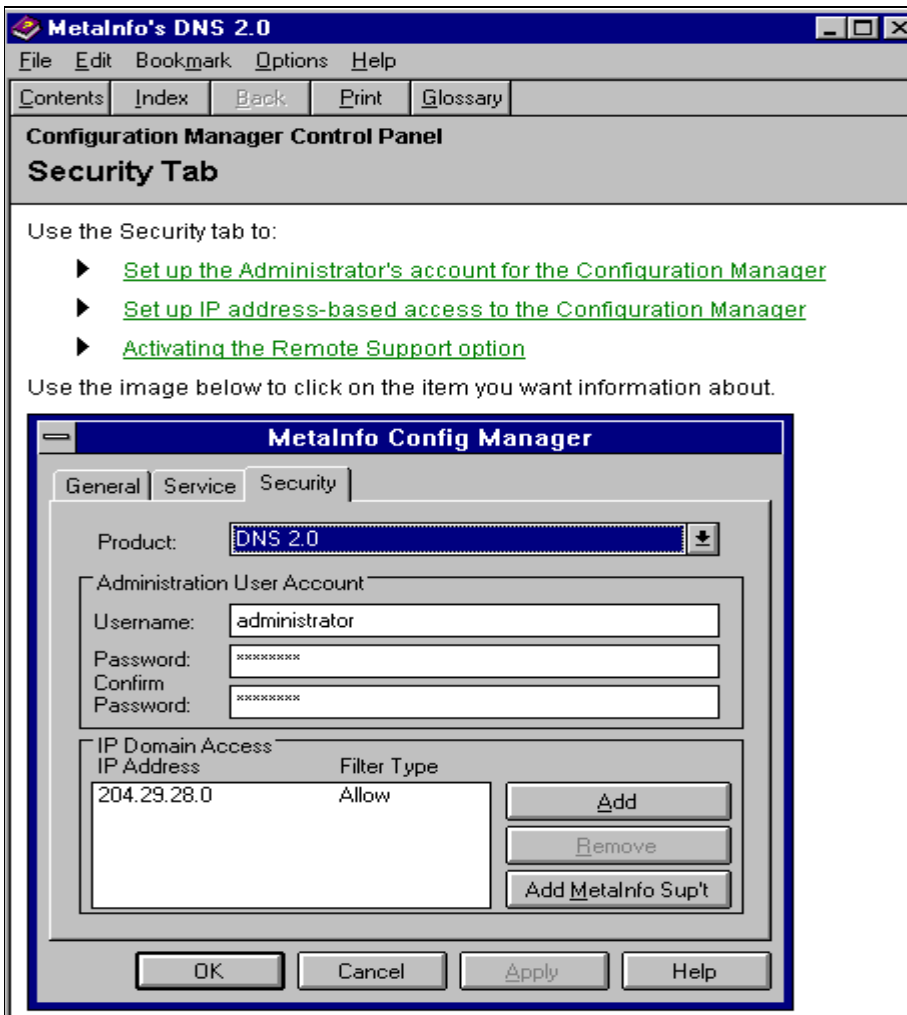
One thing I would like to see with DNS 2.0 is a setup utility to go through the host table and setup the DNS config files beforehand, and then use this online configuration manager to add new entries.

Some other screens allow you to add aliases, which allows you to refer to a machine by several different names; specify service options,

which indicate when to start the service and at what debug level to run to aid in troubleshooting if need be; and, what would we do without it, the “Undo” screen, which can restore previous configurations saved from past sessions (see below).



As you can see, I'm using Netscape to configure DNS. Installation asks for a userid/password and then I can use it locally, over the network (or should I say *intranet*) or over the Internet. Complete remote configuration is possible with this setup. And as you can see from the Configuration Manager help page below, you can add IP addresses of allowable remote hosts, to let for example MetaInfo support staff in for help with configuration.



Tools

One of your standard DNS tools, nslookup is included for testing and debugging purposes. It runs as a command tool utility.

Summary

MetaInfo has just released an upgrade, v2.1 and I am downloading it now, but due to deadline constraints have not had a chance to try it. Key features are compatibility with NT 4.0 (although I have been running 2.0 on NT 4.0 without a hitch), and the ability to run the DNS server on the same machine as a web server. Also, MetaInfo claims DNS 2.1 claims to be direct port of UNIX BIND 4.9.2, so you can use the BIND configuration files if you are thinking of moving your DNS server to an NT platform. And one more piece of good news, MetaInfo has hired on the original developer of the Berkeley BIND. They are committed to this product!

All in all I'd say the experience to be one of the ease-of-use I'd expect in a graphically-based administrative tool and then some. I like the ability to configure all aspects of the DNS server from one console, so to speak. I add one host entry and its take care of for the whole network. Get it if you can.

Jim Plumb is the Systems Administrator for commercial printing establishment keeping the multiple systems humming in unison on his network. A WindoWatch regular contributor, Jim continues to live on the bleeding edge!

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Maximizing Word 7 for Windows 95

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Introduction

In the early days of word processing, a document template was little more than a shell with some common text filled in for later and repeated use. A template then was what amounted to an electronic form, the opposite of boilerplate text, i.e., a block of common text dumped into a document at an appropriate location. Both these tools — form templates and boilerplate text — were used often in the early days of processing words. To paraphrase a popular catch phrase, templates have come a long way.

In the past several months, in this series of articles I've written on Word for Windows 95, and have examined the building blocks of a modern day Word template: styles, macros and toolbars. Throw in boilerplate—now called AutoText by the Microsoft marketing machine—and you have just about all the tools you need to fashion your own word processing environment.

In science fiction and science speculation, creating an artificial environment and landscape to mimic or improve upon existing ecosystems is called terraforming. In Microsoft Word, it's called a *template*. You can build templates for your own word processing needs or for others to use and inhabit. But a template is generally used to create a unique writing environment or simply a more comfortable one.

Electronic Clay

The Microsoft Word environment—i.e., interface—is so malleable it’s like electronic clay. Word lets you change practically every facet of itself. You can add, change or remove menus and toolbars; you can add your own functions with macros, or mold existing functions into interesting new variations of themselves. You can change the default font typeface and size, adjust the header or footer, decrease the side margins, increase the distance between normal paragraphs, dictate when all capitals are used or when font colors should change. You can remap the functions of common keys, create new keyboard shortcuts or change old ones. You can indent however much you want and page breaks wherever your heart desires. A good many of these malleable features can be done *without* delving into the WordBasic macro programming language. Best of all, if you’ve been reading along with my series on Word, you already have the know how, even if you didn’t realize it.

I won’t attempt to rehash everything covered in those prior articles, but I will touch upon AutoText and then explain how to bring all the pieces together.

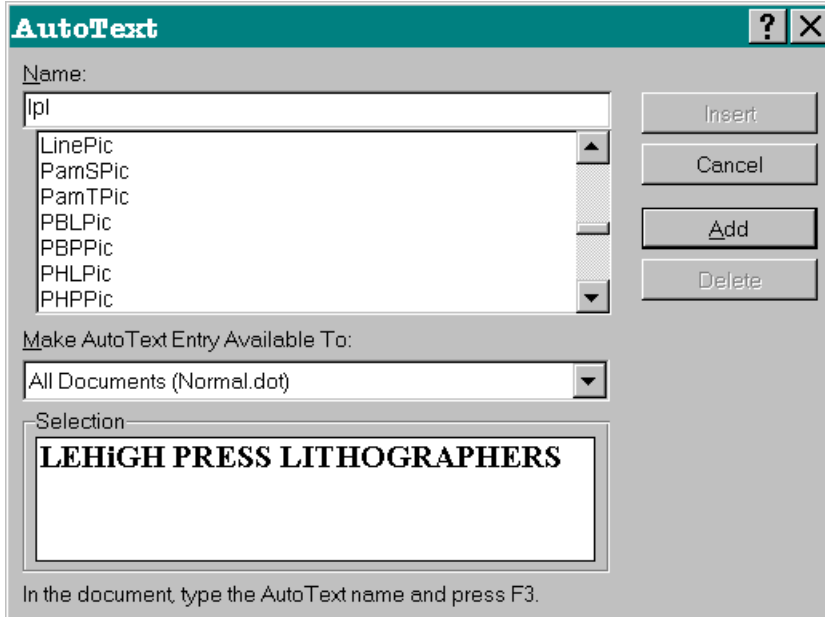
AutoText

No, this doesn’t have anything to do with car repair manuals. Nor am I referring to AutoText’s sexier cousin AutoCorrect, which corrects typos on the fly, i.e., as you mistype them. AutoText is simply the boilerplate feature I mentioned earlier with but a few additions. You can store and subsequently insert your boilerplate material as plain text or with formatting options intact, such as bold or italics. In addition, you can store images in AutoText.

To clarify the value of AutoText to your template, you should know that, unlike AutoCorrect entries which are more or less stored globally, AutoText entries can be saved in individual templates. This is important if you are considering distributing templates to others. The template should be able to stand alone, fully functional. By sending your AutoText entries within the template file, you are doing just that.

The easiest way to create an AutoText entry, whether picture or text, is to place it in your document—or template in progress—then select it. Next click on the EDT menu, then AUTOTEXT. This apparent menu oddity of *creating* an AutoText entry which obviously doesn't exist yet by *editing* it has, I'm informed, been corrected in Word97; AutoText will finally move to the Insert menu, where it logically belongs.

The AutoText dialog box will come up and Microsoft's *intelligent nonsense* will put the first couple words from your text selection into the NAME: box. The object of AutoText—in my opinion—is to enter a lot of text with as few keystrokes as possible. I would generally enter an abbreviation in the *Name*: box. For now, note that the *Make AutoText Entry Available To*: specifies All Documents (Normal.dot), which would make the boilerplate available all the time, or globally in Word-ese. In the *Selection* area, you will see the AutoText as it will look when you insert it. Once you have the abbreviation that you want, click on the ADD button.



Later, when you actually want to insert the AutoText boilerplate, simply type the abbreviation then press the F3 key. (Note: unlike AutoCorrect, the *Auto* in AutoText overstates the application!)

My example is the abbreviation *lpl* to recall the name of my employer. Actually, I already have this abbreviation as an AutoCorrect entry, which eliminates the step of pressing the F3 key. With AutoText, since the expansion of the boilerplate is on demand, you can have abbreviations that are real words. For example, I regularly use coworkers initials as AutoText entries. Mine would be *jwp*, which expands automatically to Jack Passarella. Suppose I had a co-worker named Thomas Oliver O'Brien. If I used his initials as an AutoCorrect entry, either two or three initials, I'd obviously have a problem every time I really meant *to* or *too*. If I make *too* an AutoText entry, it only

expands when I press the F3 key after it. Since I'm not likely to do this accidentally, I won't have to worry about inappropriate uses of Tom's name.

Another advantage of AutoText is that you can store bitmap images as AutoText. Symbols and thumbnail images can be stored just like boilerplate text, to be called up with a couple keystrokes. Simply select the image in your document window, then bring up the EDT AUTOTEXT dialog box, type an abbreviation name and click on ADD. Just like regular text entries.

But, the main reason for choosing AutoText over AutoCorrect is the aforementioned portability. You can package AutoText entries inside your template kit and pass them along to friends, coworkers and clients.

Starter Kit

Now that you understand a little bit about the final piece of the template puzzle, AutoText, it's time to discuss creating an actual template. As I've done in past articles, I'll draw from the real world examples of some of my own shareware and freeware templates to illustrate some of the concepts involved.

If you're ready to begin building your own Word environment, i.e., create a new template, then just click on FILE NEW. The Blank Document icon will be selected. Make sure that the CREATE NEW radio button group has Template instead of Document selected. Click OK and you will be in your new template, called Template1 instead of the usual default document name Document1. If you try to save this template now, the default filename becomes DOT1.DOT instead of the always entertaining DOC1.DOC. You can safely change the DOT1

part of the name, just keep the .DOT extension, as that tells Word that the file is a Word template and not a Word document. If you gave it a name now, e.g., MYTMPLT.DOT, you would have already created a Word template. Yes, it can be that simple... for a simple template, that is.

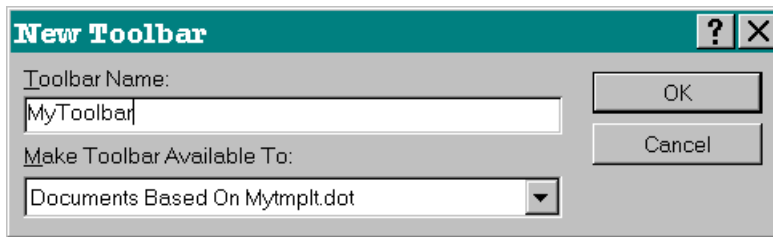
In my previous article on Word styles, *Always in Styles*, I mentioned that even if you don't consciously select and use styles, you are always in a style in Word. There's no getting around it. The default text style is called normal. Well, the default template is called NORMAL.DOT. So in a real sense, you are already using styles and templates, even if you thought you were dragging your feet all this time.

By saving MYTMPLT.DOT as a new template, what you've done, basically, is create a template based on NORMAL.DOT. Nothing really exciting, innovative or ground-breaking, but a template nonetheless.

For a template to be anything but default Word by any other name, you need to have some vision or purpose for it. That means you want certain macros or specific styles to be available whenever you are working with a document based on this new template. Maybe you just have a bunch of boilerplate you need available whenever you're cranking out contracts. You store all this project-specific functionality inside the template. You saw in the AutoText dialog box that you would be saving the AutoText entry by default into NORMAL.DOT, but you had the option of saving it in another template. If you had, that boilerplate or image would only be available when the template was active (i.e., attached) to your current Word session.

The same rationale applies if you create a new style. While you are in the template, you have the option of saving the style in the template.

When you create a new toolbar, you are asked whether the toolbar should be available to all documents or just documents based on your template. *(For more information on creating and working with toolbars, check out [Toolbar Time my Word](#) article from last month.)*



Macros are a slightly different animal, you need to be in the template window when you select **T**OOLS **M**ACRO, or you won't be able to select your template's name from the *Macros Available In:* drop down list. Note: you could always copy the macro to your template later. *(See [Organize...](#) or [Reorganize below](#).)*

Since you are in your template—i.e., your new Word environment—you can change the default font typeface and size. My [Windo Watch](#) template defaults to Times New Roman, 12 point and bold to expedite the conversion to the Adobe Acrobat PDF format. I also modified the built in Heading styles to what I needed to match the [Windo Watch](#) heading styles. By saving all these various elements in your template, you are changing the Word interface to fit the function.

Real World Examples

My freeware template, UTILPRO is basically just a toolbar with about a dozen usability enhancements in the form of toolbar buttons linked to macros. I don't consider this template to be an environmental interface change. Instead, it's designed to be unobtrusive as

possible, probably copied to the Winword startup directory so that the template's toolbar is always available, in other words, attached. I could have saved the macros and the toolbar in my NORMAL.DOT, but my NORMAL.DOT is not portable. By saving the macros and the toolbar in a separate template, I can easily distribute them and them alone.

My most complicated template is WWWWPRO, or the Word-Wise Web Writer. For the second version I added more than sixty pages of new or revised macros, mostly to accommodate dynamic dialog boxes. (Note: Dynamic Dialog Boxes are dialog boxes that change their appearance depending upon which boxes you check or radio buttons you select.) This template goes another step toward the environmental interface change. I use a blue font for HTML tags, a green font for text denoting links, as well as different sizes for different heading levels. However, WWWWPRO is mostly a time saving/convenience type of template. The user selects the tags; the template, via the macros and dialog box selections, enters all the brackets, syntax and parameters. The template is designed to save the HTML author the trouble of remembering all the tag syntax or being chained to a reference manual. Because of the specific nature of coding web pages, it makes more sense that you base a document on this template in a *project* sort of mentality. You wouldn't want to have all those macros cluttering up your standard NORMAL.DOT template. You want to be able to put aside this functionality for the majority of the time when you aren't writing home pages.

My first major template was SCRNPOR, which is a template for screen writers, who are burdened with formatting nightmare of the screenplay. Some of the logistics involved are: where to place character names, parentheticals, dialogue, scene headings, fade and cut

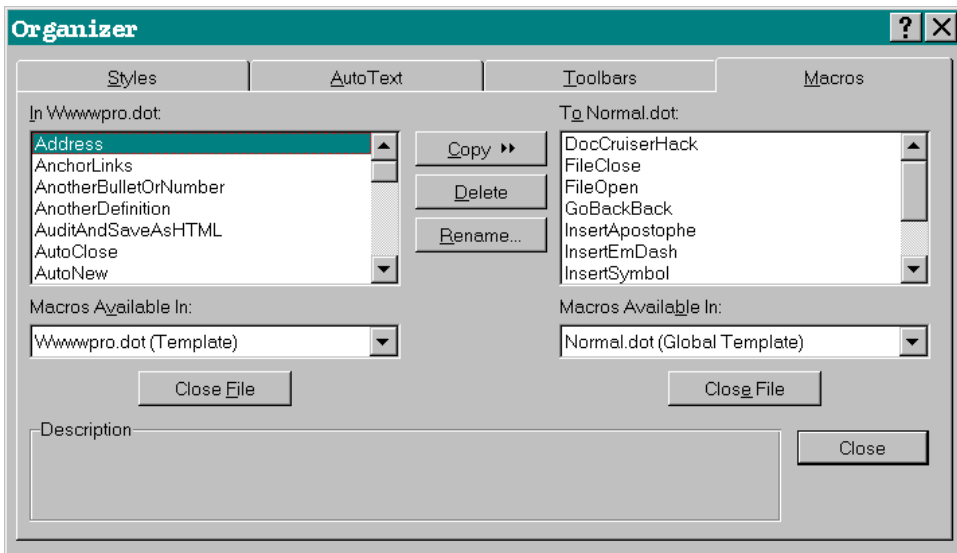
directions and on and on; spacing between each of these paragraph types varies, as does case—character name is all upper case, for example. Screenplays are even typed in the fixed pitch Courier font. All this formatting is more than a bother to remember, and setting all the tab positions could easily drive you back to the simple formatting requirements of short stories and novels.

SCRNPRO removes the tedium of keeping track of all the tab stops so completely that I was able to disable the *tab* function of the TAB key! Instead I intercept the TAB keystroke and reprogram it to cycle through logical styles for the current position in the screenplay. Instead of tabbing through page positions, you tab through different styles. The styles themselves are designed to flow into the next logical style automatically. The goal of SCRNPOR was to remove formatting considerations from the writers mind. All the writer has to do now is come up with a killer script. That's one reason why I consider SCRNPOR to be a true environmental interface change. (*I described the power of style definitions in detail in Always in Styles, a previous [WindoWatch](#) article.*)

Organize... or Re-Organize

Suppose you've been accumulating your own unique *styles*, your own sleek functionality macros or maybe even designed your own toolbar with fancy toolbar buttons on that one quarter the size of a postage stamp palette, but you've been saving everything in your NORMAL.DOT template by default. Maybe because you weren't sure how to go about creating your own template. Relax. All is not lost. Word let's you ferry your old work into another template after the fact with the Template Organizer.

First create the new template as described above, then save it so that you can give it a name that makes sense. The Template Organizer (select **FILE TEMPLATES** then click the **ORGANIZER** button) requires that the *from* (i.e., In) and *to* templates both be *open* for the copy operation. (Note: you can open or close any template or document that pops up in either the *from* or *to* box in the Organizer to get the two you really want to work with.) The active boxes is the In box, the other is the To box. You can have them in either order, just mind your selection before you click *Rename* or especially *Delete*.



As you can see, you have four tabs to work with: Styles, AutoText, Toolbars and Macros. You could, for example, copy a macro then rename it in the destination template. After you copy macros from NORMAL.DOT to a specific template, you might then want to delete

them from NORMAL.DOT. This is housekeeping, which each user performs up to some individual clutter quotient. Just Close the Organizer when you're finished. Simple.

Now you have no excuse for not being *organized* right from the beginning. For creating templates, there's no time like the present.

Conclusion

I hope these examples from my own templates give you some idea of the many things you can do with templates. Remember that Word comes with a good number of templates. Check them out; maybe you'll be inspired with your own ideas.

I also hope that you've come to appreciate the scope and power of Winword. It really is a remarkable tool.

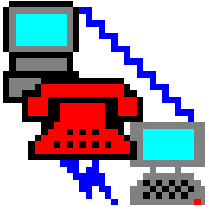
A Look Ahead

Coming first quarter of 1997 is Microsoft Office 97, including Word97. For Word macro programmers, Word97 promises at least one significant change: it's the first version of Word to use Visual Basic for Applications as its macro language. Word97 will import the old macros and convert them using a WordBasic object, so they'll work. They just won't be optimized. If you save Word 6 or Word 95 templates in their native format, the conversion will only be temporary; if you save them in the new format, they will be incompatible with those older versions of Word.

1997 promises to hold many surprises for all us Word—and Microsoft Office—users.

Jack Passarella has demystified many of the finer point of Word. He hosts the Ilink Word conference and has written original software for Word. He is a regular [WindoWatch](#) contributor as well as lending hid considerable HTML skills to the WW homepage!

Overload!



Reflections of a ModemJunkie

Copyright 1996 by *Leonard Grossman*

A few weeks ago I decided I needed to slow down. There was simply too much input. - Too much in my face! I read the NY Times every morning and scan the virtual NY Times before I go to bed. I log onto the Internet and check the Reuters news several times a day and sometimes during the night. I listen to NPR in the morning and sometimes listen to News Radio 78 every on the hour in the late afternoon.

So one Sunday afternoon when I got in the car, I pressed the button for 98.7, WFMT, Chicago's fine arts station. It had been a long time since I had listened to the opera. It seemed overblown, noisy, and too full of itself. After a few minutes, I switched the station off.

But then last week I found an opera that really satisfied a need. It restored my faith. It gave me hope for the future. Was this a masterpiece by Mozart or some sublime Bach? No! it was Opera, the software. This new browser from Norway is amazing proof that software doesn't have to get bigger, fatter, or bloated. If you are

WW

running Windows, this one is worth your while!

The compressed file is less than one meg. Smaller than the early editions of Netscape. The software still has some bugs but it offers a lot of promise. It is thoughtfully designed with a host of features left out of Netscape and Internet Explorer. In addition to nearly full keyboard control, it has an amazing zoom function which lets you control the size of the text AND images on the fly.

You can reduce the page as much as 50% or increase it by 400%. A distinct advantage for the visually impaired (and bleary eyed night-surfers). It also permits turning on and off image loading and is customizable in many other ways.

You can find a link to the Opera home page on mine.

<http://www.mcs.net/~grossman/> Grab a copy and evaluate it as soon as you can. If you have problems be sure to send their tech support a note. There is a link on their page. The creators of Opera deserve our support. As long as independent writers create software like this the big boys will have to stay on their toes. Opera may never achieve the market share of a Netscape or Internet Explorer, but, hopefully it will find its niche.

As the holidays fast approach (Hanukkah will have passed before you see this), thoughts go to what new toys are new to the market for computer junkies. Although the reports are barely in from Las Vegas (Comdex) as I write, it seems as though there are a few innovations around the corner. A new series of chips from Intel. 56 kbps modems. But these won't be here until at least January and the changes they represent will be incremental.

But it doesn't seem as though there is much new for the holidays. Last year we went to multi-x CD-ROMs, added Internet access, new speakers, and zip drives. This year each of those have improved slightly but there is not much in the way of really new toys for us to play with or talk about except to say that everything is getting smaller.

The hottest items coming out of Comdex seems to be the new pocket sized PIMS (personal information managers). The press talks about great leaps forward from last year's Zaurus and Psion machines. Most of them are now running on Microsoft's new CE software. The amazing thing about this is that the software is described as a *stripped down* Windows 95. Until now Microsoft never stripped anything except my wallet.

I even participated in a focus group for Texas Instrument's new pocket machine. It was fun to see the actual advertising that hit the papers a week or so ago. It seems they were actually listening.

But I can't get really excited. The PIMs might make great stocking stuffers, but spend my own money... nah! That's easy for me to say. Last year I went berserk trying to decide, during the Federal Shutdown, whether to buy a Sharp Wizard (I bought it - returned it- and then bought it again!) I got it at a great price from a for sale newsgroup. I just had to have it. Every month I attend a meeting of community volunteers and everyone pulls out their PIMs setting them in front of their seats on the table.

I loved it at first. I practiced taking notes and typing with my thumbs. But where am I supposed to carry it? It fits, barely, into my inside

jacket pocket, but the effect is worse than the heavy pocket radio I insisted on carrying in the early 80s. I remember the worn linings in my suit jackets. And where do you put it if you don't wear a jacket?

Women can carry them in their purses. I have tried carrying a little leather pouch. But I haven't been trained to remember it. So now it sits in a brief case dedicated to community affairs and I see it once or twice a month.

The other watchword now, more than ever, is speed. Speed **SPEED!**

For those of us who were doing quite well with 12 megahertz 286s just a few years ago, the idea of 200 MHz clock speeds seems dizzying. But, of course since the new software has to do so much just to put a character on the screen, we really don't see much improvement.

The other night I was visiting a friend who is using a 486/66. I wanted to show a new feature on my web page and logged on using his new 33.6 modem. Surprise, the pages loaded more slowly than they do on my old 386 pawnshop special. The difference: configuration and RAM.

The lesson: If you are running a 386, this may be the time to move up even though I intend to hold out a little longer. Go straight to a Pentium, the cost differential is becoming minimal. If you are already at the 486/66 level it might, just might, be worth moving to a Pentium, but if you are on a budget, look into adding memory on your old machine. If you are already running a Pentium, look to adding RAM before even thinking about getting a faster chip. RAM

is cheap right now. I thought it was cheap when I added 8 meg last summer but now it costs about half as much.

Unfortunately, the only problem with RAM is that doesn't look very impressive under the tree.

On the other hand, perhaps you can convince your significant other to give you some, if you promise NOT to sing, *Thanks for the Memory*"

For more on speed, see my essay, The Corner Garage, in the collected Reflections of a ModemJunkie. There is a link from, guess where, my home page!

Leonard Grossman, is an attorney who works for the government. He is a WindoWatch regular and has been contributing "Reflections" for some time. Leonard's home page was chosen as a "Best o' comp.infosystems.www.announce" site during April 1996. He is also president of his local user group in Chicago. Comments can be sent to grossman@mcs.com.

COREL PRESENTATIONS

Copyright 1996 by Frank McGowan

This month's installment completes my evaluation of the various software suites offered by Microsoft, Lotus and Corel, Corel Presentations, a component of Wordperfect Suite V7. Before leaving, I must ask the following rhetorical question: Is it just a coincidence that Corel's answer to the Microsoft Office Manager (MOM) is the Desktop Applications Director (DAD)?



General Evaluation

At the risk being charged with plagiarism, let me paraphrase the late Spiro Agnew: If you've seen one presentations program, you've seen them all. While there are differences, they resemble each other much more than they are distinguishable. Like its counterparts (PowerPoint and Freelance), Corel Presentations provides an easy-to-use interface and a myriad of features that let you produce attractive slide shows. After my complaints about the mysterious nature of product names (e.g., Quattro Pro, Lotus), I should point out that Corel deserves credit for directness, if not imaginativeness, in this area: what could be more straightforward than naming a presentations program *Presentations*?

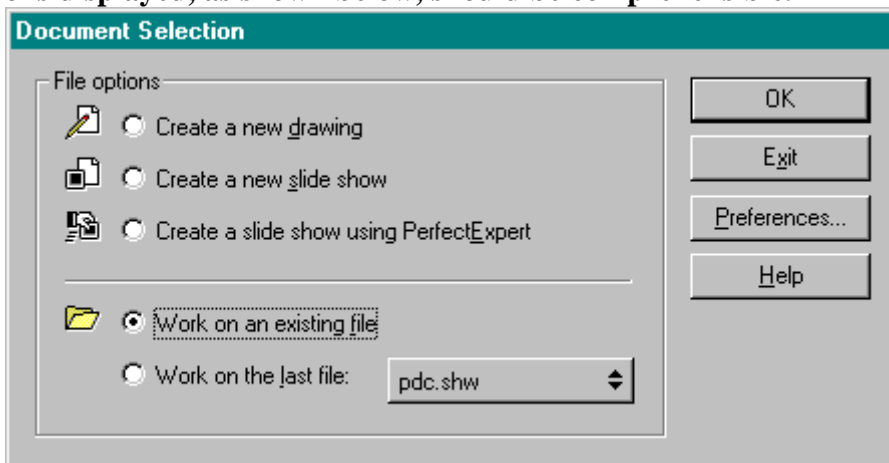
Documentation

As always, my first impression of a program is formed by the documentation that comes with it. As one of my first tech writing managers stressed, way back when, the manual is the user's window into the software. This was long before Windows was anything other than a twinkle in Bill Gates's eye.

I continue to be pleased by the job done by the writer(s) of the *Quick Results* user's guide. If the book is the work of one person, it represents a monumental task of heroic proportions, worthy of a significant increase in salary and a promotion for the writer. If it's the work of several writers, each assigned a section, then the supervisor, editor, or whoever coordinated the work deserves the raise: the writing is seamless, with each section seeming to have been the output of one person. Either way, it's a very nice piece of work.

User Interface

The first-time user will probably find the start-up screen non-threatening at worst, and reassuring at best. Assuming a user with even a modicum of experience in a Windows environment, the options and icons displayed, as shown below, should be comprehensible.



As you can see, the default is to open an existing file, which might be the one you worked on last, displayed, in this instance, as `pdc.shw`. The only puzzlement might be in figuring out the difference between a new drawing and a new slide show. I confess that had me a little stymied at first. It is a little beyond the ken of most neophytes, but it does belong on the start-up screen, nonetheless. For the beginner, it can be safely ignored because not many of us remain beginners very long.

A *drawing* is a graphic you create, as contrasted with prefab clipart. The example cited in the user guide is a logo for your organization, for which clipart is unavailable. The book is a little sketchy on how to do this, suggesting that you consult the Help file, *under create: drawn object*, which leads to the question of how this index was created. Why not *drawing, new: creating*? If Monday-morning quarterbacking were a professional sport, I'd be an all-star!

Features

In the neat category belongs QuickCorrect, which makes on-the-fly fixes to your favorite typo's, though I might suggest one or two small changes to its list, such as replacing "august" with "August". It may not always refer to the month, but simply be an adjective.

The clipart, called QuickArt, strikes me as more appealing than PowerPoint's, but your mileage may vary. Beauty, or should I say *coolness(?)* is in the eye of the beholder, after all.

It took a while to get used to, but the idea of *layers* in slides makes sense. When you create a slide show, you get to choose from masters that provide uniformity of appearance to the slides. Each master

comprises several templates consisting of a background layer of colors, patterns, logos, etc. and a layout layer of a bulleted list, organization chart, etc. The background, being the deepest layer, remains the same, no matter what you select as the layout layer (one layer above background). The slide layer or the topmost layer is where you enter the text, graphics, or whatever you want to display when you run the show. You can also edit these underlying layers, or create your own. As it is, Presentations serves up twelve masters (- which is preferable to your trying to serve more than one!) **Editorial note: I really believe that *suite stress* has gotten to this lad....**

Outliner view is best for editing individual slides, uncluttered by color and special effects. As with PowerPoint, double-clicking selects a word while triple-clicking selects a paragraph.

Nit Picks

OK, let's get persnickety. One of Presentations's features, included with the other presentation applications, is the annotation gizmo, called the *highlighter*, that shows up when you're running your slide show. If you want to add emphasis, or jot down an important point you somehow overlooked when you created the slide, you can *write* your note directly onto the slide, or click and drag to underline or circle those ideas that deserve extra stress.

As for writing with this device - good luck! My penmanship is bad enough, but my mousemanship is far worse. The best I can manage is a scrawl unworthy of the average 6-year old wielding his first crayon. I'm a little better at underlining, but the difference is marginal. So, this feature is not a major biggie for me.

The highlighter, is always there, even though it's not obvious. There's no icon on-screen during the slide show. You simply click and drag across the screen, and the highlighting shows up. If what you see is not what you want, you get to choose a highlight color and line width when you tell Presentations to run the slide show. You can choose from a vast array of colors (red being the default) and line weights from 0.001" up to 1"(the default is 0.05").

Now for the major nitpick: For the life of me, I can't figure out how to erase a highlight once it's on screen and typing E, as in PowerPoint, doesn't do it. I guess the folks at Corel assume you'll never mess up with highlighter. They definitely didn't have ME in mind!

Summary (Part One)

As presentation applications go, Corel's version is neck-and-neck with PowerPoint and Freelance. It has all the features you need to make your case, sell your product, or persuade someone to adopt your strategy. In terms of the one I'd recommend, I'll adopt a Clintonian stance and say that any of them will do what you want, with about the same amount of mental effort on your part. I'm not saying this because I'm afraid to offend anyone, but because it's my view. I've probably only succeeded in offending all three software development groups by straddling the fence. Unlike the devo's who designed and implemented the programs, I'm too far away from the forest to see the difference among the individual trees.

One really powerful application for any of these programs is one that isn't so obvious: education. Both my wife and I teach computer software at the local community college, and often find ourselves with upwards of twenty students in a class. Each student has his/her own

workstation, as well as his/her own style of learning. Running around from student to student is both arduous and inefficient. Trying to get and hold their attention makes things even more frustrating. Jotting instructions on a whiteboard in grease pencil just doesn't grab them: people have been conditioned, it seems, to ignore someone talking or writing at the front of the room.

Put a TV set up there, however, and it's a new ballgame. Hook that TV to a computer and flash a presentation slide show on the screen and you've got their eyes and, hopefully, their minds, if not their hearts. Both of us now use our class prep time to prepare PowerPoint presentations as a way to get our points across to all the students (well, the vast majority of them, anyway), in addition to working with them one on one during class. This is certainly one way of gearing education to the MTV generation. As an aside, I refuse to include rock music, however - call me a Luddite if you will, but I draw the line there.

Summary (Part Two)

Having now spent the better part of a year looking at the three major software suites, my view of their strengths and weaknesses comes down to the following bit of all-American sagacity: You pay your money and you make your choice. Despite minor divergences here and there, some of which I may have only imagined, there's barely a jot of significant difference from one to another. Trying to recommend one over another is a little like trying to tell someone why one brand of automobile is better than another. It's really a matter of personal preference and/or experience. Those of you who cut your eyeteeth on Lotus 1-2-3 will be inclined to go for Smart Suite; those weaned on

WordPerfect will lean towards Corel. For Microsoft mavens, Office will be preferred. You can't go wrong with any of them.

Let me quickly amend the above, slightly, based on my wife's review of this article: I should point out that my comments apply to the *general* user, not the specialist. As with most things in life, the more familiar you become with something, the more glaring become its strengths and weaknesses. I'm certain that there are legions of highly experienced gurus out in guruland who will be quick to point out the gaps and gaffes in my reviews, based upon years of discovering the quirks of a particular program. I humbly stress that my comments are aimed at those trying to decide which of the three suites to purchase, not at those who already know!

Should we suggest to McGowan that by doing these suite evaluations that he has become a guru himself? Those of you who have followed his suites series will understand his need to go on to something else. In any case, Frank took on this task and has brought his rich teaching and writing background to the task. A regular [WindoWatch](#) contributor we look forward to his next offering!

ADOBE PHOTODELUXE FOR WINDOWS

Copyright 1996 By Linda L. Rosenbaum

With the increasing availability of graphical replication tools such as lower priced digital cameras, much cheaper scanners, Kodak PhotoCD, and less expensive color printers, there is subsequently, increased interest in the appropriate tools to better integrate these various products. In addition, with the increased usage of Web pages, there is also a pickup of interest in the proper tools to create graphics for the Web.

In the past, programs that could touch up and manipulate photos and other graphics as well as integrate photos with written words were the domain of expensive programs geared towards the graphic/DTP professional. Of course, those types of programs still abound, but there is a growing market for less expensive and less complicated programs that can be used by non-professionals. One such product is Adobe PhotoDeluxe by Adobe Systems Incorporated. Adobe PhotoDeluxe was first released for the Macintosh and a version for Windows (version 1.0) was released last spring.

I have been a user of Kodak PhotoCD for some time and recently acquired a Kodak DC 40 digital camera. Between my husband and myself we also own several different graphical oriented programs. However I have never figured out how to get much beyond the very basics of opening a graphic image in such a program and perhaps doing some very simplistic manipulation of the photo/image. As a

result I was very interested in trying a program such as Adobe PhotoDeluxe. Perhaps, with its guidance, I could begin to learn how to enhance and change an image, as well as be able to use the various images in more than just basic cards created with software such as Microsoft Publisher.

Adobe PhotoDeluxe for Windows runs in Windows 3.1, Windows NT 3.51, or Windows 95. In Windows 3.1, it utilizes Win32s. The program also requires 45MB of hard drive space as well as a double speed CD-ROM drive, a 486 or faster CPU, a minimum of 8MB of RAM. As with most graphic oriented programs, the more memory you have the better off you will be when using this particular program. The video card and monitor must be capable of at least 640x480x256. In addition to the Adobe PhotoDeluxe software program itself, the Adobe PhotoDeluxe CD-ROM comes with more than 500 templates, clip-art images, sample photos, free fonts, and the Adobe Type Manager utility. It also comes with a trial version of DiAMAR Interactive's Better Photography, a special edition of Berkeley Systems' After Dark, special effects from MetaTools, and the Adobe Acrobat reader software.

When I installed Adobe PhotoDeluxe, I chose to leave out After Dark, the Adobe reader, as I already have that installed, and Quicktime for Windows, also on my system. The install itself was uneventful and I got down to cases trying and testing out the program.

Unfortunately I ran into a serious problem right away. The images I brought into PhotoDeluxe to work with did not display properly within PhotoDeluxe. They did display properly in other graphical oriented programs such as Paint Shop Pro. I tried more than one display driver for my video card (Matrox Millennium) with no improvement. I have since gotten a newer NT 4.0 video driver for the Millennium but that has not improved the on-screen display problems

with PhotoDeluxe. Adobe tech support has confirmed that they see/get the same screen display problems in PhotoDeluxe that I am getting in NT 4.0 with the Millennium video card. They also verified that this problem does not exist in NT 3.51 with the Matrox supplied video drivers for NT 3.51. At this point in time it is unclear if the screen display problems are strictly a video card driver problem or some interaction between PhotoDeluxe, the video card and NT 4.0. Since PhotoDeluxe was released long before NT 4.0 was released, Adobe does not make any claims the program will work properly in NT 4.0. In addition, since the market for this program for use in NT 4.0 is rather small, this problem will not get high priority to be fixed. Despite the problems, I, of course, forged ahead trying to use the program. I have gotten more used to ignoring or trying to ignore the screen display problems, but it is a definite detriment when trying to use a program that specializes in enhancing the image as well as creating various items that utilize photos.

I have also found Adobe PhotoDeluxe to be more temperamental than virtually any other program I use on a regular basis. I tend to get Dr. Watson errors while using PhotoDeluxe regularly as well as most times when I close down the program. I have since learned that if I start to get them very, very frequently I am better off restarting NT 4.0. At this point in time I don't know if these problems are related to the screen display problems noted above or something else.

PhotoDeluxe has two basic modes that one can work in. One is called *Guided Activities* and the other is called *On Your Own*. In *Guided Activities*, you are led step by step to either touch up a photo or create something using a photo. In *On Your Own* you can do the touching up yourself or you can create something yourself.

Adobe PhotoDeluxe works on the concept of layers, which is similar, from what I understand, to programs such as Adobe Photoshop and

other higher-end image programs. Each part of a project is a different layer. Hence, in order to make changes to something, the proper layer must be selected. In addition, text that is brought into PhotoDeluxe becomes a bitmap or graphic layer itself. As a result, text cannot be directly edited but rather must be deleted and started over again. I had a problem adjusting to this concept since I am used to being able to edit text in programs such as Microsoft Word or Microsoft Publisher. However I have been given the impression that the way PhotoDeluxe treats text is similar to other programs like it. I have now gotten used to the idea of experimenting via deleting and starting again. I have also run into problems selecting a text image I want to delete when working in *Guided Activities*. I am still not sure if this is a problem with my fingers or a design feature that just doesn't work as I might expect it to.

PhotoDeluxe has an abundance of Clue cards which give guidance virtually every step of the way. The Clue cards exist whether one is doing a Guided Activity or an activity *On Your Own*. A clue card can be retired by checking off that you don't want that particular one to be displayed in the future. I personally like having the Clue cards even though that I have found many of them tend to display on top of what I am trying to work on. This makes it very hard to do what is suggested by the Clue card and have it continue to display until you are ready to move to the next step.

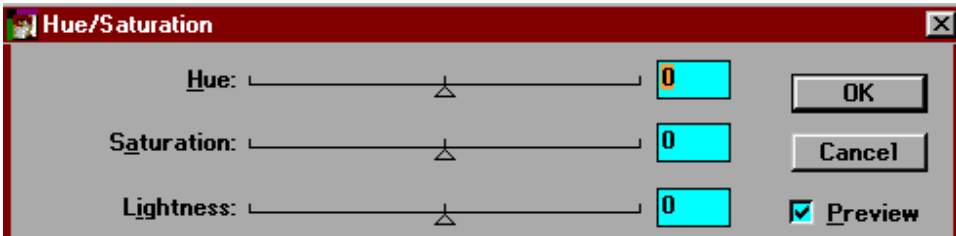
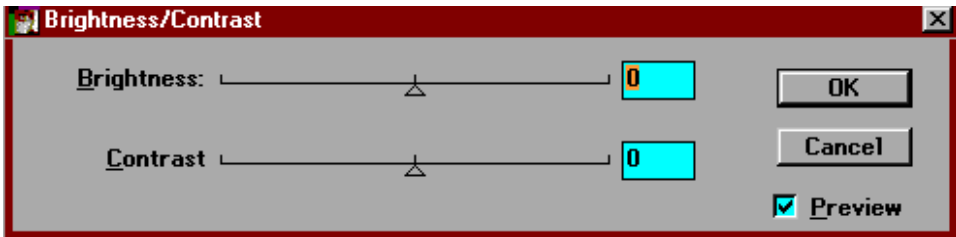
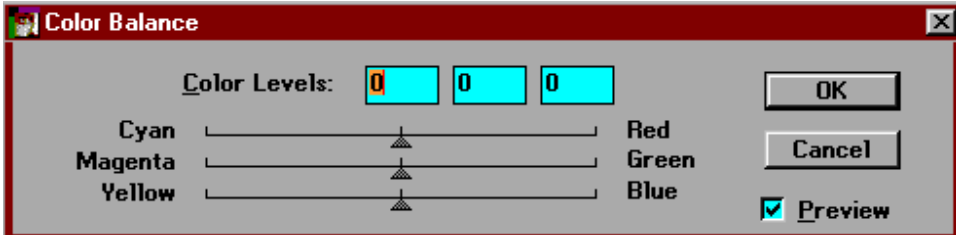
Whether one is using *Guided Activities* or *On Your Own*, it is best to start off with bringing a photo into PhotoDeluxe and then touching it up. A photo can be retrieved from several different places, including: (1) from somewhere on your hard drive; (2) via scanning; (3) direct from several different brands of digital cameras; (4) from Kodak PhotoCD; or (5) from one of the sample photos or decorations on the PhotoDeluxe CD-ROM. PhotoDeluxe can read directly several different graphic formats including: PhotoDeluxe 1.0, PhotoShop 3.0,

BMP, GIF, JPEG, Kodak PhotoCD, PCX, and TIFF. It does not read the proprietary format of our digital camera directly, so I use the software that came with the digital camera to convert its pictures to either JPEG, TIFF, or BMP, and then bring the converted picture into PhotoDeluxe for touch up etc. I have been able to open up Kodak PhotoCD pictures in PhotoDeluxe directly.

In *Guided Activities*, manipulating photos is broken up into two main categories - Touch Up Photo and Transform Photo. Each of these then has several different activities one can select for step by step guidance. For example, in Touch Up Photo, one can select one of the following three activities: Size Orientation, Quality, and Remove Red Eye. In Transform Photo, one can select one of the following groups of activities to do: Collage, Fun, Art, Cool, or Internet. After selecting one of these groups, several choices within that group are displayed. For example, the choices under Fun are Distort, Motion, Cool Text, Perspective, or Coloring Book.

As one can see there is a wealth of different things that can be done with an individual photo. I have mostly experimented with changing the quality of a particular photo but must confess that I have not had a tremendous amount of success so far. I also now tend to do this in *On Your Own*. After selecting *On Your Own* from the main startup screen, I then select Get Photo. After getting a photo, I then select Modify. Within the Quality tab, I can do Instant Fix, Color Balance, Brightness/Contrast, Hue/Saturation, Sharpen, and Remove Dust/Scratch. I have had mixed results with Instant Fix; sometimes I think it does do a decent job of changing the quality of the photo and at other times I think it gives me a result that is worse than what I started with! There is an Undo under Edit, in the pull down menus, although there is only one level of Undo. Under File, there is also a Revert To Last Saved option. I have had a lot of fun experimenting with Color Balance, Brightness/Contrast, and Hue/Saturation. Each

one brings up a box with the various choices of options which can be manipulated. These are displayed as a line on a spectrum with values for each choice starting in the center at zero.

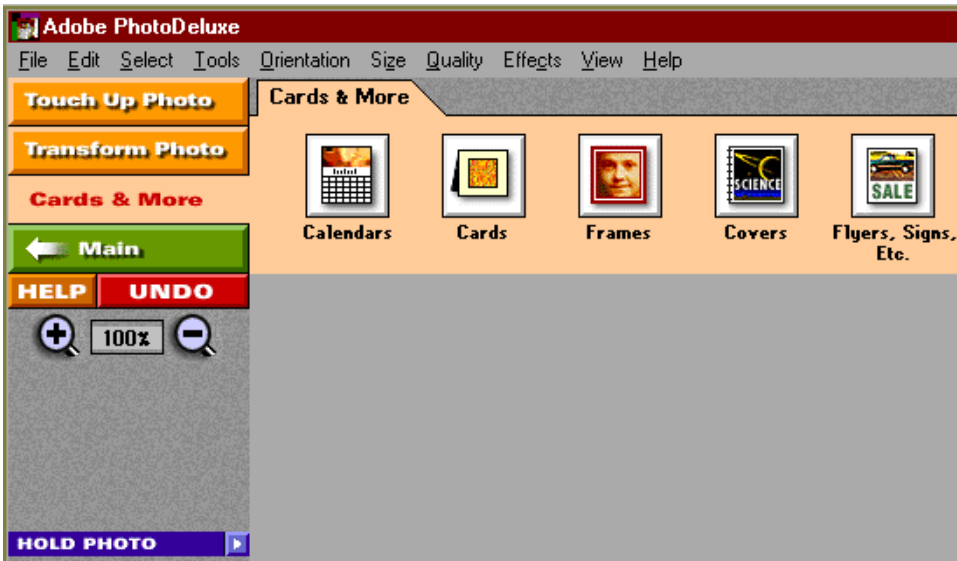


In addition I have preview selected which means the image instantly shows the change being made as I move the triangle on the line in the graph. However, only one choice displayed above can be worked on at a time. I have certainly gotten some very interesting effects this way! One of the areas of this exercise that I have not gotten a good handle on, is that which looks good visually does not always translate to a good or better printout on my color printer (an HP 1200C). I

have the sense that a lot of this is trial and error. Luckily this trial and error is quite easily done in PhotoDeluxe.

After enhancing and/or manipulating a photo, one can save it in two main ways in PhotoDeluxe. One is the traditional way of saving it to the hard drive. When originally saving an image in PhotoDeluxe, the only choice of format to save is PhotoDeluxe 1.0 (*.pdd). A PhotoDeluxe image can be exported into several different file formats including those file formats that PhotoDeluxe read to begin this photo altering procedure. PhotoDeluxe also has a save feature called Hold Photo. This does save the photo to the hard drive but in a directory under the main program called Hold. One can then more easily bring photos which are in the Hold area by selecting Hold which then displays what photos are there. You then click on the one you want to open up. Photos in Hold are saved in PhotoDeluxe format. This format does create a rather large file so it is important to delete photos from Hold that are no longer needed.

Besides the ability to touch up and manipulate a photo, the heart of this program is to be able to create various projects that utilize your photos. Within *Guided Activities*, there is a selection called Cards & More. This choice then gives you the following activities that you can perform with step by step instructions:



I have found that doing projects via Cards & More in *Guided Activities* is a mixed blessing. The *Guided Activities* are structured to be done in the exact order of the activity. However I have found that I can go back and forth if I have not clicked on Done which is the final step of a Guided Activity. On the other hand, at times I have found it easier to select done and start again from the beginning. For several different projects I have not been able to figure how to create them without using *Guided Activities*. In addition, I have not been able to modify previously created projects done within *Guided Activities* using *On Your Own* for some projects, such as Cards. Its my belief that this problem/feature may be more a function of the specific project as well as how PhotoDeluxe is designed.

I have experimented with Calendars, Cards and some of the projects within Flyers, Signs, Etc. The program itself comes with the ability to create monthly or yearly calendars through 1997 and, of course, including 1996. That probably seemed like enough when the program

first shipped. Given that its now almost 1997, I hope there will be a new version or an ability to add more months and years to Calendars in the not too distant future. Cards work very well if you carefully follow the step by step procedure. However, I have found that only one photo can be inserted per card. I would prefer to have the ability to have more than one photo in a single card. Within most of the projects I have experimented with, I have also added some of the decorations that come with the program itself. There is a nice selection of decorations and the step by step guided activities make it quite easy to add them. For calendars and labels, I have been able to do basic modifications of size and location of decorations and photos from within *On Your Own*. I have found that I have to be very careful to make sure the correct layer is selected or else the modification does not really happen.

There are a multitude of other neat features of this program. Some of these include the following:

- (1) Ability to have several different magnifications when working on a project. The choices, it appears, are preset by design and cannot be changed, at least, not that I have been able to see.
- (2) Variety of ways to accomplish the same task, using pull down menus, via *Guided Activities*, via *On Your Own*, via buttons that do a particular action, etc.
- (3) Ability to hide or not show all or particular layers. This is accomplished by clicking on the eye on the layer to hide or show it. I have found that this helps me understand exactly what each layer contains and hence helps me figure out what layer is the proper one to make changes on or with.
- (4) Ability to get a variety of special effects and combinations of photos and so forth.

Overall I am impressed with Adobe PhotoDeluxe despite the problems I have had with it in NT 4.0. Adobe has recently reduced the price of this program so it can now be gotten for about \$50 at your local computer software store. I think this is a good program for someone to get their feet wet with photos, touching up of photos and creating projects that incorporate photos. However for anyone who intends to use this program in NT 4.0, I must again caution that I have serious screen display problems as well as Dr. Watson errors. In addition it is important that any potential user of this program realize it does have certain limitations, particularly when compared with a much more expensive and high end product such as Adobe Photoshop.

Linda Rosenbaum lives and works in a suburb of New York City. She is an assistant controller at the World Headquarters for a large global manufacturing company. She has two young children and a husband whose full time job is to take care of the kids. When not working, Linda can be found on a variety of online services and the Internet reading and writing about her experiences with NT, networking, and multimedia. She maintains a home network of four systems using a combination of NT and Windows 95. Linda is the NT Editor for [WindoWatch](#) and can be reached via Email at either lindar@cyburban.com or 71154.2622@compuserve.com.

Adobe's Acrobat v.3 Flies High!

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We have been happily jumping the new feature hurdles of the newest Adobe Acrobat using the pre-release version of Acrobat v3. It has been a very satisfying experience to explore the program to see if Adobe has smoothed away the remaining few rough spots from v 2.1. These have been tiny but annoying lapses to those of us who use Acrobat on a regular basis. The truth is, that Adobe has taken desktop/electronic publishing to still a higher plateau. Their missionary work of giving away their reader/viewer from almost the very beginning has made possible world-wide distribution of PDF files, done monthly for *Windo Watch* to seventy-five plus international Simtel mirror sites.

We've been publishing *Windo Watch* using Acrobat since late 1994. We began within the context of "You must be nuts not to use the Microsoft help engine!" This was just before the Internet was widely accepted as the place to be! A few good friends cautioned me to ignore the groupies who offered Word with its massive viewer as an alternative to the Windows help engine or even Write! (Choke!) Notwithstanding rumors to the contrary, Edlin was never a serious contender!

As an aside, some of our PDF editions have exceeded 16 Meg of raw Word docs. None of the aforementioned options offered security for either documents or authors. In any case, there were complaints

about the size of Acroread, the size of the final PDF, and the size of the editor's colossal ego to waltz into Never-Never Land without Cap'n Bill and the merry band from Redmond!

In those days Acroread was about a megabyte and a long download for 14400 modems. The various drivers were imperfect at best. However the tools did improve and by the time version 2.1 appeared we started expecting, and indeed got, a consistency of quality.

Help! The Bad News

Let's get what I don't like out of the way now. I have never cared for the way the Acrobat help is organized and still don't. It's klutzy and non-intuitive even for those of us who know the software well. I wanted to learn about online forms and followed the directions to bring to the desktop a PDF file which was to describe the procedure. I have a sense that big paragraphs of narrative were missing and indeed found them on a variety of homepages who specialize in third party PDF software. I opted for the full PDF manual which I could not find at the Adobe Web site but did locate somewhere else. Hopefully this will find its way onto the final release CD-Rom!

It seems to me the fifty plus page online guide misses the mark because it gives instruction out of a context. When a command or procedure is clicked on with the working page of copy on screen, a help panel coming up to the side of the page, takes one thru the series of steps to solution. This approach not only helps one solve the problem but shows the way, task by task, of how to do so. In the world of Windows this is the criterion ! All of the required Acrobat help is available but there are insufficient visual cues, white space or the Help Wizards which Windows users have come to depend upon.

I will stop this rant only because it goes no where. Fellas, if there is a profound weakness in Acrobat, it seems to me, it is here. It is of dubious value to make this winner widely available, and make no mistake Acrobat is a winner, with a series of pages which don't quite do it. The smaller chunks are a great improvement over the former 2.1 offering. Nonetheless context sensitive help is a must, and soon!

The *Very* Good News

Acrobat is no longer what I would describe as pricey software. Micro-Warehouse in their latest catalog (1-800-367-7080) is offering an upgrade from AcrobatPro for \$59.95 and an upgrade from Acrobat Exchange for \$79.95. Additionally there is a limited time SPECIAL for Microsoft Office owners to become PDFers for just \$99.95. Adobe take a bow! Acrobat has entered the main stream software arena with both price and quality and that's very smart merchandising. If the rumor mill I listen to, is any where close to gossiping about reality, HTML is slowly losing its dead heat race with Acrobat. The final argument is one of cost or no-cost depending upon the HTML editor one uses.

There is almost no debate about which tool delivers the better product. For quality electronic presentations that one might wish to keep or ask folks to spend money for, Acrobat is the way to go! The helper application approach makes for an excellent compromise using the browser and its native language, HTML. The integration of both tools and the ability to almost instantly create new PDFs makes online work very much more productive.

Probably the two biggest bonuses for me were tiny twangs after the compile process. There *were* problems of smudgy screen fonts which have completely disappeared in version 3. I am now convinced that this was a result of how the software handled system resources. Further, many of the graphics had been reproduced with little discernible variation in either color or dimension. But no more! Herb Chong's last article Lean and Mean has been redone with version 3 tools resulting in startling differences. Prior to v.3, if there was the smallest typo the whole procedure had to be redone because there was no way to make the tiniest text correction onto the PDF. The big T on the Exchange tool bar comes to the rescue and handily fixes little slips!

And it gets better still! The compression ratio continues to improve. Using Acrobat v.3 reduced the size of WindoWatch 2_9 PDF files from fifteen to twenty per cent! One is obliged a cautionary phrase. Each system is unique and should be compared one to another in very general terms. On my Pentium 133 with 32 Meg of memory the following occurred. The original wwwin2_9 issue contained a drastically reduced in size piece done by Herb Chong. This raw Word7 doc originally weighed in at 4896k and was made smaller by limiting the number of images we published. After editing and prior to the PDFWriter compression, its Word size was reduced to 1712k. The total issue, using v.21 tools was 876268 bytes and dated 10/31/96. The soon to be released v3 size with the unaltered Lean and Mean article is 1056k.

On the next page you will see a comparison of each unique segment of the issue under discussion. I find it constructive to understand how the various tools really produce. We did not run a comparison of Distiller to PDFWriter.

WWWIN2_9
Stats Using Acrobat v.2.1

PAGE1 .PDF	5,858	10-30-96
PAGE2 .PDF	5,033	10-30-96
PAGE3 .PDF	9,616	10-30-96
<u>PAGE4 .PDF * 339,366</u>	<u>10-30-96</u>	
PAGE5 .PDF	181,952	10-31-96
PAGE6 .PDF	25,377	10-30-96
PAGE7 .PDF	10,688	10-30-96
PAGE8 .PDF	18,146	10-30-96
PAGE9 .PDF	60,713	10-30-96
PAGE10.PDF	16,383	10-30-96
PAGE11.PDF	28,873	10-30-96
PAGE12.PDF	123,411	10-30-96
PAGE13.PDF	8,503	10-30-96
PAGE14.PDF	10,538	10-30-96
PAGE15.PDF	13,268	10-30-96
PAGE16.PDF	10,262	10-30-96
PAGE17.PDF	7,869	10-30-96
PAGE18.PDF	34,768	10-30-96
PAGE19.PDF	12,254	10-30-96

Total **922,878 bytes**

***Reduced Chong article**

WWWIN2_9
Stats Using Acrobat v.3

PAGE1 .PDF	3737	11-11-96
PAGE2 .PDF	2912	11-11-96
PAGE3 .PDF	6649	11-11-96
<u>PAGE4 .PDF 270271 *</u>	<u>11-11-96</u>	
PAGE5 .PDF	179288	11-11-96
PAGE6 .PDF	22121	11-11-96
PAGE7 .PDF	8680	11-11-96
PAGE8 .PDF	16233	11-11-96
PAGE9 .PDF	59087	11-11-96
PAGE10 .PDF	14430	11-11-96
PAGE11 .PDF	26920	11-11-96
PAGE12 .PDF	120083	11-11-96
PAGE13 .PDF	6422	11-11-96
PAGE14 .PDF	8492	11-11-96
PAGE15 .PDF	11245	11-11-96
PAGE16 .PDF	8216	11-11-96
PAGE17 .PDF	5820	11-11-96
PAGE18 .PDF	18268	11-11-96
PAGE19 .PDF	10230	11-11-96

Total **799,104 bytes**

***In the final release the original
PAGE4 was substituted 569,493 bytes**

Another improvement, particularly when using Distiller, is the decrease in time when compiling the documents into the PDF format. What heretofore had taken minutes to accomplish now take only seconds. Again using Herb Chong's last piece which was huge by our standards, the compile time using PDFWriter was reduced by fifty percent.

PDFers still search for that elusive but perfect postscript driver for their unique system as do I. Until that happens, using Distiller, some of Herb's images are less than perfect, a few are gray while most others survived the Distiller crunching intact. It took PDFWriter to produce the clean finished product.

One does not fully tap new software in a matter of days or begin to explore and really learn the new features that quickly. I have yet to understand the forms procedures or begun to use the capture software with my flatbed scanner. That will come with a bit more time.

When the final arrives we will put it through its paces yet again and report upon what we discover.

Lois Laulicht is the Editor of [WindoWatch](#).

CHARLES BABBAGE - COMPUTER PIONEER

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All of you reading this must be computer people or you couldn't even be reading it. Further, we all know what a great tool the digital computer can be! However, many of you, I suspect, probably don't realize that the idea of the digital computer is actually rooted in the past - the distant past! Would you believe that there was a man who lived over 150 years ago who had the total concept of the computer in his mind?

His name was Charles Babbage. He had an idea for a mechanical digital computer, but he was never able to construct it, in part due to the state of mechanical technology of the day, but also for another reason which I shall mention later. Even so, I can assure you that Mr. Babbage would not at all have been surprised at today's high tech computers and would probably say if he were to come back today "you see, I told you that it had endless possibilities! "



Mr Babbage could probably be classified as a genius. He certainly was an interesting individual. He was quite intelligent and just loved all aspects of science and mathematics. He had one pet peeve, however, he HATED organ grinders!

Charles was born to a well-to-do family, his father being a London banker. He was born the day after Christmas in 1791. He was a sickly child, but had it better than most of his siblings who died young - only one sister living into adulthood. He was too sick for about a year to go to school, but was tutored during that period.

In 1811 he began attending Cambridge University. During his first year he read the works of the great European mathematicians of the time, and soon discovered that he knew more of The Calculus than his instructors. In his second year he joined a group of students, who became known as the Analytical Society, who were devoted to translating the work of the French mathematician Lacroix into English. These same chaps concerned themselves with propagating the use of the "d's", denoting differentials, of Leibnitz over the "dots" used by Newton; the use of which at the university Babbage once referred to as "the 'dot-age' of the university". Incidentally, Isaac Newton is one of my personal folk heros as Mr. Babbage also is.

Babbage later became interested in astronomical instruments and started a project to find a method for accurately making fine graduations on their scales. But, he thought, what good is that if the tables used to determine where to point the instrument are not accurate themselves? So he came up with an idea for a mechanical calculating machine to create more accurate astronomical tables. This device, he dubbed the *Difference Engine*, employed the mathematical method of

Successive Differences. Not only would his proposed device calculate tables, including a method of *carrying* from one column to the next, it would also print the results of its calculations on paper! By 1822 Babbage had built two experimental versions of his machine. By the next year he had convinced the British government to provide funding for further development - the total cost of the project being estimated at three to five thousand pounds - with an estimated completion time of three years.

These estimates proved to be very unrealistic with the project never being completed! This was due partly because Babbage was constantly revising his ideas, causing most previous work on the device to be abandoned many times. Because of this the government eventually refused to pour any more funds into the project, with some officials calling it a humbug, and others even accusing him of trying to defraud the government.

One of Babbage's later ideas for the Difference Engine involved letting the output of the *highest order column* be *fed back* to other parts of the machine. This resulted in him arranging the shafts and gears in a circle rather than in a straight line. This meant that the machine could "control itself"!

A machine based on that principle he referred to as an "Analytical Engine". Babbage believed such a machine could be used to automatically perform complex mathematical operations. It was around 1834 that he began thinking about such a device.

Babbage's new brainchild would be made up of several sections all working together to solve a problem - the problem to be solved being able to be changed or programmed by the user.

This, as you can see, was very similar to the digital computers of today!

The *calculating* of the Difference Engine was to be performed by *the mill* which utilized refinements of the principles of the Difference Engine. The device would also have a *store* (memory) capable not only of holding constants, but intermediate results of the machine's calculations as well - the mechanical equivalent of the memory of computers today. In fact, these terms, *mill and store* are still used in England today to denote a computer's CPU and memory respectively.

The input/output (I/O) of the Analytical Engine was also extremely sophisticated. The input would consist of constants - Babbage envisioned up to 1000 (of 50 decimal digits each) - which would be set by hand at the start of a calculation on certain wheels in the machine. The machine's instructions would come from rudimentary punched cards, the idea Babbage got from Frenchman J.M. Jacquard's automatic weaving loom which had been recently invented and was "all the rage" at the time.

The output Babbage proposed was an automatic printing mechanism similar to what he had proposed for the Difference Engine, but it would also be capable of printing two sheets at once, or creating a printing plate for mass printing. He also envisioned the machine as being able to punch cards as output.

The control for the machine, of course, came from the program cards as just described. It is easy to see the similarities between Babbage's planned machine and the computers of today.

Every computer needs a programmer - and if the Analytical Engine had ever been completed it's programmer would have possibly been a lady named Ada Augusta King (nee Byron), the Countess of Lovelace. I'm sure many of you have heard of the Ada programming language which is used today and was named after this special lady.

Ada was the only legitimate daughter of the famed English poet Lord Byron. Due to his philandering, his wife separated from him and raised Ada by herself. Ada's mother soon discovered that her daughter had a good mind, especially when it came to mathematics, so she hired the well-known mathematician Augustus DeMorgan to tutor her. In those days it was quite unusual for a woman to get more than a rudimentary education, but Ada was special!

Ada and a friend once visited Charles Babbage and he explained his ideas for the Analytical Engine to them. She immediately grasped his idea and was fascinated by it! In later years she wrote extensively about the Analytical Engine, describing Babbage's concept in much detail. She eventually died at a fairly young age - which Babbage took very hard.

Although Babbage did not get much encouragement from his fellow countrymen, other than Ada and a few others, regarding his new brainchild, the Analytical Engine, the situation was quite different on the Continent, especially in Italy. When an Italian scientist wrote of

Babbage's Analytical Engine in very complementary terms, he was invited to speak at a scientific gathering at Turin in 1840.

He was also presented with two honorary orders from the Italian King which he was very proud of - his achievements being hardly noticed by England's scientific community which discouraged him very much throughout his life.

As I said earlier, the British government eventually dropped it's financial support of the Difference Engine. It was because of that, that Babbage could not get them to finance the Analytical Engine, despite Lady Lovelace's praises of it's concept to people in the government and English society that she and her husband knew - and the praise he received on the Continent.

So the Analytical Engine and Babbage's version of the Difference Engine was never completed, partly because of the British government withdrawing it's financial support of his Difference Engine project. But, the reason for that was the failure of the Difference Engine project being completed in a reasonable time, and for a reasonable amount of money - at least as far as the government was concerned. And one reason for that was Babbage's continually revising specifications for the Difference Engine as construction went along.

It could therefore be conjectured that if Babbage had left the original specifications for the Difference Engine alone it might have been completed, and possibly then the government would have considered financing the Analytical Engine. So, who knows, if Charles Babbage had not been such a perfectionist England might have had a working

prototype of the modern digital computer, however, no one will ever know? The above conjecture is purely this writer's, and I have not read anywhere of such a theory - but it is interesting to ponder, nevertheless!

Now, a little about some other aspects of this great man's life. As far as his family was concerned, Charles married during his years at the university. His wife, Georgiana, bore him eight children, only to die during her last delivery - a very, very sad event for Charles! Most of his other children also died early in life, with only three sons surviving him. Babbage's eldest son, Henry, who eventually became a Colonel in the British Army, helped his father from time to time with his engines and even worked on one himself after his father's death, as we shall see.

In addition to his engines, throughout his life Charles was a prolific writer on many scientific and mathematical subjects, all involving a considerable amount of research. He also was an inventor, again involving a variety of disciplines.

Babbage was fascinated by railroads, fairly new at the time, and invented the locomotive cow catcher. He also had a brilliant idea for a semaphore device which could show the engineer approximately how long ago a previous train had passed. He was quite interested in the field of optics and, among other things, came up with the idea for the opthalmascope - the device the eye doctor uses to look into one's eyes. Failing to patent it, the device was patented later by someone else.

Returning to the engines, we find that even though Babbage's version of the Difference Engine was never built, a successful one was com-

pleted in 1854 by a Swede named George Scheutz. This machine utilized "4th Differences" and computed to an accuracy of 14 decimal digits, not the 50 that Babbage had proposed. Two years later it was purchased by an Albany, New York observatory and used to compute astronomical tables just as Babbage had proposed. A copy of the Scheutz engine was also used in England to compute insurance actuarial tables.

As far as the Analytical Engine was concerned, several years after his father's death his son Henry succeeded in building a working model of the engine's "mill" and printing mechanism which he used to calculate and print the multiples of π to 29 decimal places. Parts of both of Babbage's engines ended up in a London area museum where they can be seen today.

Charles Babbage died at his home on October 18, 1871 at almost 80 years of age, a long lifetime for a person in that time! He died somewhat of an embittered man because of the failure of his pet project and of the lack of recognition he had received from the scientific community in his country. But, as you can see from the above, his ideas were far ahead of their time, but "right on" as it turns out!

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Published 1970, Macmillan Co., New York.

Russ Jensen is an early retired enginer who is regularly found in pinball publications. We hope that this is the first of many contributions to [WindoWatch](#).

The Education of Augusta Ada Byron King, Countess of Lovelace

The Making of a Genius
Copyright 1996 by David Kindle



The sound of a punch card. The hum of a power supply. The sound of a printer as it spits its ink onto a plain page. These are all common sounds of the 20th century. Without certain figures in history we would have never seen the inventions that create these sounds. The invention we called the computer has transformed and continues to metamorphose copious aspects of our accustomed lives.

A woman by the name of Augusta Ada Byron King, Countess of Lovelace,¹ can be credited with much of the development of the technology we possess today. Many have said that Ada, as she was called, could have not been a genius but merely a note-taker for Charles Babbages'² creation of the Analytical Engine.³ In this paper,

¹ Ada Byron King (1815-1852), has been credited with much of the development of the computer. For this reason she has received much notoriety including the Ada language. Ada once suggested to Charles Babbage about writing a plan for how the engine could calculate Bernoulli numbers. This suggestion has been referenced as the first “computer program” and was named after her, *ADA*. The Ada language is a high-level universal computer language developed by the American Department of Defense in 1977 named after Ada Byron for all her efforts and studies for the advancement of computing. Her fame stems mostly from the notes she took on Babbages “Analytical Engine.” Biographical information borrowed from, Dorothy Stein, *The Continuum Dictionary of Women Biography* (New York, NY: The Continuum Publishing Company, 1989). Additional information provided by Betty A. Toole, “Ada Byron, Lady Lovelace” (<http://www.scottlan.edu/lriddle/women/love.htm>, 2 pages). Hereafter *Betty’s web article*.

² Charles Babbage (1791-1871). Cambridge University student that devoted most of his life to his love of mathematics. Babbage built several prototype “engines”, funded by British government, that would later be credited to being the first idea of the modern computer.

³ Charles Babbages Analytical Engine is credit to be one of the first concepts of a computer that could control itself or be fed programs. The Analytical Engine was one of

I will explore the reasons why Ada Byron King should not only receive praise for her extraordinary notes on the Analytical Engine, but also to credit her as being the true hard working intellectual she was. I will focus my research on the details of her education. I will save the repeated stories of Ada's life history and accomplishments and present to you why she was more than merely a note-taker and was indeed a true academician.

Augusta Ada Byron was born the daughter of Lord Byron⁴ and Anne Isabella Milbanke⁵ on December 10, 1815. Augusta was named after her father's half-sister, Augusta, and Ada for an ancestor that had lived during King John's reign.⁶

many prototypes and unfortunately Babbage was refused further funds by the British government to ever finish his idea.

⁴ Ada's Father, George Gordon (1788-1824), later Lord Byron, was born in London. He was an English poet that led a very tiring life both emotionally and physically. His love lives were unstable and his health was equally matched. Biographical information borrowed from, *EB* 11th ed. (Cambridge: University Press, 1911), vol. IV, pp. 897-905. Additional information borrowed from, Betty A. Toole, *Ada, the Enchantress of Numbers* (Mill Valley, California: Strawberry Press, 1992). Hereafter *Enchantress*.

⁵ Ada's Mother, Anne, suffered from a poor marriage which enabled her to focus most of her efforts on her daughter. As a result of her own interest in mathematics Anne saw fit that Ada would excel in the field also. Her husband once referred to her as the "Princess of Parallelograms." Lady Byron was a very strict mother and when it came to education it was priority one for her daughter. Information borrowed from, Joan Faith Forman, *Ada: Aspirations and Accomplishments* (California State University: MA Thesis, 1986). Hereafter *Forman*. Additional information provided by Teri Perl, *Math Equals; Biographies of Women Mathematicians* (Menlo Park, California: Addison-Wesley Publishing Company, 1978). Hereafter *Math Equals*.

⁶ *Ibid.*

Lord and Lady Byron did not have a successful marriage and because of their separation in 1816, Ada was brought up by her mother. Ada's education began at the age of four when her mother saw fit to hire a variety of governesses who never lasted very long. Nurses, governesses and tutors were quickly dismissed if Lady Byron suspected an intimate relationship was developing between them and the child.⁷ When Lady Byron did not like the education being given she would fire the educator and then teach Ada herself until she hired new tutors. Ada never attended a formal school because it was common place of the time that formal education was only meant for boys.

Ada surprised many, including her judgmental mother, with her astonishing talents when she began to form letters at the age of two, showing an interest in numbers.⁸ Ada was very adaptable to new concepts, as noted by one of her governesses when she wrote, "She adds up sums of five or six rows of figures with accuracy. She appears to possess a mind well prepared to receive information - capable of digesting much and vigorously alive to every new impression."⁹

A Swiss educator by the name of Pestalozzi was one of the first educators to instruct Ada with blocks thereby teaching her the theory of design. One of Ada's governesses, Miss Lamont, commented that Ada was an animated child and found pleasure "in imagining for herself as she proceeded" rather than being guided by a model. Ada followed this pattern throughout her life.¹⁰

⁷ *Ibid.*

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ *Enchantress.*

Between 1828 and 1829 many things changed in Ada's life. One of the most significant of these changes was the fact that measles left her bed ridden from 1829 until mid-1832. As a child of 13 who loved her horses¹¹ one could imagine the pain and frustration Ada suffered. Her mother, however felt that being bed ridden was that of a blessing for she could now study even more diligently. To this mean, Lady Byron then hired tutors to ensure Ada's continuing education. Two more tutors, Dr. King, the head of the Brighton Cooperative Society, and his spouse, Mary, an Evangelical Christian, were also brought to teach Ada.

Ada called on the Kings to help her with her studies in Euclidean geometry, algebra, astronomy, and optics. Prior to this she had only known of the rudiments. Ada, eighteen at the time, wrote King, “....I must cease to think of living for pleasure or self gratification; and there is but one sort of excitement,.....that of study and intellectual improvement.”¹² At this time she saw fit to sacrifice the adolescent definition of fun and put her studies first and classify them as her “excitement,” to better her own welfare.

Miss Arabella Lawrence, a Liverpool educator, was also summoned to teach. Ada's tone had changed dramatically in correspondence to Arabella. Prior letters from Ada were reflective of her great excitement for the subjects and her love of her studies. Subsequently she

¹¹ Ada's horse's names were Slyph, Dubby, Flirt, and Tam O'Shanter. She also had racing horses by the names of Flying Dutchman, Voltigeur, and Teddington. This information was collected from, *Enchantress*.

¹² Letter to Dr. William King on Sunday March 9, 1834 from Ada Byron. Letter borrowed from *Enchantress*, p. 53.

now began to write to Arabella such things as, “I believe I have nothing very new to tell you about my pursuits...I was obliged to omit the Millar. I began to read it as usual, not thinking right...however, I found my head in a sad state of confusion, and getting extremely discouraged began to cry...”¹³ Ada’s mother did not take kindly to these writings and instructed Miss Lawrence to help curb the trait of the conversational litigation. I believe Ada was having trouble at this point with her sickness but her strong drive forced her to continue forward ignoring all physical ailments that plagued her.

Ada stumped and confounded most of her tutors. She had presented ideas and questions that troubled her tutors. William Frend, Lady Byron’s former mathematics teacher, taught Ada astronomy and algebra. A highly educated man who was dismissed from Cambridge University for religious views described Ada as superstitious and questioning. In a letter Ada cautiously questioned the significance of rainbows when she wrote, “...I am very much interested on the subject just now, but I cannot make out one thing at all, viz: why a rainbow always appears to the spectator to be an arc of a circle. Why is it a curve at all, and why a circle rather than any other curve? I hope I am not boring you with my ignorance...”¹⁴ This questioning further proves her vigor to proceed further than teachable and explore the unknown. It is apparent that she is almost cautious now to ask him questions that she feels may be ignorant.

¹³ Letter to Arabella Lawrence Sunday July 25, 1830. Letter borrowed from *Enchantress*, p. 41.

¹⁴ Letter to Dr. William Frend on March 15, 1834. Letter borrowed from *Enchantress*, p. 54.

Frend's daughter Sophia later tutored Ada as well. Ada seemed to grow fond of Sophia as noted in the letter to Frend; "...Pray remember me most kindly to your daughter Sophia, believe me,....."¹⁵
Sophia and her father greatly enhanced Ada's continuing education. Ada expressing her gratitude wrote, "...I have finished my Planetarium all but the part which related to the Ephemeris which I have not yet got. I m extremely obliged to you and your father for the excellent description you sent me..."¹⁶

As a girl, Ada exhibited great enthusiasm for learning. When it came to a new math theorem or book, she was always intensely excited. In a letter to Lady Byron Ada wrote, "Hugo's *Geometry*¹⁷ went yesterday by Creswell. I am much delighted with the entertaining pamphlet you left me on that subject. I possessed myself this morning of the preliminary part, which I found very amusing indeed. I am a little afraid of the Theorems, However I must attack them boldly & do my best..."¹⁸ Notice the adjectives she uses to describe her studies of math; "delighted", "entertaining", "amusing." Rarely would she describe her subject as tiring or boring. This exhibits her love of the subject and her vigor to excel.

After Ada had recovered from the disease that left her bed-ridden, Miss Lawrence was replaced by a series of tutors for chemistry, Latin, shorthand, and music. Notably, William Turner, Ada's shorthand

¹⁵ Letter to Dr. William Frend on March 15, 1834. Letter borrowed from *Enchantress*, p. 54.

¹⁶ Letter to Sophia Frend February 11, 1829. Letter borrowed from *Enchantress*, p. 40.

¹⁷ Hugh Montgomery's *Geometry* book was written by Paisley.

¹⁸ Letter from Ada to Lady Byron dated Friday November 22, 1828. Letter borrowed from *Enchantress*, p. 38.

tutor, offered much more than his lessons in shorthand. During his tenure, William and Ada had an affair, however their illicit affair was discovered and Turner was dismissed. After this Miss Briggs, Dr. King, Mrs. King and others gave her lectures continuously on the subject of love and sex.

On June 5, 1833, Ada met the 42-year-old mathematician Cambridge University graduate, Charles Babbage, at a ball. Charles Babbage built several prototype “engines”, funded by British government, that would later be credited to being the first idea of the modern computer.

In the autumn of 1841, Babbage reported his findings about the “engine” at a seminar in Turin, Italy. An Italian, Menabrea, published an article in French about what Babbage had reported. In 1843, Ada translated Menabrea’s article and showed Babbage her translation. Babbage responded by asking her to add her own ideas to the interpretation. Ada’s own notes were almost three times as large as those she started with. Later in her published article she predicted that his machine was capable of composing complex music, producing graphics, and could be used for both practical and scientific use. These notes are what contributes most to her fame and creditability.

In 1834 Ada met and befriended with Mary Somerville.¹⁹ Mary, being a great mathematician too, helped Ada with her studies. Mary let her borrow books and they frequently discussed math problems

¹⁹ Ada met Mary Somerville at the age of 17. Somerville was an amazing woman with many accomplishments including her translation of LaPlace’s works into English. Somerville’s text’s were used at Cambridge. This information borrowed from, *Betty’s web article*.

together. In a letter to Mary, Ada wrote, “I am afraid that when a machine, or a lecture, or anything of the kind, comes in my way, I have no regard for time, space, or any ordinary obstacles.” Here she expressed her thanks to Mary for listening to her questions and helping her even though sometimes she could seem loquacious about the subject at hand. Mary was also very fond of Ada. She encouraged her and loved to give her a hand. In Mary’s autobiography she writes, “.....Ada was much attached to me, and often came to stay with me....she always wrote to me for an explanation when she met with any difficulty. Among my papers I lately found many of her notes, asking mathematical questions.....”²⁰ I believe Mary was not only an important tutor but also a consequential confidant.

One of Ada’s most influential tutors of mathematics was Augustus De Morgan. Augustus was a friend of Charles Babbage and Lady Byron, and taught at the University of London. De Morgan’s gave Ada work to do from textbooks and he would field questions from Ada regarding what she did not understand of the readings. In a letter written to Augustus in 1840 Ada wrote, “...I am afraid that I do not understand what you were kind enough to write about the Curve; and I think for this reason, -that I do not know what the term equation to a curve means.”²¹

Among her great love of the horse and her true genius of the sciences Ada had many other talents. Ada was able to play many musical

²⁰ Quoted from, *Math Equals*.

²¹ Letter to Augustus De Morgan on Sunday September 13, 1840 stating Ada’s problem with a homework assignment. Letter borrowed from *Enchantress*, p. 122.

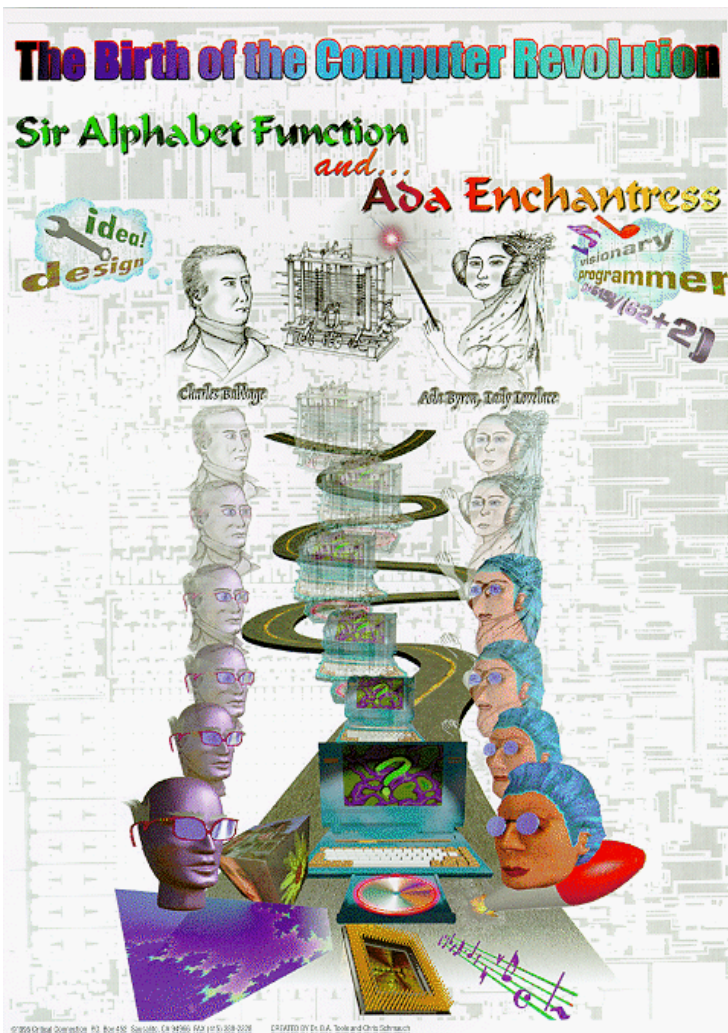
instruments including; piano, harp, and guitar. To her mother's dismay however, Ada did not like the opera. She found it very tiring.

I believe a true talent can only be sculpted and not bestowed. Ada's brilliance was not given to her from her teachers. Her teachers merely sculpted it into the thing it became. Ada's talents were that of her own and were laboriously earned. Ada suffered a very tiring life and a life full of intellectual stimulus. She was able to pull through many physical challenges that most could not do in her day. "Although it was usual for a young woman of her class to be educated, the education was typically superficial."²² Ada's education was not superficial. It was superlative. Without Augusta Ada Byron King, Countess of Lovelace's acumen we would have a lot less to learn from that era. Her contributions to the computer industry will always remain far beyond her time.

On the following page there is a wonderful poster that we had to publish with this piece. Entitled "The Birth of the Computer Revolution," it depicts Charles Babbage and Ada Lovelace as the founders of the computer and shows how they could have imagined their great works to become.

The usage of Alphabet Function, arrived from the lack of support Babbage received for his ideas. Some suggested a knighthood yet Babbage disregarded this as being a "b" knighted, and then referred to himself as "Sir Alphabet Function." This poster can be ordered by sending a check for \$13.00 to Critical Connection, P.O. Box 452, Sausalito, CA 94966.

²² Quote from, *Math Equals*.



This Poster was submitted by Betty A. Toole, 1995.

Specimen piece of Babbages Difference Engine

Directions

1. Put all the Bars so that the little cross bars are all parallel to each other and to the front of the Machine
2. Turn Bars N° I. one Round in the direction "screw in" being to this being only a fragment there is nothing to lock the Bars when necessary and of Bar II is a little out of place Bar I will not pass round. If the working point is locked Bar II is easily placed

Bar N° II half a turn in the direction "screw in" whatever figure is on the left hand disc will now have been added to the expansion on the right hand

Bar N° III a complete turn in the direction "screw in" and should a "carriage" have become necessary it will now have been made



Dear Sir Babbage will
you be kind enough to
send me the book of the
"Difference Engine" the
address is then given it had
to the amount to take on
your own
it is. I enclose

Dear Sir
is safe
delivered
your kind letter

Monday morning
I am going to
get me a carriage for
Tuesday
I am going to
get me a carriage for
Monday morning
I am going to
get me a carriage for

Calculating part of the whole
machine is but a repetition of
similar part. It was intended
to have had 18 figures in the
"column of Result" and a few

On the previous page, there are two undated letters from Ada Lovelace together with Babbages son's instructions for operating a section of the Difference Engine and the medal awarded to Babbage in 1824 by the Astronomical Society of London.

The first letter on paper hallmarked 1838 and attributed in a later hand to 1840 or 1841, asks for an acquaintance's address: it is addressed 'Dear Mr. Babbage' and signed 'A.L.', and refers to an impending visit to London. Neither letter mentions the subject of calculating.

**Contributed by Dirk Craeynest, original from
<http://www.londonmall.co.uk/babbage>, 114 KB 535x699 JPEG)
For our purposes, we converted them to 256 color bitmaps.**

David Kindle is currently a programmer at a Naval Contractor. He makes interactive multimedia programs that are used to train students via the computer medium. David is finishing his masters degree at the George Washington University and is majoring in Information Systems.

Internet Humor from Anonameese(s)

Auto Mechanics?

There was once a mechanical engineer, an electrical engineer and a computer software engineer riding around in an old Fiat 124. Not too much later the Italian car suddenly coughed, backfired, and then broke down completely. "It's probably a valve or a piston problem", said the mechanical engineer. "Nonsense", said the electrical engineer, "it's most likely a spark plug or the battery." At which point the software engineer declared, "I know. Lets all get out of the car and then get back in again!"

Greatest Fears Since I Got My Computer

My new cyber girlfriend turns out to be my grandmother from Toldeo, O.

Being reincarnated as a 386X33 with no modem.

Receiving a call from Steve Case congratulating me for spending the most money ever in one month since the creation of AOL.

Getting my posts poofed.

Having a friend come over and see my other four screen names.

Getting a thank you note from the electric company.

While sending my gif, having the computer tell me it's too ugly to transmit!

Finding out the gif I received from someone was taken thirty years ago.

Coming back from vacation and to find that I was still connected to AOL.

Seeing my cat dance on the keyboard and connect to the world wide web.

Windows 95!

SOME HELPFUL HINTS

If you're bidding for a job for UPS, don't send your bid by FedEx.

If your computer says, *Printer out of Paper*, this problem cannot be solved by continuously clicking the OK button.

No matter how much data you add to your laptop, it will not get heavier.

A bad place to store your emergency backup diskette is on the underside of your desk drawer, secured by a large magnet.

When the PC says, *Insert diskette 2*, don't do it immediately! Remove disk 1 first, even if you're sure you can make them both.

When your PC says *You Have Mail*, don't go to the company mail room and look for a package.

The French version of Netscape Navigator doesn't translate English language web pages into French.

If you go to the computer store to buy a mousepad, you don't have to specify whether it's for a Windows or a Macintosh.

DILBERT'S LAWS OF WORK

A pat on the back is only a few centimeters from a kick in the butt.

Don't be irreplaceable, if you can't be replaced, you can't be promoted.

You can go anywhere you want if you look serious and carry a clipboard.

Eat one live toad the first thing in the morning and nothing worse will happen to you the rest of the day.

When the bosses talk about improving productivity, they are never talking about themselves.

If at first you don't succeed, try again. Then quit. No use being foolish about it.

Everything can be filed under miscellaneous.

Never delay the ending of a meeting or the beginning of a cocktail hour.

To err is human, to forgive is not our policy.

Anyone can do any amount of work provided it isn't the work he/she is supposed to be doing.

If you are good, you will be assigned all the work. If you are really good, you will get out of it.

You are always doing something marginal when the boss drops by your desk.

People who go to conferences are the ones who shouldn't.

If it weren't for the last minute, nothing would get done.

When you don't know what to do, walk fast and look worried.

When confronted by a difficult problem you can solve it more easily by reducing it to the question, "How would the Lone Ranger handle this?"

No matter how much you do, you never do enough.

Cookies in the Oven

Copyright 1996 by Daniel Christle

Last month we discussed some of the issues related to marketing on the Internet. That is, the ability of marketers to compile lists from forms, news-group postings and cookies. It is the seemingly innocuous cookies.txt file I want to discuss with emphasis upon the pros and cons surrounding this controversial file.

For those of you who don't know what a cookie file does, it is simply an encrypted file that allows a web site to store information about you on your computer. That's right, - on *your* computer! Many examples abound about the use of cookies but the two best I can think of are shopping carts and personalizations. Shopping carts are used when you visit an online mall such as the Internet Shopping Mall and you add products you wish to purchase to a shopping cart before you go to checkout to finalize your purchase. That shopping cart is actually a cookie file on your system that tracks your purchases for the web site. Personalizing a web site, which you can do at either Netscape's home page or MSN's home page is done with the use of cookies. In fact any site that can greet you personally is using cookies to tell it who is visiting. These are just two examples of the many exciting things that can be accomplished with cookies.

In the age of information where knowledge is power, marketing efforts are under way to build a profile about you. They want to know

your tastes, interests and anything else about you so you can be marketed to effectively. In that particular race, the cookie is just another tool.

Given all the neat things that can be done with cookies why are they so controversial? The fact that they even exist leaves no doubt that another computer can gain access to your system without your knowledge or, for that matter, permission. This can leave some people a little unnerved. After all you do keep many personal things on your computer. In actual fact the threat for unwanted access is higher for corporate users than home users. The corporate arena has much more at stake in terms of valuable data than my check book or credit card account does. Cookies are also controversial because of the information they provide to marketing firms. Everywhere you go, on the web, use of cookies will leave a trail of where you've been that gives marketing companies all kinds of information about you. This is not necessarily as bad as it may seem. The information will tell them what you like to see and how many times you have been to specific web sites. However the temptation for abuse is also present. Only time will really tell if access to this file will lead to abuse of the information it provides.

The good news about cookies is that your browser will only send a cookie file to the server that it came from. Further, the server can't tell what other cookies have been placed on your system by other servers. In this way you are somewhat protected from a server getting misleading data about your surfing habits. In fact the cookie file is but a text file that is a store house for up to 255 characters of information. Most cookie files are used to help enhance the sites they come from by providing the webmaster information about what people like to see

and what is not interesting to you. The data that cookies provides can be useful to plan for the functionality and attractiveness of the site.

The bad news is that cookie files can be used to store your credit card number if a server instructed it to do so. The fact of that matter is that it would actually be more secure than your emailing your credit card number across the Internet. Most sites would rather you enter this information into a form and then store it in a database with your order where they can more easily and securely track the information.

A bigger problem is when your private information can be manipulated and/or used against you. An example in the extreme would be if you visited a number of sites that advertise alcohol (and lets face it some of those beer companies have great web sites) and you end up on a list that your insurance company purchases. The list compiled from a variety of Internet sites shows your name as someone who frequents sites that promote alcohol, or at the least as someone who is a prime prospect for alcohol sales. They raise your premiums on a profile that has been built about you based upon the sites you visit on the Internet.

Someone assumes this is an accurate profile and never bothers to speak with you to understand *why* you are interested in this type of site, and then acts upon this erroneous assumption. This leaves you in the position of defending yourself, or at least negotiating from a disadvantage against data which is in fact true but does not accurately represent your habits. This scenario may never happen but the door has been opened. This is not that far fetched a possibility. Just ask anyone who has been victimized by an inaccurate credit report.

So with this in mind how do you go about protecting yourself? The answer is really to use common sense. With Netscape and Internet Explorer you can set your options so that you are warned before your browser accepts a cookie. This is a good exercise to try as you will be amazed at how many sites use cookies as you surf the net.

Never give out your credit card number other than when you are using a secure site. If you are prone to shopping on the Internet, and a few of us are, make sure you track your expenses and reconcile them to your statements. If the unthinkable happens you are much more likely to get help from your financial institution if you do. Only give a site the information you want them to have - not everybody needs your home phone number or address. It is always a good idea to ask yourself why they want the information before you submit it. If it is a marketing or support based site then the answer is obvious. If there is no mention of sales or follow up on the site then they are really suspect as a site that sells names. As I have said before you are only as anonymous as you want to be.

In the end the cookies.txt file on your hard disk doesn't have to be a danger to you or your computer. It can help enhance your travels across the World Wide Web by personalizing sites and letting webmasters increase the usefulness of their websites. The worst thing about the cookie file is that it does, in fact, prove that your hard disk can be accessed and if a server is properly configured and they are really motivated, that information could be used against you. By using common sense about the kind of information you provide, you will be able to kick up your heels and enjoy your travels.

Dan Christle is actively involved in the Winnipeg PC Users Groups and can be found regularly on the Ilink network. He is employed in sales for Link Logistics an ISP which provides online services to the trucking industry. Dan is a regular WindoWatch contributor.

A Framework for Debate on Electronic Privacy:

Finding the Middle Ground
Copyright 1996 by Lois Laulicht

It is impossible to ignore either the newest cyberspace frontier, that of electronic commerce, or the profound impact its promise has had upon the Internet community. The intense and rapid changes which have come, have also spawned new and sophisticated tools creating far reaching and permanent consequence. Legitimate fears of invasion of privacy have come to the fore because many have felt under attack and see their electronic bailiwick slipping away and changing in unacceptable ways.

Regulars to the super highway are being forced to look at these new, to this environment at least, challenges to both personal privacy as well as perceived attacks upon constitutional rights. Large numbers of Internet newcomers are raising the economic stakes while firmly establishing and integrating both business and traditional net activity into the mainstream society. Fears of creeping federal control seem to overshadow valid concerns of defense of unpopular or dissenting opinion, the protection of minority groups and safety of our children, along with the very heart of one's electronic life, the sanctity of one's personal computer. Defining the parameters of right and wrong become difficult when trying to get a handle on conflicting streams of concern, - how they differ and where they are similar. Indeed these emotionally charged issues are often inter-twined and imprecisely

defined making it even more difficult to limit the scope of this turf for much needed and objective debate.

Certainly, we can all agree that ours is a democracy which regularly accommodates itself to the conflicting and often contradictory needs of its people. To oversimplify, will it become necessary to rank order priorities between respecting an individual's freedoms i.e. speech, dissent, press; against those which protect the public at large and restrain potential excesses of law enforcement?

There already exists a body of *American* law which deals with most of the issues under discussion. However, we must remember the international complexity of the Internet and that our Congress has only the power to legislate for the US while our courts may only interpret for our population! In any case, existing law doesn't appear to fit, - to some at least. For whatever the reasons, probably the free wheeling character of the Internet, that which is appropriate for the greater society is not being implemented in an even handed way in terms of Internet crime. For some, basic issues of privacy and freedom come to light after the fact as an expose of alleged law enforcement abuse or the other unacceptable extreme, of locking the door after crimes have already occurred. The Internet, at least that part of the Internet which is based in the United States, is not the equivalent of a duty free shop. The laws which apply to the greater American society apply to the American Internet as well. That is our premise!

Those of us familiar with Internet tools are acutely aware of the ease to steal information of a private nature from a surfing computer. The targeted information potentially can range from financial information for illicit use like credit card numbers or bank IDs to quite legal

appropriation of data base information for marketing purposes. We may dislike the reselling of postal mailing lists as much as we abhor the exchange of electronically gathered data. Neither, however, is against the law. As marketing has been seen as a driving force on the Internet, the profit motive give Internet based companies sufficient economic reason to reach you. One thing is certain however! As the world gets smaller, degradation of privacy increases.

Those who are a part of the online world have seen the darker side of human behavior surface. People throw out their manners as flame wars get out of hand, sometimes escalating into threats when opinions sharply differ. A recent issue of Internet World (October 1996, p. 12) showed the publication of a letter under the title of The Wrong Spirit. The author of the letter tells how she had to file a report with the FBI after receiving death threats via the Internet. These threats upon her person were an outcome of opinions which markedly differed from those of several lurkers in Buddhist and Meditation Usenet groups. An extreme example? Perhaps not! Hate groups abound off and on the Internet. Threats are a form of intimidation and control.

Who cares:

Ordinary citizens who don't break the law are concerned that their individual rights are being finessed away to deal with the *bigger* issues of apprehending criminals and making profit. On one hand they feel that law enforcement must be allowed to do their work and that the society and its children must be protected.

Nonetheless, they worry for ordinary folks who suffer when the law fails to protect them from quite legal, it appears, invasions of privacy. As this applies to business, some say they would rather not have

government regulate commerce any more than it already has. It is disturbing to discover that a company knows more about you than it should, but is it against the law? Does telephone or email harassment by business eager to sell goods and services any less an infringement upon privacy than benign(?) electronic snooping into your computer system?

An unusual coalition of the liberal left and conservatives has emerged, each with quite differing agendas and supported in political terms by incompatible groups of people. As a result, the skewing of the debate to the polar extreme has left the middle ground almost without proponents or perhaps more precisely, without an articulated position. Most of us have learned experientially that there must be protection of the many where consensus of goals and benefits are inclusive. This middle ground has become elusive in the midst of heated rhetoric leaving little room for common sense approaches to ameliorate extreme views. Attitudes of "what is right for us is right for you" or "our view is the only view that counts - please don't express yourself" seem to prevail.

The Internet Community:

This new social and technological phenomena has grabbed the attention of many for both legal and illegal activities. This mini society has been described as an anarchy that has been separated from the main stream of the society both by choice of its citizens who frequent its pages, news groups and chat rooms and because of the specialized knowledge necessary to initially gain access.

The language of the Internet is computereeze be it spoken in English, German or Japanese. It is also tilted toward white Anglo-Saxon males

under forty. That is rapidly changing as access becomes more easily achieved by other nationals, women and minority groups, less affluent citizens, and those with less formal education. Because of the ethno-centric character of the Internet (WASP) their values appear to dominate during discussions relating to freedom of speech and the Internet. The Internet erupted into a blaze of blue ribbons protecting free speech after enactment of the Communications Decency Act which was subsequently set aside by two federal judges. This Act would have decreed *undefined* indecent material illegal. For example, any town council could try to keep local library users off the Internet because of their generalized fear of unspecified indecent material. They define indecency as opposed to definitions created by the existing body of law, the Constitution and precedent, the rulings of judges for over 200 hundred years.

Federal law enforcement has legitimate concerns and obligations. The Internet can be a very anonymous society, and as a result, has also become a place for criminals of all stripes to hide their activities. These include political extremists like neo Nazis and Skin Heads who organize and recruit members in order to disseminate their views and activities all buried under the guise of innocuous mail and conversation. There are garden variety crimes of drug trafficking, money laundering, bank robbery of the white collar variety, gambling and book making; pornography, and sexual harassment. There have been allegations that pedophiles have lured children (a situation commonly referred to as trolling) into situations where minors have been abused and worse.

We know that recipes for bombs can be found, computer viruses freely distributed and that fringe groups functioning on the edge of

the law advocating sedition have operated with impunity until quite recently. It is also of note that one must first be intent on finding such information. While it is freely available it doesn't just land in your computer by mistake!

Marketing and Sales:

Although presently no one is making any real money on the Internet, everyone knows that the potential for profit is there. Ordinary business is present and growing. While perceived as beneficial by many, it is damned by others. Think of any commercial enterprise and it can be found on the Internet. This presence has also attracted shady elements which have traditionally profited on the fringes or illegally at the expense of legitimate business. As in the mainstream society, the Internet provides a place for the unethical tricks of marketing and sales; the reselling of private information for monetary gain be it lists with email addresses tied to social security numbers to selling useless or nonexistent goods to the unwary. After all, with the possible exception of software, you really can't see, touch or smell what you are buying.

Our computer systems are vulnerable to those who chose to profit from our private information if we do not insist that software be constructed to protect us from very common intrusions and sometimes benign snooping.

A case in point is a file called cookies.txt. This small file, which is stored on your hard disk, is used by browsers to help store information about how you want to access a certain page when you go back for another visit. The information it contains is used by the web server that stores the page you are visiting and can detect this file on your

system reading information from it. *It can also be used to store credit card information for sites that require per use payment.* In this issue there is an article by Dan Christle describing what a cookie file can do. Some of us however, are sufficiently concerned about the open access to ones computer provided by cookies that we have tagged this file as read only. This prevents another computer from *writing* information onto your hard disk. From the point of view of this writer, the less that is available to a curious web page owner, the better I like it!

Sovereignty, International Commerce, Terrorism and Encryption:

One of the more compelling arguments for giving the FBI and other federal law enforcement agencies more power to tap phone lines or search and seize potentially incriminating evidence, is the threat of international and domestic terrorism. We have seen the murder of victims who committed no offense except to be in the wrong place at the wrong time. We have also seen federal authorities abuse power in the name of solving crime. Somewhere between this pair of facts we must find a method to protect our citizens and bring perpetrators of heinous crime to justice.

There has been the claim by the federal establishment that encryption of international messages and documents give felons an edge that cannot be neutralized using ordinary means. Many of us are very nervous about handing over duplicate encryption keys to anyone particularly any arm of the government.

To add to this complicated mix, the Canadian Police Chief Association recently announced their intention to push for laws that will govern the Internet. The anarchist demeanor and reputation of the Internet is something many governments want to control as more of their

compatriots go online. But how does a nation control an entity that is multinational in nature? Do most governments have either the technical or monetary resources to control the Internet with unilateral agreements limited to enforcement using authorities such as Interpol? With control or government regulation does this mean that, weak as they may be, attempts to self police the Internet is dead along with the free flow of information?

We can legislate behavior and rules of conduct for ourselves but for no other societies. Although the Internet is a creature of the American Defense establishment it has long since ceased to be a creature of just America. Further, there exist enormous barriers to protect American corporations abroad short of unilateral agreements and enforcement. American corporations claim huge losses of revenue as a result of theft of their property. However, one has to note in passing , that while at home these very same corporations lobby for regulation free environments. The Clinton Administration advocates encryption and demands a copy of the key to protect the peoples interests at home and abroad. This sends a mixed message and Internet denizens retort with accusations and fears of Big Brother. Issues of freedom of speech and protection under the law are like being a little bit pregnant with everyone getting very nervous and looking hard to slap a paternity suit on almost anyone who might fit the profile. Big Brotherism is always a fear in a society that remembers the reality of a Hitler and Stalin and recently the bombings of the Federal Building in Oklahoma City and the World Trade Center in New York City. When does the public interest kick in and take precedence or add weight to questions of freedom and privacy. Does the government have the right to inspect our baggage and get profiles on each of us before access is granted onto a commercial flight? Or conversely would a government be

negligent if it didn't take steps to protect its people from both International and home-grown terrorism?

The drug business parallels the Internet. Both are International in nature and operate outside of government control. Each government has its own laws to deal with drug crimes and we will probably see each country try to initiate their own laws for regulating their own little piece of the Internet.

In the United States, drug busting justifies all sorts of privacy invasion stretching the limits of authorized and non-authorized wire tapping; from garbage picking, to issues of tax and banking records, to exaggerating the truth to a judge in order to get a search warrant. In value terms, drug busting is the starkest example of our national dilemma. The huge amount of money changing hands and being laundered has to exceed the gross volume of sales by the automobile industry. The consequence of this huge international money machine negatively effects the entire world with examples too numerous to mention here.

For law enforcement to have a crack at controlling these activities, law enforcement must have the tools to do so. Here lies the crux of the dilemma as it relate to regulating the Internet. Are the laws and enforcement tools which now exist, sufficient? In terms of the drug scene many would agree that we have asked law enforcement to engage in very dangerous work without giving them adequate tools. We know that the Internet is being heavily used by the drug industry. So in order to give the government the ability to police the illegal and dangerous international drug interests are we opening the door to police the Internet risking more infringements upon our rights?

A Final Thought....the Unhappy Accident:

Very recently I had an experience which was an eye opener! No one tried to do me harm, but effectively, a legitimate request for information and my willingness to cooperate, had the potential for doing just that! Like many homepage owners, a visit to a much respected computer industry publication triggered a request for my purchasing habits. I wanted the free hard copy subscription to their publication so I complied. It was a detailed interview which took place early in the fall and I thought nothing more of it.

Very recently I decided that I had to follow up on mail coming to the magazine indicating that many links were out of date. This had been brought about as a result of our change of ISPs. After doing several key searches, notifying web masters of necessary updates I decided to close down this boring housekeeping chore with a search on my name.

My boredom changed to shock! Imagine my reaction to have that entire *secure* interview scroll down the screen! All of it!

I was very lucky because this is a reputable company that actively worked with me to clean up the mess. In a matter of several days the problem was solved. However there remain two issues which should be mentioned. There was no malice in this case on either side. I dread thinking about what a less decent outfit might have done or more importantly, not done. It is fair to assume that they too consider themselves fortunate that I am not a litigious person. However there remain questions of liability and establishing loss for everyone who regularly does business on the Internet.

It appears, according to their logs, that I was the only victim. The hole is plugged and hopefully no one else emerges weeks from now. The Internet does not function in a vacuum. When computers interact with each other exchanging information to the physical world potentially, they can initiate *real financial losses*. Is that when we start paying closer attention and attempt to reach working compromises?

We can readily see the possibilities of genuine exploitation for gain at the local national level, that is the United States. The problems and conflicts are real with no easy solutions. The ground rules for acceptable international solutions are even harder to get a handle on.

These are but some of issues that need to be seriously examined and vigorously discussed. People need to voice their concerns before they are drowned in the noise of commercialism and politicking. And finally, creating solutions to these dilemmas are only as good as the behavior to engage in civil debate and flexible problem solving.

I want to thank both Leonard Grossman and Dan Christle for reading parts of this essay. The point of view taken is obviously my own and my responsibility.

Lois Laulicht is the Editor of *Windo Watch*



Paul Kinnaly's sunset: He says "harkening back to CLOSE ENCOUNTERS OF A THIRD KIND"



Herb Chong's Lost Island

Closing the Worker Technology Gap II

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Before we go back to the details of the computer training we're putting in place, it's important to understand what computer equipment is presently in use and the operating systems we run.

Our system configuration is quite typical of most small and medium size business establishments. We have no Win31 boxes but rather fifty-three DOS PCs, five Win95 boxes and four Netware Servers, one using 3.11 and three 3.12. We also have about fifteen dial-in users running everything from DOS, Win3.1 and Win95 all using PCAnywhere to connect through our Comm_Server running Netware Connect. Our DOS boxes are all diskless 386SX-16s, running DOS 6.22, WordPerfect Office 3.0, and WordPerfect for DOS 5.1+. Additionally, we have a small assortment of Castelle Print/Fax servers and a couple of scanners.

Our upgrades and acquisitions will move the system to two or three P6-200 WinNT Servers, keeping one of the Netware Servers, and replacing all of the in-house computers with P6-180s running Win95.

Getting back to the main event, last month I described the first three phases of my training program here at Damon Key. They are:

- 1. Educational Flyers which are distributed in the employee lounge.**
- 2. Computer Periodicals strategically placed for increased circulation.**
- 3. Lunch-Time classes on computer subjects.**

Since last month, the weekly Educational Flyers, in particular, have really taken off. There are now half-a-dozen people in the office who've requested to have copies of the latest flyer sent directly to their office so that they can have their own copy to keep and refer to.

Also, we trained nineteen people in our *Introduction to the Internet* class. Among them, are people who have long been considered computer phobic by our IS staff.

The next parts of our training program are still to come. They fall into three basic sections:

- 1. Train the Trainers / Develop Mentors**
- 2. In-Depth classes.**
- 3. On-Line Education.**

The first section, Train the Trainers, is where I have put together some intermediate and advanced classes for the people in our firm who will be expected to field questions from our users. The mentors include the Systems Administrator, General Manager and the General Manager's Assistant. These particular classes are geared more towards troubleshooting and resolving issues for the user rather than teaching the actual use of the software products. Even so, the mentors certainly should be able to minimally use the software as well as trouble-shoot them.

The first "Train the Trainers" class will be on some of the intermediate features of Win95. We'll talk about configuring Printers, creating/managing shortcuts, the basics of the Network section of Control Panel, an explanation of what the Registry is and other gen-

eral computer issues designed to help them help users. I don't expect that they will be able to do heavy duty trouble shooting, but having them available to solve the less complicated problems like - *How do I change printers?* will remove some of the load from us.

An unexpected educational opportunity has arisen as a result of security concerns from the directors. It became clear that there was a lot of misinformation about computer viruses in circulation, so we've scheduled a seminar and invited all interested parties to discuss the basics of Computer Viruses: What they are, what they aren't, how you can get them, and how you can't, and most important, simple precautions to take to keep a system virus free. I'm hopeful that by the end of the class the seven people who have already enrolled, will be better educated, less fearful, and equipped to take intelligent precautions to stay protected while not denying important services out of irrational fear.

The second section, In-Depth Classes, is where our Systems Administrator will take small groups of end users and lead them through extensive training in the actual, day to day, use of the software products we primarily use. We hope that the entry into these classes will be eased by our earlier efforts: Flyers, Magazines and Lunch Classes. Here we will find out if the earlier measures were successful; our end users should have a good base of knowledge and a positive comfort level with which to start the In-Depth Classes.

These In-Depth Classes are designed to help users with general hands-on Windows training. Topics include printing, opening files, using the Find File features, desktop management, using the taskbar, cutting and pasting as well as a tour of the main features of each product such as spell checking, formatting, templates, macros, etc. By the

time they leave they should be equipped to handle their daily tasks using these applications.

The third section, On-Line Education, is where we make available to our users a Knowledge Base, FAQs and simple documents like our Educational Flyers, on-line through their computers. We can then encourage them to pursue their questions by reading these materials whenever possible. Hopefully most of the common problems will be covered in the FAQ, and answered with an easy procedure, so that our users can solve many of their own problems without having to rely quite so heavily on the ISD staff.

We also intend to carefully field questions that are answered in the product manuals and evaluate *why* the question came in. Why didn't the user get the answer from the manual themselves? Was the issue covered in the manual ? If it's a case of the manual being too difficult to understand, then we'll attempt to rewrite the section in question and post our edited version, along with the question, in the On-Line FAQ.

If it's a case of the manual having covered the issue but the writing poor or unclear, or even too difficult for them to find the information they need, then we'll try to create a FAQ with easy to use references to page numbers. If a question comes up too often, we'll have to try to organize a class session to address that specific issue.

As new people join the firm, we'll have to run them through the In-Depth classes, point them to the On-Line materials and encourage other users to help them get up to speed. This is expected to be one of our biggest challenges - as new people come into the firm who do not

have the benefit of all of the preliminary education that our veteran users will have.

Our goal in all of our training is to make the users as efficient as possible. Along the way we want them to be self-sufficient when it comes to dealing with computer problems or questions that are basic or can be easily answered with reference materials. The ISD department should be free to handle the complex technical issues, develop macros and templates and be focused on upgrade and expansion issues.

Will we reach our goal? Only time will tell. I can say that in the three months that we've been ramping up this program there has been a noticeable increase in the computer savvy of our users. People who barely saw past the keyboard and monitor can now explain, in basic terms, what RAM is and what a GUI is. That increase in comfort and knowledge is bound to pay dividends in efficiency, independence, training and troubleshooting down the road.

Ben M. Schorr is the Director of Information Services, for now, for Damon Key Bocken Leong Kupchak in Honolulu, Hawaii. Ben has been writing the LASTWORD for several years and continues to give our readers his unique perspective...even with a gorgeous lei around his neck.