



**Transfer Tricks**  
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Over the years I have often worked with “sneaker net” arrangements – trying to transfer and maintain a group of files among two or more computers without benefit of electronic connections. Most recently I have been working with a group of about 450 files (mostly word processing files, with a few spreadsheet and graphic files) organized into 59 folders and subfolders, all taking up about 24 megabytes.

Three PCs are involved, (1) a Pentium with one hard drive and a Zip drive running Win95, (2) another Pentium with two hard drives and a Zip drive running Win98, and (3) a 486 running Win3.1 on top of DOS 6.2.

Each of the three machines has a 3.25 inch floppy. The second hard drive in the second PC is an older, smaller (540 mb) drive using FAT16. I use it for data files.

A backup program can be used to back up files to tape or removable disks (such as floppies or Zip disks) to be used to restore lost or damaged files on the same computer. In addition, backup programs can generally be used to “restore” files to another computer. The backup program thus becomes a means of transferring files from one computer to another via the removable medium. Of course, multiple copies of the software used are required on both computers, as are devices that will read and write to the medium.

I have two copies of the old Norton Backup for DOS. One is installed on the 486 (Win3.1, and therefore FAT16). The other is installed on the second PC (Win98), on the second, FAT16, harddrive. I am able to run the Norton Backup program on the second PC if I restart in DOS mode. I can then use it to back up or restore files to floppy disks and exchange them with the third PC, the one with Win3.1 and DOS 6.2.

I find that Norton Backup reads the file structure and makes its calculations very slowly on the Pentium computer in DOS mode. I am careful not to let it try to read the first hard drive with FAT32. If I try, it trips up. I am not sure whether that has to do with the FAT system or simply the sheer number of files on the first hard drive.

So, using Norton Backup for DOS, I can transfer files between the Pentium with a small, second, FAT16 hard drive and the 486. I customarily keep Norton backup configured to verify its backup and restore (reading and comparing files after they are backed up onto a floppy or restored to the other hard drive). I keep it set for the file compression method that saves disks. I use the restore setting that allows over-writing only older files. Most of the time, I do only an incremental backup, backing up only those files from one hard drive to floppies that have been created or changed since the previous back up. This scheme enables me to keep data files on the second and third computers in synch with each other.

To transfer data between the two Pentium computers I use a different scheme. Xcopy is a DOS utility that copies groups of files. The copying procedure can be used with groups of files, directories (folders) and subdirectories (subfolders).

[Historical note: A decade or more ago, Compaq’s version of DOS differed somewhat from the then PC-DOS (distributed by IBM) and MS-DOS. I remember Compaq DOS having a variation of Xcopy that allowed one to copy files from one source to another without over-writing files with the same or a later date. I never found that feature in MS-DOS until moving to Win9x.]

Win9x has two different Xcopy programs. One of them (Xcopy.exe) runs if you re-start in MS-DOS Mode and use the Xcopy command. The other (Xcopy32.exe) runs if you are in a DOS window. That is, if you have called the MS-DOS Prompt shortcut on the desktop or if you have clicked the MS-DOS Prompt under Start, then Programs, Xcopy32.exe is available to you. Then, Xcopy32 will execute whether you enter a command Xcopy or Xcopy32.

Xcopy.exe is like the Xcopy programs I remember in earlier versions of MS-DOS. It allows for fewer parameters (directions given after the Xcopy command at the DOS prompt or in a batch file).

Xcopy32.exe allows for additional parameters. One of them, /D, prevents copying a file to a location where a file of the same name exists, unless an older file is being replaced.. I have written batch files that call Xcopy32.exe, which I keep in the root directory of a Zip disk, to transfer files between the first two PCs, those running Win9x.

Here is the sort of batch file I use to transfer files from the second hard drive (D:) of the second PC (with Win98) to a Zip disk. Note, all the folders involved are organized under *d*:\MYFILES, where *d*: is the root directory of the hard drive involved, D: in this example. Because this batch file is run from the Zip disk it does not require the drive letter of the Zip drive in the destination parameter.

```
REM THIS BATCH FILE COPIES CERTAIN FILES
REM FROM THE PENTIUM 2 WITH WIN 98 TO THIS ZIP DISK
REM USE THIS FILE IN A DOS WINDOW, NOT A
REM DOS SESSION, TO CALL XCOPY32.EXE
XCOPY D:\MYFILES\*.* /S /D \MYFILES\
```

There are several parameters after the XCOPY command.

D:\MYFILES\\*.\* specifies that all the files (\*.\*) in the MYFILES folder on drive D: of the computer will be copied.

/S specified that files in the subfolders of MYFILES will also be copied.

/D specifies that in copying, newer files will not be replaced. The first time this batch file is run ALL the files in ALL the folders will need to be copied. Subsequently, only files that have been created or changed (and have a more recent date/time stamp will be copied.

\MYFILES\ is the destination parameter and specifies that the data copied from the hard drive will be placed within the folder MYFILES in the root directory of the Zip disk.

Copying files from the Zip Disk to the other computer's hard drive uses a batch file like this:

```
REM THIS BATCH FILE COPIES FILES ON THIS DISK
REM TO THE HARD DRIVE ON THE PENTIUM 2 WITH WIN 95
REM BUT SHOULD NOT OVERWRITE
REM FILES UNLESS THEY ARE OLDER
REM USE THIS FILE IN A DOS WINDOW, NOT A DOS SESSION, TO CALL XCOPY32.EXE
XCOPY \MYFILES\*.* /S /D C:\MYFILES\
```

By transferring files between the two computers that have Zip Drives and by transferring files between the computer with the older, smaller, FAT16 hard drive and the 486, all the data files stored in the substructure of MYFILES can be kept synchronized..

**File Formats and  
Compressions**  
by Alex Dumestre

Graphic file formats are often viewed by confused users as works of Satan whose only purpose is to torment them. I hope to show you that this view is only partially correct. In writing this article, attempting to give a systematic explanation of some of the underlying technical questions as well as some practical guidelines, I was soon convinced that I could not fit it within the usual space limitations of this newsletter. The solution chosen was to write a two-part article to be published in two consecutive issues. This first part will contain most of the more abstract parts of the set while the second part will finish up on another abstract concept – compression – and then concentrate on the practical.

Lets start our graphics discussion with a simple example of a small 10 x 10 unit white background with a black cross on it. The arms are eight units long and 2 units wide and cross in the center. That leaves a one unit white border around the cross as shown in Fig. 1. Reread the previous three sentences carefully and determine if they contain enough information to completely describe the drawing in Fig. 1. Could you read those three sentences to a friend over the telephone and expect the listener to be able to draw Fig. 1 perfectly? Sure – if the listener paid close attention. That description is pretty much the type of information that is encoded in a vector graphics file such as is used in CAD and other types of drawing programs; but it is not the way the information is encoded in the more common type of raster graphics that we see on web pages and produce with paint programs. Why?

Well, for one thing, our sample picture was very simple geometrically and therefore could be easily and accurately described. More complex drawings, and worse yet, black and white or color photographs of people's faces or mountain landscapes would be impossible to describe over the phone in sufficient detail for the listener to create a perfect copy. Yet we do send beautiful, perfect copies of pictures over the Internet and attached to e-mail every day – how?

Raster Files. When the computer displays graphics on your monitor, they appear as a rectangular array of picture elements (pixels). Computers can't store shapes or colors in files, they can only store strings of bits. We'll spend the rest of this article talking about various methods for turning pictures into bit-strings and bit-strings into pictures in simple and/or efficient ways.

Raster files describe each pixel of a picture in a fixed order (e.g., from left to right starting on the top row, followed by each row below, until the last row is finished). If we elect to make a 0 bit represent white and a one bit represent black then we could define our cross drawing in Fig. 1 by the following string of bits:

```
0000000000, 0000110000, 0000110000, 0000110000, 0111111110, 0111111110, 0000110000, 0000110000,
0000110000, 0000000000.
```

I inserted commas at the end of each row to make it easier for you to follow what is going on but the computer doesn't get distracted as easily as you do so the commas are not part of a real raster file. By the way, this bit-string is usually called the bitmap of the picture. (This is lower-case "bitmap" not necessarily the same as Microsoft's BMP file).

The (mythical) PCN Format. Let's define our own file format (everybody else seems to do so) and call it the PC News format and use the extension PCN. Any real raster file would need a little more information in addition to the string of 100 bits in order to work – it needs a header. What might be in the header? Lets design ours right now. We'll use the first three bytes of our header to contain the ASCII code for the letters PCN. Then let's list the dimensions of the bitmap that is in the file – in our example that would be 10 x 10 – in brackets. That ends the header which, spelled out here in characters rather than in bits for convenience, will be PCN[10x10]. It is followed by the 100-bit bitmap shown above. This is all written to a file that we will name cross.pcn.

Let's see what use our heading serves. Say we have written a paint program to read PCN files and display the contained picture on our screen. We feed this program a file and the first thing it does is read the first three bytes in the file to confirm that they contain the characters PCN. If they do not then the program puts up an error message declaring that the file it was handed is not a legal PCN formatted graphics file. If it finds PCN then it reads the bitmap width W and height H numbers so that it knows the proper length of each row and how many rows there will be. It then that the next bit is to be interpreted as the color (black or white) of the upper left corner pixel to be displayed on the screen. It then places the proper color in each new pixel to the right until it has placed W pixels in the row, at which point it drops down a row on the screen, goes back to the left edge and starts displaying the next W pixels. After it has displayed H rows of pixels it stops. To summarize, the header told it all it had to know about whether the file was, in fact, a PCN file and how the bitmap was organized.

So should we copyright our PCN format and make a bundle with it? Hardly. It's much too limited for practical use. First of all it only handles black and white drawings, not even grayscale. Second, if we want to use it with very large bitmaps we could do a few things to save storage space (and transmission time).

An Improvement – Other Color Depths. What would it take to make PCN a bit more useful? Well for one thing we could add something in the header to show what color-depth the picture uses. Our PCN V1.0 assumed that we would only be using one-bit depth which limits us to strict black and white. If we made a space in our header where we could tell it either one or eight bit color depth then we could store grayscale pictures in the file. If we also told it our choice as to whether to treat the eight bits as grayscale or limited (256) color then we could even use it for color pictures. With this improvement we could pass on to our PCN paint program the information it needs to know whether to treat each bit or each byte in the bitmap as a pixel color code. If it uses each byte as a color code, how should it interpret the code, as the grayscale code or as the 256 color code? If we really wanted to get in the big leagues we could also provide the option of using three-byte pixel depth in order to be able to handle 24-bit color. Do you see how this can grow to ever greater complexity?

This is the whole idea behind raster graphics. Any picture can be displayed by simply listing the color-code for each and every pixel in the picture. We can make the picture as detailed and as color-accurate as we wish by simply adding ever more pixels of ever greater color-depth.

Indexed Palettes – A way to save space. A previous article in this series discussed color depth, but for our purposes here we want to place additional emphasis on the idea of a palette. Let's take a simplified look at what is meant by palette. Let's say that we decide to hike to the shore for the purpose of sketching a seascape. We decide to use crayons for the picture (Back to Basics is big on crayons), but to keep our load as light as possible, we will carry only eight crayons. If we took our standard kindergarten eight-color set of crayons we'd be hard-pressed to find sufficient "seascape" colors, but if we had the chance to carefully select just the eight colors we wanted from our big set of 64 crayons then we might have a chance. We would pick a few blue-greens for the water, some blues and white for the sky and clouds and whitecaps, pack them in an eight-crayon box and be ready to go. If the next day we decided to sketch a desert scene on an overcast day we could again select just the eight colors – browns, tans and grays – that would best suit our needs but you can bet that there would be few crayons that were the same as on the previous day. Each of these sets of eight colors would be called our palette for that particular picture.

Similarly, a computer capable of displaying only 256 colors can still display a seemingly wide range of color when told which particular 256 to display. The colors that we select might each require 24 bits (three bytes)

to define in the RGB color model but if we wished we could write a list of these 256 three-byte colors and assign each a different label (or index) from 0 to 255. In computer graphics jargon this list would be called an indexed palette.

So what? We still had to write the colors with three bytes each and three-byte color depth should enable us to use 16.7 million colors, not just 256 colors. What have we gained? Let's consider as an example a 680 x 800 pixel picture on our screen. This uses 544,000 pixels. Using 24 bit color depth would require  $544,000 \times 3 = 1,632,000$  bytes of data. But, if we write an indexed palette of 256 three-byte colors (768 bytes) and then use the one-byte index to define each of the pixels in the picture, we need only  $544,000 + 768 = 544,768$  bytes of data; that is, one byte for each pixel plus an additional 768 bytes to define the palette, only about a third as big as the un-indexed palette file.

Alex Dumetre has been associated with computers for over 30 years, most of that time writing geophysical applications for use on the mainframe, minicomputers, and workstations. He is however, a novice on PCS. Mr. Dumestre is a member of 1960 PC Users Group (Houston, TX), and can be contacted via e-mail at [dumetrea@pdq.net](mailto:dumetrea@pdq.net).



**BatteryDisk**  
by Bob Schulte

Here is why I wanted *BatteryDisk*. Older people (and I certainly fall into this category) tend to worry perhaps more than others. I also don't attend the Novice Group meetings at PCUGR just to meet people, I'm still a novice with computers. So what if my CMOS battery poops out and I lose all that Critical data? So I hear that *BatteryDisk* is the answer to my concern. It captures that data in CMOS so that if it is lost, the *BatteryDisk* floppy will have the necessary data to restore it.

#### *System Requirements*

The 16 page (size: 3½" square) Instruction Guide cites no requirements regarding minimum equipment or systems. It only makes the requirement to get out of Windows 95 to DOS. So to begin with, I read the "entire" Instruction Guide from cover to cover to be as sure as possible that I would do installation correctly.

#### *Installation*

The installation requires that you insert the 3½" floppy in the A drive, go to the A: prompt, key *setup* and press Enter key. However, being the type who follows protocol, I proceeded to make a backup copy of the floppy. It would not allow me to do so. OK. So I went to the only MS-DOS I've been able to get to for some time, via the icon in Explorer. Upon doing so I received a nasty error message saying "*This program will only run from the original diskette in Drive A:*" But that's what I just did, Bubba Maybe my attempt to produce a backup floppy ruined the *BatteryDisk* floppy. Whoa! The Instruction Guide, I see, requires that setup cannot be administered with DOS in a in 95 window. So I now go through the computer shut down procedure wherein I may select the option to reboot in MS-DOS. But when I do so the screen shows a blinking cursor that never goes away. Now what? Well I must have damaged the floppy or it was defective to begin with.

Our Product Review Editor arranged for a replacement floppy. It took about a month for it to arrive after a couple reminder e-mails. Guess what? The new one did the same thing without my trying to produce a backup floppy. I deduced that the only logical, rational thing to do was to find someone with a computer that can come up with pure MS-DOS. Thank the computer Gods for Rawls Frazier, my local guru and salvation. He agreed to provide the required condition for installation and, you guessed it, it worked! It installed. Schulte, if you had a brain you would have reasoned with the first diskette that the lack of pure DOS was the problem, not the diskette.

So back to square one. On my own PC I again go to a restart option of rebooting to MS-DOS. Again I get only the continuing blinking cursor. Oh, now my feeble memory reminds me that is the reason I could not get to DOS outside Windows. Hey. Rawls. what do I do now to get around the blame cursor that won go away? In a flash he gives me the answer, I insert the *BatteryDisk* floppy, key *setup* at the A: prompt and voila, in less than ten seconds the installation is complete and the CMOS data is now on the *BatteryDisk* floppy to have and to hold until disaster occurs or I junk the PC.

The diskette comes with a handy plastic pouch with a serial number which must, and does, match that on the diskette. The Manual instructs you to "Remove the diskette and place it immediately in the transparent plastic *BatteryDisk* storage envelope." Next, "Peel the white paper backing off the vinyl holder to expose the adhesive backing. Affix the plastic envelope to the front, side or back of your computer where it will be ready to use when needed. Do not affix it to the monitor, this could cause the loss of important data."

As for the operation of this software, I cannot attest to how well it works because I do not wish to remove the CMOS battery to find out. Reasonable? However, I do have a great deal of comfort knowing that in all likelihood I am saved if ever my battery does go out and I lose CMOS data.

#### *Documentation*

The documentation I have joked about is completely adequate, if sparse.

In summary, I am very happy to have (unnecessarily in a dumb manner) taken the opportunity to obtain this protection of my CMOS. The whole thing, when done correctly, is quick, easy and comforting and well worth (to me) the cost.

This program is produced by International System, Inc., 351 West Hubbard Street, Suite 501, Chicago, IL 60610. Telephone 312-222-1364 and Fax 312-22 2-9226. The price I have seen over the past many months that I salivated over it, has been as I recall \$29.95.

PCUGR Board Member Bob Schulte is a retired Registered Public Accountant and former auditor for the State of California. During his last 20 working years he was a User Representative of EDP accounting systems writing procedure manuals and acceptance testing of those systems. Questions and comments on this review can be directed to him at flyerbob@sonic.net Subj.: Review Batterydisk

**Adobe Premiere 5.0**  
by Jonathan Wing

Over the years, *Adobe Premiere* has always been a pretty decent computer application. I personally believe it's one of the best software – based video – editing programs available. While previous versions of *Premiere* were good, it has never really been considered a serious, professional hands – on editor. However, the recently released version *Premiere 5.0* becomes a totally new and much more powerful tool for digital video editing. It now packs a completely different and better interface with many new features.

When I first received the package, I was rather excited. This is the program I've wanted to work with for over a year. Being a digital video enthusiast, this software is most likely the cheapest and easiest way to go. Included along with the *Premiere 5.0* software was *Photoshop 4.0 LE*, *Acrobat Reader 3.01*, *Apple QuickTime 3.0*, tryout applications, and a bundle of many other exciting programs, filters, videos, photos, and more.

#### *The New Look*

As soon as I started up the program, I could easily see that I would have lots of fun with the new features. The new features that definitely stand out are the new Monitor window and the Timeline window.

The new Monitor window incorporates the viewing functions found in previous versions into a cleaner interface that is much easier to use. I have two viewing windows – the Program window on the right and the Sources window on the left. I can simply drag and drop video clips from a source to one of the two new windows, to be added to the Timeline. It is now much easier to access clips, since I can retrieve them from a small drop down box that is below the windows.

The new Timeline window has been influenced by *Adobe After Effects* and many other professional editors. It now uses the layering concept the *Photoshop* and other Adobe applications use so well. Now it is much easier to handle multiple clips with a similar interface as other Adobe products. I can now show, hide, shy, and lock tracks on the Timeline. I still have up to 99 video tracks and 99 audio tracks on the Timeline, giving me the same great flexibility as before.

Adobe has recently made available an update to *Premiere 5.0* – the upgrade is version 5.1. This upgrade is free to all registered *Premiere 5.0* owners. It can be downloaded from the Adobe website on the Internet at <http://www.adobe.com>.

#### *Professional Editing Tools*

The tools in the new *Premiere* are as good as always. But Adobe didn't just leave it at that. They completely changed the whole way desktop video editing works. With up to 32 consecutive Undos, 21 audio filters,

better title tools and the ability to create videos up to three hours long, Premiere, I believe, blows the competition straight out of the water.

Audio in *Premiere* is basically new. The previous synchronization problem in which long clips in timelines would drift from it's audio is gone. There is a visible audio waveform with rubber-band controls so that I can very simply edit track volume and panning. New pass and low-pass filters, noise gates, notch/hum filters, chorus, reverb, and much more. This may all sound like gibberish to you, but when working with a perfect that has low quality sound, those filters can really make the audio come alive!

Titling is now easier than before. I just add the text I want, pick the colors and fonts I prefer, and choose whether I would like for it to roll, crawl, or be static.

Voila – I have great titles! All these functions are powerful, flexible, easy to use with precise timing controls. Resizing, changing fonts, changing text, and changing justification are all available and easy to understand.

Here now is one of my favorites – Special Effects and Transitions. Several of the different Special Effects filters that I used included Backwards Video, Black and White, Hue and Saturation, Blur, and Swirl. Transitions are very popular, but should not to be overdone! With over 75 popular transitions including wipes, fades, blinds, and many other special effects it can be very easy to use too many in your project!

#### *Hardware/Software Support*

One problem with the new *Adobe Premiere 5* is the existing hardware compatibility support. Not too many cards, especially low-end cards, are supported. The biggest, and most annoying problem I experienced was my having to re-install Premiere every time I wanted to run it. After closing the program, I would not be able to re-enter the application. I would then have to delete it off my system, re-install it, and then restart the computer. I don't completely understand why this is, but I do know it is due somewhat to the fact that the video card I have is not support by Premiere 5.0. You can visit Adobe's website on the Internet to see a supported list of support video cards and drivers.

Even though it has little problems like this one, Premiere is a superb program overall. While used on the Professional level by many filmmakers and newscasters, it is still available to the home user. I wouldn't necessarily suggest this product to somebody who is planning on editing a home video or vacation movie. However, it is definitely the perfect choice for those who want a great production for business presentations, advertisements, training videos, or commercials but are operating on a limited budget.

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## **Registry Backup** by Don Singleton

Here is the SAVEREG.BAT file I used to do a registry backup on the old luggable:

```
d:
cd \win95
attrib -s -r -h system.dat
attrib -s -r -h user.dat
copy system.dat c:\savereg
copy user.dat c:\savereg
attrib +s +r +h system.dat
attrib +s +r +h user.dat
c:
cd \savereg
copy c:\autoexec.bat *.dat
copy c:\config.sys *.dat
dir
```

To see how it works, let us consider a few commands at a time.

```
d:
cd \win95
```

The above two commands select the drive and directory containing Windows 95. They may be different on your computer. Your Win95 may be on drive C instead of drive D, if so change the first command. And it may be installed in a directory called "windows" instead of "win95," in which case change the second command.

```
attrib -s -r -h system.dat
attrib -s -r -h user.dat
```

These two commands remove the system, read-only, and hidden attributes of two files, system.dat and user.dat; these two files constitute the "registry." Once these attributes have been removed, the files can be copied.

```
copy system.dat c:\savereg
copy user.dat c:\savereg
```

These two commands copy the system.dat and user.dat to a special directory I had already created on drive C, i.e. "c:\savereg".

```
attrib +s +r +h system.dat
attrib +s +r +h user.dat
```

Once the registry files have been copied, these two commands restore the system, read-only, and hidden attributes to the two registry files.

```
c:
cd \savereg
```

The registry itself is now backed up, but before the bat file ends I want to preserve a copy of config.sys and autoexec.bat. The above two commands change to the drive and directory where I copied the two registry files.

```
copy c:\autoexec.bat *.dat
```

This copies the autoexec.bat file from the root directory, but instead of it being called autoexec.bat, in the savereg directory the file will be called autoexec.dat.

```
copy c:\config.sys *.dat
```

This copies the config.sys file from the root directory, but instead of it being called config.sys, in the savereg directory the file will be called config.dat.

```
dir
```

This command does a directory list of all files in the savereg directory. Notice that there are now four files with the extension dat. I then notice the largest numeric extension of other files, add one to it, and do a rename to rename all four "dat" files to that number. For example, assuming the largest number is 6, I would manually execute the command "ren \*.dat \*.7".

Here is the GETREG.BAT file that I use on the old luggable to restore a particular set of registry files:

```
if %1x == x goto :error
d:
cd \win95
attrib -s -r -h system.dat
attrib -s -r -h user.dat
copy c:\savereg\system.%1 *.dat
copy c:\savereg\user.%1 *.dat
attrib +s +r +h system.dat
attrib +s +r +h user.dat
goto :end
:error
echo Need to know which one
dir system
:end
```

To understand this BAT file, let us again look at it one or two lines at a time.

```
if %1x == x goto :error
```

When one invokes GETREG one needs to indicate which set of files (set 6, set 7, set 8, etc.) are to be restored. One restores set 6, for example with the command "GETREG 6". This parameter is seen by the BAT file as "%1" (the 1st parameter to the BAT file). If the first parameter followed by the character "x" is the same as the character "x", then the first parameter must be NULL (i.e. it must have been left out), and therefore the BAT file will transfer control to the line ":error". If this transfer does not take place, and if the following instructions are executed, then "%1" is presumed to represent the set to be restored.

```
d:
cd \win95
```

These two commands switch to the Drive and Directory where Windows 95 is installed on the luggable. You would need to change these to the drive and directory it is installed on your computer.

```
attrib -s -r -h system.dat
attrib -s -r -h user.dat
```

These two commands remove the system, read-only, and hidden attributes on the current registry, so that they can be overwritten by the following two commands

```
copy c:\savereg\system.%1 *.dat
copy c:\savereg\user.%1 *.dat
```

These two commands take the specific set of system and user files in the C:\savereg directory that correspond to "%1" and copy them to the current drive and directory (where Windows 95 is), and they restore the "dat" extension to the files.

```
attrib +s +r +h system.dat
attrib +s +r +h user.dat
```

Now that the restored registry files are in-place, these two commands restore their system, read-only, and hidden attributes so that they will be protected from accidental modification.

```
goto :end
```

The batch file has now accomplished its objective, so this command transfers control around the ":error" code and takes it to the end of the file. Notice I did not restore the autoexec.bat and config.sys files. Currently I have not seen a need to do that, but if I did, the SAVEREG file did capture the files that were active at the time those registry files were backed up, and I could restore them if I wished. I could also add commands to SAVEREG to backup other files like WIN.INI or SYSTEM.INI or MSDOS.SYS if I felt the need, and if I did that, I might elect to have restored them as well before transferring control to ":end".

```
:error
echo Need to know which one
dir system
```

These instructions get control only if the first statement in the BAT file found that the first parameter had been eliminated, in which case it would echo the statement "Need to know which one" reminding the user to indicate the particular set of registry files to be restored, and then it would do a directory list of all of the "system" files, so that he would see by the extensions, which backup sets were available to be restored.

This command ends the BAT file. If ":error" got control it would be encountered after the directory list had been done. If the BAT file did restore a set of registry files, the "goto :end" would have transferred control to the ":end" command.

Some may say all of this is nice for Windows 95 users, but I still use Windows 3.1. What should I do? That is a reasonable question. Here is a copy of the PRESERVE.BAT file that I use in my Windows 3.1 system. Note that this set of files uses a directory I created on my C: drive called "autoconf", because it contains backup sets of autoexec.bat and config.sys files, among others.

```
if %1x == x goto :noparm

pkzip c:\autoconf\%1.zip c:\autoexec.bat c:\config.sys
e:\windows\*.ini e:\windows\*.grp
```

```
goto :end
:noparm
```

```
pkzip c:\autoconf\initial.zip c:\autoexec.bat c:\config.sys e:\windows\*.ini e:\windows\*.grp
:end
if %1x == x goto :noparm
```

As in GETREG above, this BAT file checks to see if a file name (up to eight characters) was provided when PRESERVE was executed, such as "preserve office" which I might use right after installing the Microsoft Office files, and if I did, it would create a backup set in a file called office.zip. If I left off the parameter, I would not abort, but would rather just update the files in "initial.zip".

```
pkzip c:\autoconf\%1.zip c:\autoexec.bat c:\config.sys e:\windows\*.ini e:\windows\*.grp
```

This command uses PKZIP to create a ZIP file with a particular file name in the c:\autoconf directory. This file will contain a copy of the current autoexec.bat file, the current config.sys file, all of the ini files in e:\windows (which is where I have windows 3.1 installed), plus all of the "grp" files (which contain the icons for each program in each program group).

```
goto :end
```

Once the zip file has been created this file is finished, so it transfers control to the end of the BAT file.

```
:noparm
```

```
pkzip c:\autoconf\initial.zip c:\autoexec.bat c:\config.sys e:\windows\*.ini e:\windows\*.grp
```

If no parameter was specified in the PRESERVE command, this code would get control, and PKZIP would be used to update the autoexec.bat, config.sys, and all ini and grp files in initial.zip, replacing files if they were already there, and adding them if they were not already there.

```
:end
```



The ":end" file represents the end of the bat file, to which the "goto :end" command can transfer control.

Don Singleton is a member of the Tulsa Computer Society. This article was reprinted from the January 1998 issue of *I/O Port* the newsletter of the Tulsa Computer Society.

**PhotoMontage v.1.0**  
by ArcSoft, Inc.

by Kim Lewandowski

For this month's SHRUG (South Hampton Roads [VA] User Group) program, I demonstrated a really cool software package called *PhotoMontage* v.1.0 by ArcSoft, Inc. <http://www.arcsoft.com/>

I think it was the cover of *Life* magazine where I first saw a photo montage, of Princess Diana. Thousands of tiny photographs selected for certain colors and shades are put together to make a mosaic of a source photograph; the result from a distance is sort of like an impressionist painting of the subject; up close, you can see all the tiny photos that make up the whole. And that's what *PhotoMontage* does with your photos.

The software is very easy to set up and use. In fact, I demonstrated that at the meeting, too. I just inserted the CD and it automatically ran the installation program. I okayed a few questions and that was it. The program comes with over 20,000 images in three different sizes, so you can choose how detailed the final result will be. These images are not installed on your hard drive, so you need to have the CD in the drive when you use the program. You can add your own scanned or otherwise acquired images to the collection provided by *PhotoMontage* and they will be used in the mosaic. You can also designate a Hidden Treasure image that will be used somewhere in the montage; maybe hide a photo of a loved one and give them the picture for their birthday. You can also add a signature graphic which will appear in the lower right corner.

After starting the program, you see three large buttons on the right in the Create area – Get Photo, Edit Photo, and Build Montage. Click Get Photo and you can select a source photo from ArcSoft's collection; acquire one from a Twain source (a scanner or digital camera); a Photo CD; or get one from your hard drive. It supports all the major graphic file formats, including BMP, GIF, JPG, PCX, TGA, and TIF. You can also create albums of photos for use in the program. Photos with large areas in light and dark colors work best; if the subject and background colors and shades are too similar, it might be difficult to perceive the original photo in the result.

Next you can edit the photo - crop it or adjust the brightness and contrast settings to improve the final result; these functions are somewhat limited, so you may want to use your favorite photo editing software first. Then you have the option to save the edited photo, or just use it in the montage by clicking Okay. Then click Build Montage, and now you have some choices to make. You can select how many and what size images to be used, and *PhotoMontage* tells you how big a file your choices will produce. You can also choose how often a given photo will repeat in the pattern, select whether the photos will be straight or offset (like bricks), choose a border, and add a caption using any font you have installed.

After making your selections, click Okay and *PhotoMontage* will begin by making, block by block, an inverted black and white version of your image; then it will start reading photos from the CD that most closely match the colors and tone of the original and fill them in block by block. I have a Pentium 200 with 32 megabytes (mb) of memory and each stage – the inverted image and rendering the final mosaic – took less than a minute. After making the montage, you can zoom in on it to see the tiny photos, then zoom out a little at a time until you see the entire picture.

You can order enhancements to the basic program, like specialized sets of photographs, including flowers, wild animals, and classic cars. You can also send your montage to ArcSoft via the Internet and have it printed into a full-size poster.

For a first version of a program, it works wonderfully, although there are a few improvements I'd like to see. For example, you have no control over the size of the final result when you print it, and you have no idea how it will look on a page because there is no print preview. It seems that by default, a printout will fill the page horizontally and take up whatever vertical space the rectangular shape of the mosaic requires. Another gripe I have (and this is personal preference) is that the whites seem to be over represented by pictures of planes.

Overall, though, it's a fun, unique program that delivers exactly what it promises. Realistically, *PhotoMontage* requires a Pentium PC; Windows 95, 98, or NT; 32 mb of RAM; a CD-ROM drive; a mouse; a VGA monitor with at least 16-bit color; and 100 mb of hard drive space. The suggested retail price is \$79.95. E-mail [sales@arcsoft.com](mailto:sales@arcsoft.com) for more information.

**Computer Law:**  
Trust Them — Wrestling Isn't Faking It  
by Bill Wood

The WWF is taking steps to make sure that everything is 100 percent genuine. Faking it just will not be tolerated.

No, I'm not writing about the "action" in the ring. The ring-side antics may be as phony as can be, but the business wants to make sure that its intellectual property rights are protected in cyberspace. Rip-off World Wrestling Federation sites are not allowed.

In last month's article I wrote about Playboy Publishing suing one of its former models for using the Playmate description on a web site without a license from the company. (A correction is in order. She was a Playmate as stated in the text of the December article, not a "Bunny" as indicated by the title.

In any event, owners of trademarks and copyrights have long wanted some way to control the use (or reuse) of their property in the web world. On the one hand they want to develop a large and enthusiastic fan base. But they must make sure that they do not lose the exclusive rights to the trademark or permit illegal copying of copyright protected material. Of course they also want the revenue from the brand.

According to a December 7th story on Zdnet's website, new technology may make it possible to allow some limited downloading of images but still control the context and use of the protected material. Microsoft (aren't they into everything?) and a company called Thingworld.com have combined streaming audio and video through the use of Microsoft's Windows Media Player with Thingworld.com's digital locking software that can protect the material from unauthorized use. The owner can then control the duplication or alteration of the material. Another option allows the material to be downloaded and installed on a local computer, but it contains an automatic link back to the authorized home site.



I had some trouble downloading and installing the browser plug-ins that make this development possible. And, even after I had it running I succeeded in crashing my computer three times. But, I must say the demonstration pages for WWF, the South Park cartoon characters and the New England Patriots are very impressive and provides some spectacular animated graphics.

The extensive sales material on Thingworld.com's website indicates that developers can create sites that can be "moused over, clicked on, taken, owned, collected, shared, locked, copyrighted [and] used as a screen saver." The company also claims the product will also work for pay-per-view web events! If it really provides that level of protection to intellectual property rights, it could open the net to tremendous amounts of database and graphic material that won't be posted until the owners feel secure.

Visit <http://www.thingworld.com/> They are back again. The Texas Legislative Website is up for the 1999 legislative session. Legislators that were reelected were allowed to pre-file bills for the legislative session that starts on January 12th. Readers of prior columns will remember that the site (<http://www.capitol.state.tx.us/>) posted by the Texas Legislative Council's office can be indispensable if you want to follow particular bills. It also has an updated link to the current Texas Statutes.

In the coming legislative session it is predictable that a lot of attention will be focused on computer related topics. Between the Year 2000 mess, tax issues and use of computers (particularly the Internet) at schools and libraries, this session will be very busy. As I prepared this article I found that thirteen out of the 300+ bills that had already been filed in the House deal with computers and the Internet.

Guess what, one of them deals with Year 2000 liability. HB-40 filed by Rep. Pitts is only the first of what may be a very, very large number of bills attempting to limit liability for Year 2000 legal problems.

Although that particular bill may not apply to most APCO members, many of us will be interested in the sales tax exemption for Internet access proposed in HB 111 by Rep. Maxey. If that bill eliminates the sales tax on Internet service it will fit nicely with the recent federal tax moratorium on certain aspects of Internet commerce.

A tip about using the legislative site is in order-most, but not all of the computer and Internet legislation is indexed under Science and Technology. Law Site Bookmark for January, 1999 Actually this month I want to point out the new location of an old standby. Law Journal Extra (<http://www.ljx.com>) had been a mainstay for daily developments in the legal world. It provided a tremendous amount of substantive information for free. I used it as a source for copyright, real estate, and constitutional law topics. It also provided timely information on the use of technology in the law office.

America Lawyer Media has now launched a new site at <http://www.lawnewsnetwork.com> that is slicker. It seems to have borrowed a style page from USA Today by placing more emphasis on pictures and short leads to articles on the front page. I hope they maintain the substantive content along with the new visual presentation.

Bill Wood is an Assistant City Attorney, in the San Antonio City Attorney's Office. He practices real estate and technology law for the city and can be reached at [wwood@email.com](mailto:wwood@email.com) or via his web page that has links to legal resources on the Internet. It is at <http://lonestar.texas.net/~ww00580>. Previous articles have been posted at <http://www.alamopc.org/mag.html>.

These articles are for general education only and are not intended as specific legal advice. He is not in private practice and is not soliciting clients. No attorney/client relationship is intended. Therefore, anyone concerned about any legal questions covered by these articles should consult a private attorney that is familiar with the field.

Bill Wood is a member of Alamo PC Organization Inc. This article appeared in the January 1999 issue of *PC Alamode*, San Antonio TX.



## Book Reviews

*Reaper*  
by Ben Mezrich  
Harper, paperback, 1998  
\$6.99, 407 pages

A Boston paramedic stumbles on a horrific scene – eight lawyers participating in a teleconference have died sudden and frightful deaths, their organs calcified. He and an army virologist suspect that these and a handful of other similar incidents are tied to the beta-testing of high bandwidth TV/computer combo that is soon to be switched on in ninety-five percent of American households. Light emissions from the screen appear to activate dormant viruses present in everyone's immune system, causing death. Only days away from the "big turn on," the heroes have to figure out what's wrong and who's responsible, then pull the plug before the entire country is put in jeopardy.

Soon to be a made-for-TV movie on TBS, this one kept me on the edge of my seat. It addresses some serious computer issues, such as data security and encryption, the danger of giving one company too much power over our information technology, and the potential for a computer virus go berserk. Nicely done medical details, too. The characters are likeable and the plot is action-packed. Lightweight, but highly recommended.

*Society of the Mind*  
by Eric L. Harry  
Harper, paperback, 1996  
\$6.99, 657 pages

Harvard psychologist Laura Aldridge receives a mysterious summons to the South Seas hideaway of the world's richest man, computer magnate Joseph Gray. Laura assumes that the invitation is for administering discreet therapy to Gray himself, but she is stunned to learn that her mission is to determine whether the computers themselves have gone insane.

This is a fantastic book, teetering on the edge of speculative fiction. The computers in the book are water-cooled, analog, and use fuzzy logic. The computers are self-programming, using the laws of evolution; they created free-ranging robots that learn about the world by experiencing it. It is an intriguing – and at times – frightening glimpse of the future, and raises important questions about what it means to be human.

Susan Ives, past president of Alamo PC of San Antonio, TX, claims that computers are a mystery to her. These reviews appeared in the March 1999 issue of *PC Alamode*.



## New Users Group

John MacMillan  
March 2, 1999

Only eight people attended the New Users Group at the Henrietta Media Play March 2nd. Early arrivals discussed falling prices in the computer market and some of the values available.

The ever popular Internet topic surfaced again when a user stated that he had started to upgrade to Netscape 4.5. The process was interrupted before he had chosen an identifying name but it appeared that the service provider had established one. He wondered what the identity was and went on to question the use of unique names and passwords for different uses. Gregg Sayre said he used one name to log onto the Internet and had distinct names for each different user group. He does not provide any group with other passwords or identities. The use of multiple identities prevents people with access to a site list from being able to log onto the net with your Id. or to easily track through multiple sites. It also makes backtracking more difficult for any user

trying to trace you for some reason. He recommended a paste it note or similar list near the computer to record the various identities. This is just as handy; less expensive than available software packages that manage password lists; and is only available to someone sitting at your computer. Before establishing a profile with any service provider, you should investigate the security of their processors and avoid those that do not use secure methods of conveying information. Cookies and their use were also mentioned. Some sites will not let you in unless your browser is set to accept cookies.

A user questioned the difference between Yahoo, which had been mentioned several times, and My Yahoo. Based on individual profiles and personal preferences My Yahoo gathers services of interest to you in more convenient screens which are automatically updated. Book-marks allow easy access to sites but may not update material as service providers do. Some browsers can be configured to do updating tasks. Gregg suggested not subscribing for automatic updating unless that's what you want.

People often enter search criteria as a string of words for example New York State Parks. This will yield hundreds of thousands of hits for sites containing one of the words, New, York, State or Parks. Most search engines will let you refine the search by enclosing the search criteria in double quotes, (""). This will greatly reduce the number of responses since each hit must contain the exact phrase contained within the quotes. AOL lets you look at the responses in groups of ten and I often noticed multiple listings for the same site. Responses are sent on your computer but there should be a preference setting for how long they are kept on file. Earlier discussions of this topic had recommended storing items of interest under a file of your choice and then purging service provider cache files at the end of any Internet session.

Asked about virus scanning for things downloaded from the web, Gregg replied that he did not virus check text or news group messages or E-mail messages without attachments. He immediately deletes attachments from unknown sources and virus checks other attachments which are executable (.BAT, COM, or .EXE suffixes). When asked if there were any virus checkers that run in less than 4 megs under Windows 3.11, he cited older versions of McAfee's which are no longer supported. Avoiding questionable sites, automatic opening of downloads and not using questionable floppies, seems to be the only choice. Other users cited the long time frame of net based automatic downloading of McAfee's virus checker so Gregg suggested manually downloading the one zip file that contains three files which are used to overwrite the corresponding files in the McAfee directory on the hard disk. In addition to being faster it avoids any problems which might occur during the lengthier download process.

The owner of a five year old machine using Windows 3.1 to write letters and E-mail wondered if she would have a problem with the year 2000. Quicken for Windows 3.1 was identified as a potential problem. Many Basic Input Output Systems (BIOS) operate on the 2 digit year theory which is behind the Y2K problem. It was pointed out that there are programs available on the Internet and at Media Play which will test the system clock, the BIOS and Windows operating systems from 3.1 to 95 for year 2000 compliance. Windows 98 is already 2000 compliant. Other software packages may also need to be checked. These testing programs may also fix the problems. Greg Wolfe mentioned that last month's PC Novice magazine was virtually devoted to Y2K problems. Among other things it listed BIOS'es, motherboards, different computers, by serial number, web pages and hours of download to repair.

A question arose about column alignment when using true type fonts. Most fonts vary in width from one letter to another (proportional lettering), that is w or m takes more space than a or e which in turn take more space than an I. Pica and Elite were early fonts that were of fixed width without regard for the character. Current fixed width fonts may include Ariel and Courier.

Discussion continued on alternative locations for the New Users Group meetings. At this time the group is planning to hold the April 6th meeting at 6:30 at the Monroe Developmental Center, 620 Westfall Rd. This on the north side of Westfall Road almost across from the Brighton Town Park, between East Henrietta Road and Winton Road. Route I390 provides easy access to the East Henrietta exit where you turn north (toward the city). Turn right on Westfall which is the first cross road with a traffic light. Please call John McMillan at 872- 4867 after April first to verify this location.

**New Users Group**

John MacMillan

April 6, 1999

The last paragraph of the March New Users Meeting notes stated that the April Meeting would be held at the Monroe Developmental center, 620 Westfall Rd. There were additional instructions to help people locate this alternative to Henrietta's Media Play. The Center has conference rooms with many facilities reminiscent of a classroom in addition to being quieter. We expect to continue meeting there until further notice.

There is a large parking lot about 400 feet from the entrance with handicapped parking closer to the door. E-mail notices and phone calls were made to over 20 people when the planned announcement missed the *Monitor* because of the March ice storm. My apologies to those who did not get the word.

Ten people signed in at the security desk before the meeting started at 6:30 on April 6th. Instead of a question and answer format, which has been the norm in the past, John McMillan gave a one hour presentation on *Fundamental File and Folder Facts*. This started with an in depth look at Windows 3.11 File Manager. Time ran out before Part 2 on Windows 95 could be started so that topic will be taken up at the May 4th meeting.

## The Lighter Side

### Hunting Elephants

MATHEMATICIANS hunt elephants by going to Africa, throwing out everything that is not an elephant, and catching one of whatever is left.

EXPERIENCED MATHEMATICIANS will attempt to prove the existence of at least one unique elephant before proceeding to step 1 as a subordinate exercise.

PROFESSORS OF MATHEMATICS will prove the existence of at least one unique elephant and then leave the detection and capture of an actual elephant as an exercise for their graduate students.

COMPUTER SCIENTISTS hunt elephants by exercising Algorithm A:

1. Go to Africa.
2. Start at the Cape of Good Hope.
3. Work northward in an orderly manner, traversing the continent alternately east and west.
4. During each traverse pass,
5. Catch each animal seen.
6. Compare each animal caught to a known elephant.
7. Stop when a match is detected.

EXPERIENCED COMPUTER PROGRAMMERS modify Algorithm A by placing a known elephant in Cairo to ensure that the algorithm will terminate.

ASSEMBLY LANGUAGE PROGRAMMERS prefer to execute Algorithm A on their hands and knees.

ENGINEERS hunt elephants by going to Africa, catching gray animals at random, and stopping when any one of them weighs within plus or minus 15 percent of any previously observed elephant.

ECONOMISTS don't hunt elephants, but they believe that if elephants are paid enough, they will hunt themselves.

STATISTICIANS hunt the first animal they see  $N$  times and call it an elephant.

CONSULTANTS don't hunt elephants, and many have never hunted anything at all, but they can be hired by the hour to advise those people who do.

OPERATIONS RESEARCH CONSULTANTS can also measure the correlation of hat size and bullet color to the efficiency of elephant-hunting strategies, if someone else will only identify the elephants.

POLITICIANS don't hunt elephants, but they will share the elephants you catch with the people who voted for them.

LAWYERS don't hunt elephants, but they do follow the herds around arguing about who owns the droppings.

SOFTWARE LAWYERS will claim that they own an entire herd based on the look and feel of one dropping.

VICE PRESIDENTS OF ENGINEERING, RESEARCH, AND DEVELOPMENT try hard to hunt elephants, but their staffs are designed to prevent it. When the vice president does get to hunt elephants, the staff will try to ensure that all possible elephants are completely pre-hunted before the vice president sees them. If the vice president does see a nonpre-hunted elephant, the staff will (1) compliment the vice president's keen eyesight and (2) enlarge itself to prevent any recurrence.

SENIOR MANAGERS set broad elephant-hunting policy based on the assumption that elephants are just like field mice, but with deeper voices.

QUALITY ASSURANCE INSPECTORS ignore the elephants and look for mistakes the other hunters made when they were packing the jeep.

SALES PEOPLE don't hunt elephants but spend their time selling elephants they haven't caught, for delivery two days before the season opens.

SOFTWARE SALES PEOPLE ship the first thing they catch and write up an invoice for an elephant.  
HARDWARE SALES PEOPLE catch rabbits, paint them gray, and sell them as desktop elephants.