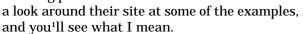
## Introduction to the 3D World

by Mike Kaltschnee Danbury Area Computer Society

Thave zero (maybe even less) artistic talent. I'm not being hard on myself, I have skills in other areas and I've seen great artists at work, so I know my limits. I can't draw, paint, or even create "modern art" by throwing paint at a canvas. I know because I've tried.

Thankfully, I have found one artistic tool that makes me feel like I can actually create something that looks good and gives me a chance to get creative. I was a partner in DeMorgan Industries, the creators of www.WebSpice.com, which

is now owned by Index Stock Imagery in New York (my current employer). At DeMorgan we created more than 2 million original and royalty-free Web images. About 30,000 of them were created using a 3D modeling tool called true Space is a really amazing product — take



Even though I was the marketing and sales guy, I had the opportunity to play with trueSpace and create some interesting 3D objects. I was lucky enough to have partners that were truly gifted at 3D design work. You can see examples of our work at the WebSpice.com site. I had some help creating the objects, but I really enjoyed the work. 3D modeling is like sculpting on the computer. Instead of spending most of your time cutting away at stone you assemble the scene or item you are trying to create by putting objects together. It's like sculpting in reverse.

You have seen the amazing power of 3D modeling programs in movies, most strikingly (in my opinion) in Jurassic Park. All of the dinosaurs were created using 3D software, and then added to the real -world image. The power of 3D led to the suspension of disbelief, and you felt like running dinosaurs at the theater surrounded you.

When I thought of writing a series of articles on 3D modeling, I looked for a new program that ran on both Mac & Windows. I prefer the Mac, but like to write about products that run on both

platforms. I was surprised to see that Carrara Studio from Eovia ran on Windows and OS X. The nice folks at Eovia (www .Eovia .com) sent over a review copy and I did the review and testing under OS X.

Eovia is the most interesting software company you probably haven't heard of. They have an impressive line of products for creating 3D images, including Poser (awesome tool for modeling humans and animals in 3D), Carrara 3D Basics (a \$99 introductory 3D program), Carrara Studio 2 (\$399), and Amapi Designer (high-end 3D design at \$499).

Working in 3D takes a while to get used to.

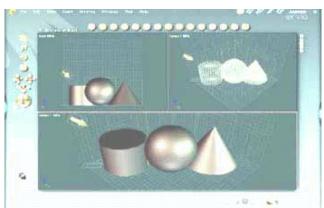
You can see by the screen capture you can view your work in several angles at once. The screen shows the Carrara 3D interface, which is strange on the first viewing, but after going through the demo it actually makes a lot of sense. The only problem I have with the interface is that it is different than most Mac OS X programs

(and violates many of Apple's suggested guidelines for designing software). The program is fast, even on the test machine, a 500 megahertz PowerMac.

If you look at the screen capture, you'll see 3 windows with images. Most 3D work is done in the wireframe mode, as seen in the upper right image. This is much faster than a solid object, but doesn't give you the detail of the final image. Once you assemble your image, you have to run it through a process called "rendering." This takes the image you have created in wireframe mode and applies color, texture and most importantly, lighting to the image. Rendering can take a long time to process due to all of the reflections and lighting effects. Carrara wins big points by including a batch render feature that can let you process a group of images at night, while you are sleeping.

After reading a bit of the manual and going through some of the demos, I'm more and more impressed with Carrara. It's fast on older hardware, and the interface is a bit cryptic but well thought out for efficient access to most features. After a few hours of using Carrara I was able to

1



find features easily and without referring to the manual.

Reprinted from the June 2003 issue of Dacs Doc, the newsletter of the Danbury Area Computer Society. Mike is a DACS member who wishes he had one artistic bone in his body.

Computer Law:



Can You be Sued for Copyright Infringement? by Bill Wood AlamoPC Organization

The answer may be different than you think. In early April various copyright owners filed suit against four college students. The plaintiffs allege the defendants were using college networks to run file-swapping services. The separate suits against Daniel Peng (Princeton Univ.), Jesse Jordan (Rennselaer Polytechnic), Aaron Sherman (Rennselaer Polytechnic), and Joseph Nievelt (Michigan Technological Univ.) use language not usually found in court documents. The suit against Peng includes allegations that

Defendant has taken a network created for higher learning and academic pursuits and converted it into an emporium of music piracy where copyright infringement is simplified down to the click of a computer mouse.

Copies of the Petitions can be found at Find-Law under the heading RIAA Complaints Against Alleged File-Swapping College Students.

Corporations and universities have received letters from the movie and music industries urging them to take actions against employees and students to curb the use of corporate and college systems for these uses. Apparently the letters did not threaten direct legal action against the colleges but they certainly were intending to turn up the heat on the network officials to stop the use of the internal networks for the illegal file swapping activities. Cnet's News .com carried an article last October that quoted the industry letter that was sent to 2,000 universities as including,

Students must know that if they pirate copyrighted works they are subject to legal liability. It is no different from walking into the campus bookstore and in a clandestine manner walking out with a text-book without paying for it. October 10, 2002

Peng was accused of running a file swapping server using the university's internal computer system, complete with lists of top downloads of the day on a Website that was open to users of the Princeton network as well as the outside world through the university's high-speed computer connections. Supposedly it has been possible to copy songs from Christina Aguilera, U2, Santana and Billy Joel, among others from Peng's system.

The Petition filed against Mr. Peng included this general statement,

[r]ecent statistics have indicated that, at some universities, nearly 50 percent of the available Internet computer resources (known as "bandwidth") are being used for the unauthorized copying and distribution of copyrighted material.

One unusual allegation is that Peng's server

actively scours the network for files that others have designated for copying and distribution, and indexes the names of those files even without the knowledge or acquiescence of network users who have so designated those files, and without the consent of the copyright owners of the works embodied in those files.

Apparently, these activities were widely known around the Princeton campus. The petition alleges that Peng's site was the subject of an article in the student newspaper, the *Daily Princetonian*, last November.

So what have the plaintiffs requested of the Court? The answer is fairly staggering. The plaintiffs ask for \$150,000 for each work which was found to be illegally copied plus attorney's fees, expenses and for a permanent injunction.

Two developments on the technology and privacy front have occurred. Both of the events center around Congress. The first is a report from the Associated Press (Reprinted in Government Technology on April 3, 2003 that the e-mail account of Florida Congresswoman Ginny Brown-Waite was hijacked and used by a hacker to send scandalous e-mails which were opposed to President Bush and the war in Iraq. The Hacker sent copies of the bogus message to everyone in her e-mail address book and other copies went to members of the Florida Legislature.

Senator Feinstein introduced the Privacy Act of 2003 (S.745) that aims to protect our Social Security numbers from identity thieves. The bill would impose civil penalties for the acquisition and use of another person's social security number and criminal penalties for obtaining any individual's social security number for purposes of locating or identifying an individual with the intent to physically injure, harm or use the identity of the individual for any illegal purpose.

Interestingly, the bill also prohibits most governmental entities from printing our social security numbers on checks. It also bans the requirement that we disclose our social security number for purchase of commercial goods or services in most circumstances. So, if this bill passes, you may not have to disclose your social security number for routine purchases.

There is a lot more to the Privacy Act and it bears watching in the coming months. It is on line at the Library of Congress Website.

From the May 2003 issue of PC Alamode, the newsletter of the Alamo PC Organization, Inc. of San Antonio, TX. 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.

Longhorn

Gateway to Hypermedia

A hot new operating system may very well change the way you interact with your data.

by Ron Fenley

icrosoft's new Windows operating system, code named Longhorn, will open the flood gate to hypermedia and provide a new approach in working with data.

Background

The NY Times ran a story on November 7, 2002 by David Gelernter who reported that Bill Gates had made the following comment earlier in July, "Why are my documents files stored one way, my contacts another way and my e-mail and instant-messaging buddy list still another, and why aren't they related to my calendar or to one another, and easy to search en masse?" Oh, listen to what the words imply. The words of Bill Gates give you a clue about the new operating system.

Longhorn Highlights

The folks at ZDNet had the opportunity to view the alpha release of Microsoft's new Windows 6.0

operating system and they have reported many intriguing features.<sup>2</sup> This system, just as with all previous Windows systems, will provide a new look and feel. The eye-candy will be driven by a new 3d technology code-named Avalon that presents a photo-realistic desktop display. Interestingly, some of the menus will be somewhat transparent, giving the operating system that new look and feel.

Other features are support for the 64-byte processors like Intel's Itanium II or the AMD Opteron, but these processors are not a requirement. The user will finally have access to My Hardware directly off the Start menu instead from the Device Manager. There will be an XML-based sidebar to allow the user to easily customize the interface and its functionality as necessary. The system also provides enhanced support of both DVD-R /RW and DVD+R/RW. The new system provides for enhanced multimedia support where one can burn DVDs directly from camcorder or other video source without having to store data on the hard drive first.

The new operating system will also provide support for terabyte hard drives. A terabyte is 1000 gigabytes of storage, and it is projected that terabyte drives will be available in 5 years for around \$350. Video will place the greatest demand on the hard drives, and yet one could store 1000 compressed movies on a terabyte drive. From a text stand point, one could store 700,000 novels the size of War and Peace on a disk drive of that size.

The most profound change is the file system will not be based on File Allocation Tables like FAT, FAT32 nor the New Technology File System like the NTFS file system. But instead, Microsoft will introduce a new file system architecture called Windows Future Storage (WinFS). This new file system will be based on the SQL Server 2003 (codenamed Yukon), thus accommodating complex SQL file searches. And as Bill Gates may have implied back in 2002, data such as contact, email messages and office documents are no longer stored as individual files but will be stored as data and cross referenced allowing for complex searches.

Possibly the most contentious innovation is the introduction of the Palladium security system. Special hardware will be required to operate this real-time module separately from other system components. When the computer is powered, the BIOS will check the hardware and then identify the system users/owners. This will provide protection to the system and its data

against unauthorized access and also prevent attacks from the Internet.

All data on the disk will be encrypted and special control checks are made on data leaving the system. All connections to the computer are examined and receivers on the network are identified. This verification process controls the data flow coming into the system from the network or Internet and determines whether the file or data has been certified for usage. This means that spam mail will finally be prevented from entering the system just as a virus is detected before it enters the system.

Timestamps will be applied to documents like Word, Excel or PowerPoint that will allow the document to be available for reading up to a specified date. E-mails can be sent in such a way that only the addressee can read it and the e-mail cannot be copied or forwarded. Finally, the system accommodates the Digital Rights Management (DRM) protocol, pushed primarily by the audio/video media industry where any copyright-protected material will be transferable exclusively to the entitled receiver.

Windows 6.0 may be the first operating system to take advantage of PCI express. PCI express is the next generation motherboard slot protocol that provides communication from a peripheral card to the computer system. This new protocol will provide communication 8 times faster than the existing PCI based protocol, and is a requirement for the Palladium security system.

The new operating system will handle the files and data differently which implies that the Office suite will have to be overhauled to be compliant with the new operating system. Reportedly, this point was confirmed by CEO Ballmer in a published industry news report.

A number of Longhorn screen prints can be found at Paul Thurrott's Internet Site<sup>3</sup>.

Launch Date

The launch date was not known, although it was originally scheduled to be released in 2003 or 2004. More recent reports indicate the new operating system may not be available until 2005, and there is a possibility that it may not reach the streets until 2006. In any event it appears we will have to wait a couple more years before we can get our hands on these new features.

References

<sup>1</sup>New York Times article 07 Nov, 2002 www.nytimes.com/2002/11/07/technology/circuits/07soft.html

<sup>2</sup>ZDNet article 21 Feb, 2003 reviews.zdnet.co.uk /review/42/1/2989.html

<sup>3</sup>Paul Thurrott's Internet Site www.winsupersite .com/reviews/longhorn\_alp ha.asp

Reprinted from HAL-PC Magazine, the newsletter of the Houston Area League of PC Users. Ron worked as an engineer/analyst and retired in 1999.

### Neat Free

## Windows Utilities

by Ira Wilsker Golden Triangle PC Club

ome of the most popular columns I have written have been on the topic of free utilities. In the past, I have discussed excellent but free utilities including antivirus software (AVG), firewalls (Outpost and ZoneAlarm), comprehensive utilities (JV16 Powertools), graphics and photo editors (Irfan Viewer), spyware utilities (Ad-Aware and SpyBot Search and Destroy), and many others. With thanks to the readers of this column, and listeners to my show on KLVI, I have been made aware of several other excellent utilities.

I have recently become a user of Win Patrol, available for free download from www.winpatrol.com. Available in a fully functional free version, and a nominally priced "Plus" version (\$12.95), WinPatrol can significantly increase the performance, safety, and security of almost any Windows computer. WinPatrol is an easy-to-use but comprehensive utility utilizing a little Scottie dog to monitor the computer, and bark whenever a problem or threat is encountered. WinPatrol can control the programs that start when the computer is booted, similar to Microsoft's Msconfig utility, but will also alert the user when another program, such as spyware or a Trojan attempts to insert itself in the startup sequence. By being able to control what programs automatically load when the computer is booted, and prevent unwanted programs from automatically loading, system performance can be significantly enhanced. Better then either the "Close Program" screen on Windows 95, 98, or ME, and the "Task Manager" on 2000 and XP, WinPatrol allows for the monitoring and control of any programs or processes running on the machine. If a program freezes or locks up while running,

WinPatrol may be able to kill the unwanted tasks, without rebooting the computer.

With all of the discussion about privacy while surfing the net, WinPatrol provides an excellent cookie manager that can be used to identify and control cookies placed on the user's hard drive. If the user wants to know who is the real owner of a website, WinPatrol will do a "WhoIs" search, and provide that information. Some websites attempt to hijack the user's Internet startup page, directing the user instead to another page; WinPatrol can detect and stop that unethical practice.

The author of WinPatrol, Bill Pytlovany, of Scotia, NY, has a son and two nephews in the army, and is very supportive of military personnel and their families; for this reason, he is offering the "Plus" version of WinPatrol to military personnel and their families for free. Simple registration for those eligible, including a statement that the information will not be disclosed or used for any other purpose, is online at www .winpatrol .com/freeoffer .html. While on the "freeoffer" page, visitors can view a cute photo album of his active-duty family. I strongly recommend WinPatrol to the readers of this column and the listeners of my show.

A lot of computer users are unaware of what software is installed, and what hardware is in their computers. Many are not aware that hardware manufacturers periodically post updates and upgrades to drivers and other utilities. A free utility that can run on any Windows computer from Windows 95 to XP, that gives the user comprehensive information about his computer, AIDA32, is available from http://www.aida32.hu /aida-download.php. This software can generate a significant report (81 screens of information) about the hardware and software used, including detailed information on the motherboard, processor, video card, hard drive, sound card, memory, operating system, utilities, and other useful information.

By knowing exactly the model number of the components installed, the user can then check the websites of the manufacturers to see if there are any updates. Builds or versions of all of the installed software are also presented, making updating or upgrading an easier function. Separate versions, all free, of AIDA32 are available for personal computers, networks, and enterprises. Written in Hungary, the program is also available in over a dozen languages. If a user is contacting someone for technical support or

repair, the information provided by AIDA32 can be a valuable resource.

As has been stated repeatedly in this column, the three most important words in computing are "Backup, Backup, and Backup." Murphy's First Law of Computing is "A properly backed up hard drive will never fail; a hard drive that does not have a current backup will always fail at the most inopportune time". Now, another reason not to backup frequently has been quashed, now that an excellent free backup utility is available.

Written in Romania, Backup4All, available for free download from www .backup4all .com, is nearly as full featured as many of its expensive competitors. Capable of full and incremental backups (only files new or changed since the last backup), this program has a wizard that walks the user through the backup steps. Of course no backup is useful without restore strategy, and Backup4All provides a wizard for that as well. Designed primarily for backing up to local or network drives, with some support for limited backups to CD drives, this program has some limitations which the author says will be addressed in future updates. At present, the program does not offer any support for backing up to DVD or tape drives, but those features may be added in the future. Since contemporary thought is that backing up data to another hard drive, either local or on a network, is the fastest and most efficient way to backup and restore files, that is the method targeted by Backup4All, and the method that I personally use.

It is not always necessary to spend a lot of money to get excellent software, and these three programs are examples of that adage.

Reprinted from the May 2003 issue of the Tulsa Computer Society's newsletter I/O Port.

Media Notes

by Bill Petitt

Southeast Virginia Computer Group

Intuit Abandons Product Activation

 $\label{lem:continuous} Annoyed \, customer \, retains \, laws uit \, over \, Turbo Tax \, function.$ 

Intuit is dropping its controversial product activation policy, which drew criticism and suspicion from customers, who had to let the vendor note some basic information about their PC, tying it to their TurboTax package before they could use the software.

Intuit "did not get the response we had hoped" from its single tax season of product activation, said Steve Bennett, president and chief executive

officer, speaking in a conference call reporting the company's quarterly earnings.

A disgruntled customer who had filed suit against the company for the way it implemented the new requirement described his reaction to Intuit's decision as "cautiously optimistic." Nevertheless, he is proceeding with the lawsuit, which also seeks compensation for users of TurboTax 2002.

#### Unsuccessful Effort

Intuit said it had hoped to quash piracy by forcing users to activate their copies of the taxreturn TurboTax program. At one point, the company claimed that millions of people used illicit copies of TurboTax. Under product activation, customers could still file multiple tax returns from a single PC. But they could not install the same software on more than one PC without Intuit's permission.

Intuit had hoped that the restriction would prompt additional TurboTax purchases by people who previously had borrowed a friend's copy. Though sales revenues for TurboTax were up 24 percent this tax season, the increase apparently wasn't enough. Any growth in sales because of product activation was "incremental," Ben-nett said, adding that Intuit "didn't get the business results we expected."

Product activation "didn't attract as many [new] customers as we had hoped," Bennett said. He also acknowledged that the customer backlash in response to the activation policy may have stalled the hoped-for growth. Bennett said that Intuit can't produce exactly how many additional copies it sold because of the anti piracy technology, but it did gather some unspecified data about how many people filed multiple returns from the same package.

Intuit will retain a form of activation technology in promotional and trial versions of Turbo Tax products. Users will have to contact the company to pay for and then unlock the full functions of discs distributed in marketing promotions, Bennett said. But copies of TurboTax sold in retail outlets or purchased directly from Intuit will not include product activation.

#### Customer Suit Continues

When the new product activation policy surfaced, Intuit fielded criticism from some TurboTax customers who felt they were being treated as suspected pirates. Others disliked the inconvenience of not being able to move the application easily to a new PC. And at least a few experienced mechanical problems when trying to activate their legal copy of the product.

Scott Leviant, an attorney with Stanbury Fishelman in Los Angeles, didn't just get annoyed — he filed suit. The longtime TurboTax user said he was challenging not Intuit's decision to implement product activation, but its method of implementing it. Primarily, Intuit should have clearly labeled its software packaging with information about the new requirement, Leviant said.

"We believe that the correctness of our position has been further vindicated by this development," Leviant said of Intuit's decision.

He said he would "wait and see what Intuit actually does." But Leviant also suggested that the lawsuit might be behind Intuit's change of heart.

"We are gratified that our efforts thus far have resulted in a substantial positive benefit for consumers of TurboTax worldwide," he said in a statement on behalf of the four plaintiffs. "However, undisclosed computer modifications, undisclosed use restrictions, and undisclosed Internet communications of personal data remain significant threats to consumer rights and privacy."

Decision: Strictly Fiscal?

Leviant recently amended his complaint, adding allegations that Intuit implemented the product activation technology for reasons other than security. He said he believes that the company intends to force customers to a direct-sales model.

Intuit has about a month to respond to the amended complaint. It has routinely declined to comment on pending legislation. However, an Intuit spokesperson says retail sales are a large part of its business and will "never go away."

Bennett acknowledged the customer complaints, although not the suit. "For most customers it was a relatively painless experience; but for too many, it wasn't, and that's why we made the decision to discontinue it for next year," Bennett said. He also noted that Intuit had to ramp up technical support to handle product activation questions.

But not everyone was sufficiently annoyed to drop the product. In fact, Intuit did not experience a higher rate of product return than usual, according to a spokesperson.

"We got a lot of feedback from customers who got mad and switched to another product and then found that the competing product wasn't as good and came back," Bennett said. Customer complaints weren't the deciding factor, he said: "The real reason here is we didn't get the new customers and the revenue we expected."

Other software developers have experimented with product activation for some products. Microsoft backed down from a limited activation process in Windows XP. But Intuit was the first to implement a strict scheme in a leading application.

Game Console Prices Drop

Microsoft follows Sony's price cuts despite losses.

Microsoft has cut the price of its Xbox video game console, a day after rival Sony Computer Entertainment America discounted its Play-Station 2.

Effective May 14th, the Xbox is selling at a retail price of \$180, down from \$200 in the United States. In Canada it will sell for \$250 (\$180 in US currency), down from \$300, Microsoft said in a statement. The price drop is only effective in the United States and Canada. Microsoft has no plans to reduce the price in other markets, the company said.

Surprise Cut

Microsoft's price cut was not expected. The company did not mention it on Monday when it announced a host of new games and features for the console. Microsoft made its product announcements before the opening of the Electronic Entertainment Expo (E3) in Los Angeles, which began Wednesday and runs through the weekend.

"It is a surprise announcement; I don't think they necessarily were planning to cut prices," said Matt Rosoff, an analyst with independent research company Directions on Microsoft. "Microsoft has always said it would match Sony price cut for price cut, and they have to do that."

Sony, the day before, trimmed the price of its PlayStation 2 to \$180 in a move to clear inventory of current PlayStation 2 systems. The company is preparing to release a combo pack of a PlayStation 2 with a network adapter for online gaming, priced at \$199, that will replace the existing PlayStation 2 packaging.

The price-cutting sequence repeats the companies' leapfrog pricing of a year ago. Microsoft dropped the price of its Xbox by about one-third a day after Sony dropped the price tag of its PlayStation a like amount.

Losing Money

Microsoft is cutting its Xbox prices despite continuing losses in Microsoft's Home and Entertainment division, which includes the Xbox game console.

Losses nearly doubled in the most recent quarter compared to a year earlier, as revenue tumbled and marketing spending increased, Microsoft disclosed in a regulatory filing this week. The division markets the Xbox game console, PC games, consumer hardware, and Microsoft TV. It posted an operating loss of \$190 million for its fiscal third quarter that ended March 31, compared with a \$97 million loss a year earlier, according to the filing.

Quarterly revenue at the division fell to \$493 million from \$943 million a year ago, according to Microsoft. The drop is largely attributable to lower sales of Xbox game machines and games in all geographic regions, Microsoft said in the filing. Last year's quarter marked the launch of Xbox in Europe and Japan and reflected sales following the U.S. launch during the preceding quarter.

Microsoft also sustained a recent setback when a leading game vendor apparently snubbed the Xbox. Earlier in May, Electronic Arts lifted the veil on its major announcements for E3, saying that ten of the online sports games it is rolling out at the show will be for the PlayStation 2.

Microsoft's cash cows remain its Client and Information Worker groups, which include the Windows operating system and the Office productivity suite, respectively.

Microsoft May Cut Costs to Beat Linux - Software could be sold at deep discounts, or even for free, report says.

In an effort to win big government and institutional contracts when up against Linux, Microsoft is prepared to draw from an internal slush fund to offer its software at deep discounts or even for free, according to a published report.

According to Thursday's online edition of the International Herald Tribune, then top Microsoft sales executive Orlando Ayala sent an e-mail last July authorizing senior managers to draw from a special fund in order to win contracts where the software giant looked likely to lose against open source Linux software.

"Under NO circumstance lose against Linux," the IHT quoted Ayala's e-mail as saying. Remaining Quiet

Microsoft representatives in the UK declined to comment on "leaked or speculated internal documents" Thursday but did issue a statement saying that "the issues raised in the [IHT] story touch programs that the company has adopted to make technology available to customers at low prices."

At the time the e-mail was reportedly sent Ayala was the number-three executive at Microsoft, in charge of sales and marketing, but has since been transferred to lead a new business focused on small and medium-size companies, the paper said.

While Linux has a tiny share of the desktop software market compared to Microsoft's over 90 percent, the cheap, open source alternative does have a growing share of the server software market, and has been gaining attention with governments looking to shift to what some see as a more stable, low cost alternative, particularly in emerging markets.

Antitrust Concerns?

The report also details other aggressive strategies reportedly employed by the company, such as offering discounts on the hourly rates for its corporate consulting services and covertly collecting information on competitors. The tactics, if true, could potentially run the company even further afoul of government regulators, which have been pursuing Microsoft for years over its dominance in the PC software market.

Late last year, after Ayala's e-mail was reportedly sent, Microsoft finally reached a settlement with the US Department of Justice to loosen its grip on the desktop software market by sharing some source code, un-bundling products, and taking a more evenhanded approach to competitors.

The European Union is also scrutinizing the company and has generally stricter antitrust laws than the US Steep discounts given by a dominant software provider could potentially violate E.U. antitrust laws, the IHT speculated. Representatives for the company in the UK would not comment on possible E.U. regulatory action in light of the report, saying only that the company continues to work constructively with the E.U. for a resolution of its case.

Dueling CPU launches see

AMD gain ground in chip wars.

After correcting its inventory problems from the end of 2002, Advanced Micro Devices has gained a few percentage points of microprocessor shipment share against runaway leader Intel. Intel shipped 81.7 percent of all x86 processors sold into the market in the first quarter, a slight decline from its 84.7 percent share of processor shipments in the fourth quarter, according to data released this week by Mercury Research.

AMD's share rose from 13.8 percent in the fourth quarter to 16.6 percent in the first quarter as it cleared out the remains of an inventory backlog, said Dean McCarron, principal analyst

at Mercury Research, based in Cave Creek, Arizona. The figures in this study include all x86 desktop, mobile, and server processors shipped to distributors, manufacturers, and end users. This includes processors that Intel makes for Microsoft's Xbox gaming system, McCarron said. *Jumpstart in 2003* 

In 2002, AMD overestimated demand for its products in the second half of the year, and was left with an overstock of inventory as its chips sat in factories and distribution warehouses. That overstock has cleared out, and by next quarter, the market share numbers should accurately reflect the makeup of the market, McCarron said. The first quarter was a little stronger than expected; the first half of the year is traditionally down compared to the third and fourth quarters, McCarron said.

Intel's Centrino package, consisting of the Pentium M processor, a new chip set, and a wireless chip, was the chip giant's biggest launch of the first quarter, although it happened late in March. Intel also released new Xeon server processors in the quarter, and increased the clock speeds of other members of its lineup.

AMD launched the Athlon XP 3000+ processor in the first quarter, its first chip based on the new Barton core. That core design increased the amount of cache available on the processor. AMD also launched several mobile processors for a wide variety of notebooks.

FreeRip MP3

This tool rips songs from your music CDs and saves them in digital format. The program can convert between audio formats as well. It supports ID3 tagging to help you keep your music organized, and it automatically downloads your song's title and other data from various CDDB Internet databases and stores the information within your music files. No sound card is necessary

Version: 2.21 - Price: Free

Download FreeRip MP3 now at http://www.pcworld.com/downloads/file\_description/0,fid,16726,tk,hsx,00.asp

Looking for an ISP?

If you're looking for an Internet service provider, the Web has some guidance.

Several sites can direct you to free or low-cost firms. What do you get by pinching your pennies? Read the customer comments. There appear to be more complaints about free services than those that charge. Customer service is expensive to provide, and the free services are probably at a

disadvantage there. Where do you go for information? I went to FreedomList and found over 65 ISPs under \$10. This is a nice way to compare features, too. FindAnISP is another good site. You'll find those two at: http://www.freedomlist.com/ and http://www.findanisp.com/

There are also the Freenets. These are normally volunteer non-profit organizations dedicated providing community information and offering Internet access at the lowest possible cost. To find one near you, you can check the list here: http://www.lights.com /freenet/Upgrading?

Computers age quickly and new ones are costly. Here are four upgrades that will breathe life into an aging machine.

1. More memory: Installing more memory, or RAM, is the single best thing to speed up a computer. Depending on what you need, an upgrade should cost you less than \$100. You may be able to escape for less than \$50.

Microsoft says Windows 98 or Windows ME only requires 64 megabytes of RAM. Raising that to 128 MB is worthwhile.

Many inexpensive new Windows XP computers come with 128 MB of RAM. Double that and overall system performance can increase as much as 25 percent. If you're running Apple's OS X, you need 256 MB.

Another benefit to more RAM is speedier Web browsing. Files from the Internet are placed into the computer's RAM. If there is not enough RAM in the system, files are saved on the hard drive. Retrieving data from the hard drive is much slower than RAM.

It is not difficult to add more RAM to a computer. Your computer manual should provide instructions.

Make sure you buy the right RAM for your computer. Memory modules are not interchangeable. As long as you know your computer's make and model, you can buy online at Crucial Technology or Kingston Technology: http://www.crucial.com, http://www.kingston.com

If you prefer, local computer superstores often have memory sales. Watch your newspaper.

2. A new video card: If you have enough RAM and the screen takes a while to refresh when playing a game or editing pictures, the video card could be short on memory. Not all machines have separate video cards; most low-end computers have a video chip that's part of the motherboard. Unfortunately, built-in video cannot be upgraded.

You can easily install a video card with more memory, say one with at least 64 MB of RAM. Serious Windows gamers should add an AGP video card with at least 128 MB of RAM. Video upgrades are also available for the Mac. Video cards come with instructions, and, like installing more RAM, the job is fairly easy.

3. A faster modem: For dial-up connections, the minimum is a 56K modem. If you have something slower, it's time to upgrade. An internal 56K modem costs less than \$20; external modems are easier to install but are more expensive.

The newest 56K standard is V.92. It offers quicker connection times and something called "modem-on-hold." This allows you to receive an incoming call and stay connected to the Internet. Call-Waiting service from your phone company is required. You can also initiate a voice call while online. However, not all Internet service providers support V.92. Check with your ISP before buying a V.92 modem.

Switching to a high speed Internet connection makes a big difference. A cable or DSL connection is five to 60 times faster than a 56K modem.

4. A new processor: Replacing an old processor with a new one is a serious and relatively expensive upgrade. Often, a new processor requires a new motherboard. Check the motherboard manufacturer's site to see if it will take a later chip. You may have to upgrade the BIOS with a process called "flashing." That's a risky procedure not recommended for non-professionals.

Reprinted from the June 2003 issue of The Umbrella Online.



## From The DealsGuy by Bob Click

Greater Orlando Computer Users Group
Watch That Power Rating

ome are aware of the recall on APC uninterruptable power supplies. I bought a APC 350 VA UPS a while back and thought I was having problems with it recently. I called APC tech support to see if mine was affected by the recall (turns out it was) and the guy started asking me about what I had plugged into it. I had my 900 MHz Athlon desktop computer, my NEC XE21 monitor, my DSL modem and my Linksys router on it. He then told me my unit would not be covered under the recall because it had been overloaded. He offered me a special deal below wholesale (his words) for a new one (much larger).

When I questioned him further, he said that my 350 VA UPS would only handle about 280 watts and my computer's power supply alone is 350 watts (rating). Considering all that, he said I would need at least a 700 VA unit, and probably more. I was never aware that just a computer and monitor alone would overload that UPS. I was under the impression that the 350 VA only had to do with how long it would support your computer after the power went down. Live and learn. Looks like I need to spend a lot more money. I'm telling you this so you'll be aware. In the past though, I used a 600 VA UPS for several years with no problem. According to his analysis, it would have been much too small. I have since found that my problem was not with the UPS, but instead was a defective power cord. Moving it seemed to get things working again and I thought it was the UPS's plugs. I finally tried a new power cord, which solved the problem. I also have a different brand UPS now.

#### **Another Warning**

This is for you folks who love downloading music files. It is rumored that someone (I won't quote the entire rumor) is putting poisoned files on file sharing sites. Those poisoned files could damage your computer's file system, causing you to lose all your data, and Winamp vulnerabilities, check out [http://www.winxpnews.com/rd/rd.cfm?id=03012 1SE-WiMP\_Winamp] to find out more. Maybe your Antivirus software will now check for that virus, but find out for sure.

### Let's Shrink It

While reading the *Data Bus*, newsletter for SouthEastern Michigan Computer Organization, I saw the special for PicoZip at a 40% discount. I e-mailed Christopher Tan, the developer, asking if I could have the same special for the column and he was happy to oblige. PicoZip is a file compression utility that Supports ace, arc, arj, bh, cab, gz, jar, lha, lzh, rar, tar, tgz, z, zip, zoo, xxe and uue file formats. (Whew, I never heard of some of them) I understand it is a full-featured automated backup tool. Also comes with lifetime free upgrades.

To get a better explanation of this product, check the Web site [http://www.picozip.com]. The normal price for PicoZip is \$24.95, but my readers can get it for only \$14.95 by using the special coupon code "PZ DEALSGUY" when you access the special URL [http://www.picozip.com/coupon/coupon.php?couponid=PZDEALSGUY] to order. This offer is valid through August 31, 2003. File size is about 2.59 MB.

There is a review for PicoZip posted on my Web site on the Other Articles/Reviews page written by Franz Breidenich of SEMCO.

Need a Web Host?

Matt McCann needs no introduction to all of you. You have seen Matt in action many times doing presentations for your users group, and they were always memorable. Matt is offering something new, hosting for your Web site, and e-mail. According to his e-mail announcement, you can register your domain name for just \$9.95 per year, or transfer your present domain name for the same including a one-year extension. Not bad! Web hosting is as low as \$5.95 per month including one free e-mail account.

Check it out at [http://www.webhostingand-domains.net] for more information and pricing. I have been friends with Matt for many years and have confidence in the product he sells. I wish him the best with this new product. There are cheaper deals for this service, but we all know Matt well.

This column is written to make user group members aware of special offers I have found or arranged, and my comments should not be interpreted to encourage, or discourage, the purchase of any products, no matter how enthused I might sound. Bob (The Cheapskate) Click [Bobclick @mindspring.com]. Visit my Web site at [http://www.dealsguy.com] for past columns. I have also been busy putting up some interesting new articles on my Web site, so take a look.

## Preventing Data Loss

by Brian K. Lewis, Ph.D. Sarasota Personal Computer Users Group, Inc. reventing data loss is just another way of saying, "Backup your hard drive". However there are many different ways to accomplish this. As we discussed in the March Tech Forum at the General Meeting, most people want a simple way to recover from a catastrophic hard disk failure. Unfortunately, in that discussion, I led some people astray when we were talking about using an external USB IDE drive. Power-Quest's DriveImage software does NOT work with USB drives. This fact is made very clear on their web site in the DriveImage FAQ's. About one year ago I tried to backup to a USB drive. In my case, DriveImage would not allow me to create an image file on the USB drive. Somewhere along the way this fact was reported in a software review in the *Monitor* and it just really slipped my mind. I guess it's just another manifestation of "old-timers" syndrome!

So, let's clarify just what DriveImage can do to help prevent data loss. DriveImage is primarily designed to create a compressed image file of an entire hard disk on either a separate hard disk or some form of removable media (CD-R, Zip or Jaz disks). The image file is one file containing all the contents of your hard drive including the operating system files. If this image file is created on a hard disk, the disk is not bootable. You can restore individual files, programs, or operating system from this image file. So, if your original hard drive fails, you have to restore to a new drive from the image files on the backup drive. Just remember the restoration process returns your drive to the condition it was in at the time you created the image file. The greater the interval between image file creation and restoration, the greater the data loss.

If you wish to have a bootable hard disk, you must use a program, which provides for a complete disk to disk copy without compression. The current version of DriveImage contains a Drive-Copy program, which allows you to "clone" your hard drive. The "cloned" drive is an exact copy of your original drive and is bootable. However, it is not really recommended that you have two bootable drives installed in the same computer. This may lead to some problems in booting your system. PowerQuest recommends that you remove the "cloned" hard drive and store it in a safe place. Then once a month, reinstall the drive and make a new disk copy. In between these monthly backups, you should backup your data files to some media such as a writeable CD or DVD.

Using DriveImage to backup your hard drive is one system for preparing for the eventual failure of your hard drive. Admittedly, the life of a hard drive has increased greatly along with their increasing storage size. However, their warranted life span has been reduced. Several manufacturers have reduced their warranties from five years to three. This probably reflects the fact that few drives actually survive for five years. Consequently, if you don't prepare for the loss of a hard drive, you will lose everything you have stored on it when it does fail.

So what procedures should you follow in trying to prevent loss of information from a drive failure? Let's talk first about the ideal system. In this system you would have a second hard drive identical in capacity to your boot drive, generally your C drive. The second drive should be installed in a removable rack or drawer so it can be

stored away from your computer. Then you should also have a CD-RW or a DVD writer.

Using these media, once a month you would create either an image file or a complete copy of your C drive on the second hard drive. If your C drive is partitioned, then each partition should be copied to the second drive. Between these monthly backups, you should backup your data files using either CD's or DVD's. The frequency of these backups would depend on how much data you are willing to lose if your drive fails. If you only backup weekly, then you can expect to lose as much as one week's data. If you backup daily, then the most you will lose is one day's work.

So you say you can't afford to lose even one day's work. What do you do then? The best alternative is to use a two-drive system with a RAID system. RAID stands for Redundant Array of Independent Drives. This was originally designed for network servers using an array of SCSI drives. However, the technology has been adapted to use ATA drives (see my article in the November 2000 Monitor). An add-on adapter using RAID 1 mirroring can be installed in any computer running any version of Windows from 98 on. In a RAID 1 system, only two hard drives are needed.

In this system the drive controller first writes data to the main drive and then writes the same data to the second drive. This provides an identical copy of the first hard drive. One disadvantage of this system is that the double writing of all data doubles the time required for disk access. If the software application is data intensive, for example database data handling, then there may be a noticeable delay due to disk writing. With the faster ATA 100 or 133 hard drives combined with a fast CPU, this delay may not be noticeable. Disk reading may also be slowed unless the controller can read from both disks simultaneously. In order to install a RAID system you must have two identical drives and a RAID adapter card. Companies such as Adaptec and Promise make ATA adapters, to cite just two examples. Prices for these adapter cards range from under \$50 to about \$100.

With a RAID system, if one hard drive fails, the other can be immediately reset to be the master drive. The failed drive can then be replaced and the RAID system will rebuild all the information on the new backup drive. As with any two drive backup system, if both drives fail at the same time, you have a major problem.

However, the probability of simultaneous failure is very, very small.

If you don't want to go to the expense of setting up a second hard drive and an adapter card, there is a software solution to the continuous backup. However, the software does not produce a mirrored drive. Instead, it monitors the data files and continuously backs up any changed files. This backup can be made to another hard drive, a second partition on your C drive or to any removable drive including a CD writer. V Communications and PeerSoftware make desktop software for continuous backup. These products are available from their websites for prices ranging from \$29 to \$89. You can also download free trial versions to see if this is software for you. Please note, I have not tested software from either of these companies. However, V the makers of System Commander, Partition Commander and other well-known

If you elect to use the data monitoring software, it would be advisable to use Drive Image, Ghost, or similar software to periodically make a complete backup of your hard drive. In between these backups, the monitor-ing software would keep your data up to date. If you include a backup of your registry, you could be assured of not losing any program or settings information. This would entail more effort when you had to restore a hard drive. However, you would have far less chance of being caught without any backup at all

For Windows 98/ME the pertinent folders are: (1) Windows\Application Data\ Microsoft\Address Book; and (2) Windows\Application Data\Identities\{alpha numeric identifier} Microsoft\Outlook Express.

I don't really know the folder locations in Windows 2000, but I suspect it is similar to the locations for Windows XP. Windows NT used the

same locations as Win98/ME. If you can not find your OE address book in any of these locations do a search for \*.wab. That should locate your address book(s). To locate the folder containing your e-mail messages, run Outlook Express. From the menu select Tools, Options and then click the Maintenance tab. This has a button for changing the location of your messages. Click the "Store Folder" button and a small window will pop up showing you the location of your message folders.

The method you choose to handle your backup is not as important as the fact that you are doing backups. If you don't backup your hard drive, you can expect to have a drive failure and you will lose data and possibly some of your programs. Your daily mantra should be "Backup, Backup, Backup,"

Reprinted from the April 2003 issue of the Sarasota Monitor, the official monthly publication of the Sarasota Personal Computer Users Group, Inc. Dr. Lewis is a former University & Medical School professor. He has been working with personal computers for more than thirty years.

Society News

President's Message by Ron Matteson

rist, I want to remind everyone of our July meeting. I'm excited that the Sound Bytes guys are going to be with us. My suggestion is that everyone think of the most aggravating problem they have with their computer system, and bring it to the July meeting for discussion with the experts. For example, my Windows XP system crashes a lot, especially when I try to keep a Microsoft product and an Adobe product open at the same time.

There are some nice things about XP that I like, though. I like seeing the thumbnails of photos that I have in a folder when I open the folder. It makes finding the right photo a lot easier. Also, there is the neat clipboard that comes with Office XP. You can clip and save 24 different pieces of information. Thumbnails of the pieces saved show up in a panel on the monitor, so that you can select and paste any of the items you have saved. I also like the "hibernate" feature of XP. Go to Start-Shutdown, and click CTRL-H. The computer shuts down fast, including shutting down the hard drive. When you want to start up again, just hit the power button, and the system starts up fast, and brings it back

to exactly where you left it, with documents open, etc.

I thought the last Program Meeting on web page design presented by Mike Necheles was great. One factoid of interest is that there is a WYSIWYG web page design tool included in most Windows operating systems of vintage 98SE or earlier. Go to Start-Find, and type in FrontPage Express (note the lack of a space between Front and Page). This tool will do a lot of the things that Mike talked about.

Another item of interest is the variety of courses available on the HP web site. Just go there and sign up, it's free. Courses are available on a variety of topics, including Word, Desktop Publishing, Scanning, and Multifunction Devices. More courses are added all the time.

I hope you are all planning on coming to the RCSi picnic, which will occur on our regular meeting night in August, but at the shelter in the Brighton Town Park, off Westfall Road. See Steve Staub to sign up.

Report of Planning Meeting June 17, 2003 by Ron Matteson

hose present: Bob Avery, Tony DeLello, Ron Matteson, Dan Rothfuss, Sally Springett, Bill Statt, and Steve Staub.

Under old business, it was agreed that the program meeting on June 10 was very well received. The topic of web page design might well lend itself to a half-day or full-day short course. Also discussed was the fact that the RCSi still needs a secretary, since no secretary was elected at our recent elections. Anyone interested, please apply to Steve Staub for consideration by the RCSi Board.

Another item discussed was the need for a permanent place to hold our program meetings. Some places require liability insurance; other places require payment of a fee. Neither of these alternatives appear attractive at present. One idea is to offer insurance agents advertising in return for liability insurance coverage.

The treasurer's report can be found elsewhere in the Monitor. The financial audit and completion of the Form 990 will be completed shortly. The Form 990 will be filed with RCSi documentation.

The next Program Meetings consist of the following:

July – the Sound Bytes guys (Brighton Memorial Library)

August – picnic (Brighton Town Park)

September – Arpad Kovacs on computer moding (BML tentative)

October – PowerQuest presentation on their software products

Bob Avery reported that slides from the last Program Meeting are available on the web site, information about the next meeting is available there, and the information has been reported to the SoundBytes web site calendar.

It was decided to start a promotion, whereby purchasers of new computers from local computer stores would receive a coupon for six months free membership in RCSi. The offer is not available to current members. The cooperating stores would receive a quarter page ad in the Monitor. Sally will design a coupon to be printed at the time of printing the next Monitor.

The RCSi Bylaws have been amended, approved by the membership, and is a part of the RCSi documentation. No further action is required at present, thanks to Warren Ganter.

New Users Notes by John McMillan June 4, 2003

Bill Statt handed out copies of the June Computer Link magazine for attendees to peruse while he tried connecting his laptop to the Internet through Roadrunner. He thought Roadrunner might have eliminated 10 monthly hours of roaming time for customers who were temporarily away from their cable connection. If this is true it will limit some future demonstrations.

The first question came from a user with a digital camera card reader but who couldn't add picture files to his hard drive or move them to another networked machine. One thought was that the browser Netscape had taken control of picture processing, that is, JPG files would open in Netscape and this association should be changed. This can be done by clicking the View command in Windows Explorer which opens a tabbed Folder

Options window. Clicking the File Types tab opens a list of registered file types and their icons. When a file type is selected, it's extension (the 3 characters following the file name), and the program that extension opens are shown below the list. There are buttons that allow new file types to be added, and old types to be deleted or changed (edited). If this does not solve the problem and the program that opens is not one that you want or use, try deleting the program

and then changing the association as previously described.

Bill indicated that, when files have been read by the reader, they need to be moved from the reader into a folder on the hard drive.

He went on to demonstrate the process on his laptop beginning with the selection of the file or files to be copied. He put the cursor over the Start button and right clicked which opened a menu. Selecting Explorer opened a window that gave him access to the computers table of contents. Folder structures were shown in the left pane and the files of a selected folder were listed in the right pane. For me this is a very important connection and well worth creating a shortcut to. Windows Explorer has been an integral part of the operating system starting with version 95.

Bill positioned the cursor over a file name and single clicked the left mouse button to select the file. After the first file has been highlighted, other files can be selected by holding the control key down while clicking on additional file names. If the files to be selected are listed consecutively, after the first is selected, the shift key can be held down when the last one is clicked and all files between the two will be highlighted.

When selection is complete, hold down the right mouse button and choose copy. Then, in the left pane, select a new location on the hard drive and right click. Select paste from the menu that appears and the selected files will be copied onto the hard drive. From there they can be opened in a graphics processor and manipulated in many ways.

Many picture files are very large and are therefore saved as .JPG files that utilize compression formulas to reduce the size. This often introduces slight color changes that are cumulative through several iterations resulting in distortion that is sometimes unacceptable. Bit Mapped (.BMP) files are more consistent but much larger in size.

In an associated question, a user downloaded a Print Image Matching (.PIM) program from Epsom that is used to transfer information from a Sony camera to Adobe. It was suggested that she use the Epsom folder to store the downloaded file which is used by Epsom for direct printing. Any changes such as contrast or other adjustments would be made in the Adobe system before sending the file to a printer.

Another user found that he often receives attachments too large for the screen so horizontal and vertical scroll bars are added to make the entire image accessible. He wondered how he could reduce the image to the size of the screen. After the attachment has been saved as a file, it could be opened in a picture processing program such as Adobe Elements, Adobe Photoshop or Micrographix Picture Publisher. There may be commands for resizing or when the file is opened, it may be surrounded by a dotted line with small blocks in the corners.

Positioning the cursor over the upper left corner block often gives a double headed arrow that can be dragged toward the center of the screen to change the width and height of the picture simultaneously. Then positioning the cursor in the reduced image will allow it to be dragged back to the upper left corner of the screen.

This process can be repeated until the entire picture fits on the screen. The discussion turned to scanning pictures and it was suggested that scanning be done at the highest resolution possible. The resulting file can be optimized later. Bill mentioned that the printing standard is 300 dots per inch but 240 is adequate for a 4 x 6 print and noted that photographic paper is far superior to normal ink jet stock. 640 X 480 is a better resolution for files to be transmitted by E-mail.

The next topic was cleaning up the hard drive to make space for new programs or files. Bill suggested going to Start in the lower left corner of the Desktop, selecting programs, then accessories and then System Tools. Clicking on Disk Cleanup will open a dialogue window that asks what disk you want to clean up. You can also get to this point by opening Windows Explorer, selecting a drive and clicking Properties in the File menu.

After a drive is selected, the program calculates how much space can be saved by eliminating temporary Internet files, downloaded program files, temporary files and emptying the recycle bin. You can check which actions you would like and then click ok to execute them. There are also tabs for removing windows options that you do not use, and for settings which may allow you to institute automatic cleaning when free space gets low.

Going to Start, > Settings, >Add or Remove Programs would allow scanning to determine if there are programs that are no longer used and could be removed. Some programs have their own deletion program and may not be in the general list. Opening Windows Explore allows examination of the entire hard drive looking for seldom used text or graphic files; programs; or games that could be eliminated or transferred to

removable media if not already backed up somewhere.

Regardless of how things are removed, it should be recognized that they are still present on the hard drive. Their locations have been removed from the registry to make the space available for reuse when anything new is stored. This has sometimes led to trouble when hard drives are salvaged and the new owners are able to retrieve sensitive information such as E-mail addresses, passwords and bank or other account numbers. Data is only removed when it is written over and even then there are specialty techniques for delving down through several levels of recording.

With continuously dropping hard drive costs, one might consider a larger or supplemental hard drive. It was noted that Comp USA will install hardware purchased from them at no cost.

When the questions slowed down, Bill demonstrated his new Line 8.2 version from SuSe that comes with much better documentation than 8.0 for a meager \$49.00. Although the basic Linnux operating system is free, SuSe includes 4500 pieces of software for such varied tasks as picture editing, E-mail and other communication programs, music players including a segment that will print guitar chords, a complete office suite that includes word processing, spread sheet, and a presentation package similar to Power point to mention a few. Apt - Get, available from Debbian, is a free but less extensive assembled package for people new to Linux.

The New Users group will again be open for questions starting at 6:30, Tuesday, July 1st at the Monroe Developmental Center, 620 Westfall Road.

Treasurer's Report
by Steve Staub
Balance as of 5/20/03 \$689.26
Income
Dues and picnic deposits \$163.00
Expenses
Park permit
Folding machine (last payment) 86.72
St. Stephen's
Bulk mail permit
\$366.72
Balance as of 6/17/03 \$485.54

The Lighter Side

## If Data Was

# Microsoft Compliant

**Worf**: Captain, there are three Romulan warships uncloaking dead ahead.

Picard: On screen.

The main viewing screen changes to a pattern of horizontal lines, each only a single pixel wide.

Picard: Data, what's wrong here?

**Data**: Captain, the main viewscreen does not have sufficient video memory to display an image of this size. May I suggest that you select a lower resolution?

Picard: Make it so.

The screen blanks, and then an image appears, with big, blocky square pixels. Three objects appear in the center, which could be Romulan warbirds, but which actually look more like the aliens in Space Invaders.

**Picard**: Data, open a hailing channel to the Romulans.

Data: Aye, sir.

Data picks up an hourglass from the floor beside him, turns it over, and places it on the console in front of him. He punches some buttons on the console and sits motionless for several seconds. A flash of light blossoms from one of the Romulan ships on the viewscreen.

**Worf**: Incoming plasma torpedo, Captain! **Picard**: Shields up!

**Data**: I'm sorry, Captain, but I am still attempting to complete your last instruction. I must ask you to wait until I have finished before you issue your next command.

**Picard**: What on earth do you mean? Data, this is important! I want those shields up right now.

**Data**: I'm sorry, Captain, but I am still attempting to complete your last instruction. I must ask you to wait until I have finished before you issue your next command.

**Laforge**: Allow me, captain. [to Data] Controlaltdelete, Data.

Data removes the hourglass from the console, and returns it to the floor.

**Data**: The Romulans are not responding to my hails. Press my nose to cancel and return to Windows. Pull my left ear to close this communications channel which is not responding. You will lose any information sent by the Romulans.

LaForge pulls Data's left ear.

Picard: Shields...

There is a tremendous explosion. The bridge shakes violently, and all the crew members are thrown to the floor. A shower of sparks erupts from Wesley Crusher's station at the helm, throwing Wesley back away from the console.

**Picard**: Up, Data! **Data**: Aye, sir.

Riker: All decks, damage report!

**Worf**: Captain, Ensign Crusher is injured. He appears to be unconscious.

Data picks up the hourglass again, places it on his console, and punches some more buttons. He waits a few seconds, then puts the hourglass back on the floor.

Data: Shields are now up, captain.

**Picard**: And not a moment too soon. Worf, lock all phasers on the lead Romulan ship.

**Worf**: Aye, sir. [He punches buttons on the weapons console.]

**Picard**: Mr. Data, take the helm, and prepare for evasive action.

**Data**: I am sorry, sir, but I do not have the proper device driver installed for that console.

**Picard**: Well, damn it, install the right one.

**Data**: Please insert Setup Implant #1 in my right nostril.

**Picard**: Number One, where do we keep Data's setup implants?

**Riker**: I left them with Geordi.

**Laforge**: [in a surprised voice] What!!? I thought you still had them!

**Picard**: Data, don't you have device drivers stored in your internal memory?

**Data**: Not found, sir. Please insert Setup Implant #1 in my right nostril.

**Picard**: Data, I don't have Setup Implant #1. **Data**: Not ready reading right nostril. Abort, Retry, Fail?

Picard: Abort!

**Data**: Not ready reading right nostril. Abort,

Retry, Fail?

Picard: Well, fail, then!

**Data**: Current nose is no longer valid.

Data walks over to the helm, and presses several buttons. The ship lurches, the images of the Romulan warships suddenly shift to one side of the viewscreen, and a highpitched whining noise is heard coming from somewhere else in the ship.

**Laforge**: [alarmed] Data, what the hell are you doing?

**Picard**: Number One, do we have a customer service number for Data?

**Riker**: Yes sir, but last time I tried to call them, I got put on hold for two hours before I was able to talk to anyone. And that person wasn't knowledgeable about androids of Data's model. She specialized in industrial control robots.

Suddenly, the lights all go out, the viewscreen goes blank, and all the usual noise of fans, motors, and so on whines to a halt. After a few seconds, the red emergency lights come on. Data is standing by the console, absolutely motionless.

Picard: What's going on?

**Laforge**: [checking the helm console] Lieutenant Data has caused a General Protection Violation in the warp engine core.

**Picard**: These androids look really sharp, but you can't really do anything with them.

The shimmer of the transporter effect appears, and six Romulans in full battle dress materialize on the bridge. A seventh figure, a Ferengi, appears moments later.

**Ferengi**: [with a mercenary grin] Can I interest you in a Macintosh, Captain?

-Author Unknown

T's a comfort to know that there's a place in the business world for people like these:

A user who complained to his support department that the limitation that only one computer at a time can use the emergency dial-up connection shouldn't pertain to him because, he said, referring to his machine, "This isn't a computer. It's a laptop!"

A manager who could neither understand nor accept the explanation for why the network was down when she unplugged a router so she could charge her cell phone.

-Computer World