

# Amateur Computer Group of New Jersey NEWS

Volume 33, Number 03

March 2008

## 33rd Annual Trenton Computer Festival

April 25, 26 and 27

3rd Annual



### TCF IT Professional Conference

The Trenton Computer Festival (TCF) is the nation's longest running personal computer show and it is being held at The College of New Jersey. For the third year, the Trenton Computer Festival is extending its program to provide Information Technology and computer professionals with an additional day of conference. It is intended, in an economical way, to provide attendees with insight and information pertinent to their jobs, and to keep them informed of emerging technologies that could impact their work.

The TCF Professional Conference will be run between 8:30 AM and 5:00 PM on Friday, April 25, 2008. For more information, registration, click [here](#). For a list of talks with abstracts and biographies of the speakers, click [here](#).

### New — Robotics Contest

The TCF 2008 Robotics Contest is the first annual robotics contest hosted by TCF. It is here that the best minds are invited to compete in one of four categories to showcase their knowledge of robotics and electronics.

04/26/08 - 11a-2p **Sumo Competition**: Two robots compete in a "sumo match" in which the goal is to push the opponent out of the ring.

04/26/08 - 3:30p-5p **Maze Navigation**: A robot is to solve a maze without assistance from any outside force.

04/27/08 - 12p-1p **Precipice Avoidance**: A robot is to detect the edge of a table and place a ball in a shoebox.

04/27/08 - 9a-2:30p **DesignATHon**: Contestants will come up with a solution to a problem that will be disclosed 4 weeks before judging. (Non-Robotic)

04/27/08 - 3p-4p DesignATHon Judging

The prizes for all four categories are: A Gold medal and a \$250 A-WIT Gift Certificate for first place. A Silver medal and a \$150 A-WIT Gift Certificate for second place. A Bronze medal and a \$50 A-WIT Gift Certificate for third place.

TCF Takes place the weekend of April 25th, 26th and 27th. ACGNJ needs your support for TCF. Most of ACGNJ income comes from TCF so PLEASE attend TCF. Plan to attend the talks, seminars, discussions, lectures, presentations and classes at TCF. Venders will be there for purchase of almost any equipment or software you want or need.

TCF also needs Volunteers to handle all the background mundane chores necessary to run such an enterprise. Please [Volunteer](#).

### Keynote Speaker for TCF 2008

#### David Perry

David will speak on "Identity Theft", one of the fastest rising crimes in America as reported by the FBI and CIA.

Saturday April 26, 2008, from 2:35 PM to 3:30 PM ET

David Perry is Global Director of Education for Trend Micro, an antivirus software company. He is the representative of Trend Micro at industry, government, customer and reseller events worldwide.

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<http://www.acgnj.org>

Founded 1975

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**Tips for reviewers:** Why does anyone need it? Why did you like it or hate it? Ease (or difficulty) of installation, learning and use. Would you pay for it?

**Advertising:** Non-commercial announcements from members are free. Commercial ads 15 cents per word, \$5 minimum. Camera ready display ads: Full page (7 x 10 inches) \$150, two-thirds page (4½ x 10) \$115, half-page \$85, one-third \$57, quarter \$50, eighth \$30. Discount 10% on 3 or more consecutive insertions. Enclose payment.

**Publication Exchange:** Other computer user groups are invited to send a subscription to ACGNJ at the address below. We will respond in kind.

**Address Changes** should be directed to Martin Rosenblum ([m.rosenblum@ieee.org](mailto:m.rosenblum@ieee.org)) and/or to his attention at ACGNJ at the address below.

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**Typographic Note:** The ACGNJ News is produced using Corel Ventura 5. Font families used are Times New Roman (TT) for body text, Arial (TT) for headlines.

### E-Mail Addresses

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# TCF 2008 Talks, Forums and Exhibits

Visit [Talks and Forums](#) for scheduling, abstracts and biographies of the speakers. Here is a summary of the subjects:

**Saturday, April 26**

## ***IT PC - Room BSC-210***

- \* Internet Job\$\$\$ by Donald Hsu, Dominican College
- \* Introduction to Searching with Regular Expressions by Christopher Frenz, New York City College of Technology
- \* Agile Software Development by Matthew Ganis, IBM/Pace University
- \* Comparison of Popular Social Networking Tools for Professionals by Ron Graham, Isles YouthBuild Institute, Trenton NJ
- \* Integrating Oracle 10g XML: A Case Study by Coleman Leviter, Arrow Electronics

## ***Digital/Graphics - Room BSC-211***

- \* Getting Started With Microcomputers, the Internet, and Digital Photography by Herman Hinitz, HBH Associates
- \* Seeing Clearly through your monitors lens by Thomas G. Brown, Consultant
- \* Advances in Digital Photography by Shabbir Moochalla, IEEE Princeton Central Jersey Section
- \* A Case Review in the Evolution of a Computer Language by Claude Kagan, Retired

## ***Consumer Apps - Room BSC-202W***

- \* Designing Intelligent Multimodal User Interfaces for Mobile Wireless Devices by Osamuyimen (Uyi) Stewart, IBM Research

\* Building a Home Theater PC with Mediaportal by Douglas Ferguson, EMC

\* Dangers of File Sharing vs. Identity Theft by Rebecca Mercuri, Notable Software, Inc.

## ***Software Apps - Room BSC-202E***

- \* RESTful Web Services by Mike Barlow, Sensor Technologies
- \* Should You Upgrade to Windows Vista? by David Soll, Omicron Consulting
- \* The Future of Computers by Allen Katz, The College of New Jersey
- \* Video Games 2008 by Roger Amidon, Nanergy, Inc.

## ***Technology - Room SB-D***

- \* All About HDTV by Cass Lewart, Freelance writer
- \* VoIP (Voice Over IP) Update by Joe Budelis, Persimmon Telecommunications
- \* LP to MP3 by David Ciotti, The College of New Jersey
- \* Science and Computers at Home by Mark Streitman, New Jersey Society for Amateur Scientists
- \* The Apollo Guidance Computer: Architecture and Operation by Frank O'Brien, Infoage Science/History Learning Center

## ***Education - Room SB-E***

- \* Bionformatics Workshop by James Dyer and Katherine Herbert, Science Informatics, Montclair State University

*Continued*

## **Keynote Speaker, *continued from page 1***

He is a leading authority on computer virus prevention with more than 25 years in the technical support and education field. He has appeared at numerous industry trade shows, been featured on hundreds of television and radio broadcasts and in print media interviews, and is well recognized in the antivirus industry. He is one of the most quoted experts in the field of computer viruses, malware and security education.

He has worked in the field since 1991, and in the computer industry since 1979. Before Trend Micro he worked at Norton on Norton Antivirus, and at McAfee. David has been interviewed by The New York Times, The Washington Post, Time magazine, ZDNet and other publications. He has appeared on TV and radio all over the world, including Good Morning America, BBC News, Fox News and ABC News.

He is a leading authority on computer virus prevention with more than 25 years in the technical support and education field. He has appeared at numerous industry trade shows, been featured on hundreds of television and radio broadcasts and in print media interviews, and is well recognized in the antivirus industry. He is one of the most quoted experts in the field of computer viruses, malware and security education.

end of 1999 during the Y2K vigilance, providing his services as a computer virus expert for the President's Task Force on Y2K Issues. ☺



\* 2008's Newest and Best Search Engines, Websites & Software plus Videos, Amazing Robots and more! by Eva Kaplan, Computers + Kids Camp/Pennington Computer School

\* Using Technology to Lose Weight by John LeMasney, Consulting

\* How to Refill Laser Cartridges and Cut Printing Cost by Irene Wissman, NYACC

**Hardware - Room SB-F**

\* Controlling the World with PICs in 2008 by Paul Bergsman, Author and Independent Consultant

\* Rolling Your Own PC-Boards 2008 by Paul Bergsman, Author and Independent Consultant

\* Workshop on Home Automation by Neil Cherry, Author/AT&T Research Lab

\* Protecting Intellectual Property by Michael Feigin, Law Office of Michael Feigin

\* How to Make a Gadget by Mark Streitman, Evolutionary Thought,LLC/Microchip Design Partner

**Software - Room SB-G**

\* Introduction to C++ by Michael Redlich, ExxonMobil Research & Engineering

\* C++ Advanced Features by Michael Redlich, ExxonMobil Research & Engineering

\* Introduction to Object-Oriented Programming and Design Principles by Michael Redlich, ExxonMobil Research & Engineering

\* Ubuntu: What It Is, and Where It's Going by Joseph Terranova, Ubuntu New Jersey Local Community Team

\* Significance of 1980 Kaypros in the evolution & revolution of portable personal computers by Frank Gadek, Retired

**Special - Room SB-H**

\* OpenVMS for the Hobbyist: Industrial Strength at No Cost by Robert Gezelter, Software Consultant

\* Workshop on Advanced Web Site Development using Open Source Libraries by Mike Barlow, Sensor Technologies / ACGNJ Lotus Notes User Group

\* Financial Market Turning Points Identified Using Neural Networks, Donn Fishbein, Neuroquant

\* Project Management: Opportunities Unlimited by Donald Hsu, Dominican College

**Amateur Radio - Room SB-103**

\* Ham Radio License Testing and information

\* Ham Radio License Testing and information - Second Exam

\* APRS, where we are and where we are going by Brian Boccardi, NJ state office of emergency management

**Exhibits - Rec Center Room-RC**

\* Poster Sessions, Historic, Wireless Technologies, Robotic & Electronics Contests, Electronic Music, Digital Imaging, and Multimedia Computing

**Sunday, April 27**

**Internet - Room SB-D**

\* Financial Market Turning Points Identified Using Neural Networks by Donn Fishbein, Neuroquant

\* VoIP (Voice Over IP) Update by Joe Budelis, Persimmon Telecommunications

\* 2008's Newest and Best Search Engines, Websites & Software plus Videos, Amazing Robots and more! by Eva Kaplan, Computers + Kids Camp/Pennington Computer School

\* A Case Review in the Evolution of a Computer Language by Claude Kagan, Retired

**Applications - Room SB-E**

\* Controlling the World with PICs in 2008 by Paul Bergsman, Author and Independent Consultant

\* Rolling Your Own PC-Boards 2008 by Paul Bergsman, Author and Independent Consultant

\* Using Technology to Lose Weight by John LeMasney, Consulting

**Technology - Room SB-F**

\* Protecting Intellectual Property by Michael Feigin, Law Office of Michael Feigin

\* LP to MP3 by David Ciotti, The College of New Jersey

\* Integrating Oracle 10g XML: A Case Study by Coleman Leviter, Arrow Electronics

**Special - Room SB-G**

\* The Apollo Guidance Computer: Architecture and Operation by Frank O'Brien, Infoage Science/History Learning Center

\* Hands-On Java Programming Workshop by Michael Redlich, ExxonMobil Research & Engineering

**IT PC - Room SB-H**

\* Better Performance for Your Web Server by Guy Ferraiolo, CNET Networks

\* Getting a Job as a Visual C#.NET Programmer by Donald Hsu, Dominican College

\* Introduction to Searching with Regular Expressions by Christopher Frenz, New York City College of Technology

\* Emerging Technology: Wireless Body Area Networking by Maulin Patel, Philips Research North America

**Exhibits - Rec Center Room-RC**

\* Poster Sessions, Historic, Wireless Technologies, Robotic & Electronics Contests, Electronic Music, Digital Imaging, and Multimedia Computing

# A Tale of Two Digits

Robert Hawes (r.d.hawes@hotmail.com), ACGNJ

We'll be racking up a *lot* more than two digits before this article is done; but if I used any other number in the title, it might obscure my titular rip-off of Dickens. Anyway, we'll be working with binary files, so that "two" *does* fit. However, as is often the case in my articles, I'll start out with a topic that seemingly has nothing to do with the title; namely, TV trivia. Anybody remember *Hogan's Heroes*? Who'd make a *comedy* about a World War II POW camp? Anyway, a lot of people (including me) liked it. Over the years, there have been other TV programs in which a combination of good writing and good acting succeeded in overcoming a bad premise. If this was a TV Club newsletter, perhaps I'd list them; but I brought up *Hogan's Heroes* only to introduce another show produced in a similar vein.

*'Allo 'Allo* was a 1982-1992 BBC comedy set in World War II occupied France. In the USA, it's often been rebroadcast on PBS. There are a lot of things about this silly sit-com to recommend. Here, I only want to showcase its ingenious use of language; and what's even better, nobody ever explained anything. You just knew it from watching the actors interact. Of course, it's a British show, so everybody was speaking English. French characters spoke English with a French accent. German characters spoke English with a German accent, whether they were speaking to the French characters or among themselves. When the writers wanted to emphasize that the Germans were actually speaking German, they had them *yell!* A handful of English characters spoke English with an only slightly exaggerated English accent, and had absolutely no idea what the French characters were saying. Just a few of the French characters could speak English. When they did, they'd switch over to a cliché snooty upper-class English accent. As far as language went, my favorite character was Officer Crabtree (played by Arthur Bostrom), an undercover English spy who spoke French *wrong!* My talent for mimicry is infinitesimally small, so I'm only able to reproduce one of his lines. When impersonating a French gendarme, he would say; "I am disgeezed as a peloseman". From time to time, the plot would call for one or more of the characters to sing. Usually, it was just in the background, as other characters spoke their funny lines; but once, Officer Crabtree stepped up to the mike, and the result was hilarious all by itself. About halfway through the series, the writers introduced some Italian characters, who of course spoke English with an Italian accent. Character-wise, they acted like stereotypical buffoons; and either the writers couldn't think of anything else to do with the Italian language itself, or what they did was so subtle that I completely missed it. However, the writers did have one last ace up their sleeves. At the end of the series, several other British secret agents showed up, and they *all* spoke mangled French. You suddenly realized that somewhere in England there was a spy school that actually taught incredibly bad foreign language.

Well, enough of that. Here's another seemingly irrelevant digression. In 1994, a person whose name I *refuse* to commemorate (and who had nothing whatever to do with the development of Linux) made a discovery. Nobody had ever

filed to copyright or trademark the word "Linux". So he did. Then he sat back and demanded royalty payments for the use of "his" word. It took three years and a lawsuit to make this guy go away. Now, being something of an Evil Genius myself, I've made a similar discovery. Nobody has ever copyrighted the number 28. It's one of my favorite numbers, and I've used it very often over the years. I know that if I look through my records, I can document many cases of "prior art". This is great! I know I can make quite a decent income collecting royalties for the use of 28. I'll be set for life. What!!! You say that I can't copyright a number. Nobody can? Then what's all this Digital Millennium Copyright Act (DMCA) nonsense? Each and every digital file or signal that ever was or ever will be created in this world or any other is also just *one* single unique (and *very* large) number. That's what the word "digital" *means*, for Pete's sake. If my proposed copyright of 28 is invalid, then so is *every* other DMCA copyright. *At last*, we've come to the topic of this month's article.

I intend to create and save a text file on one computer, then copy the number that represents that file on to a piece of paper. Then, carrying *only* that piece of paper, I intend to walk into another room, to another computer that is *not* connected to the first computer by any network of any kind. There, I'll create a blank file and, using a program that can read and write disk sectors, insert that number into that file. Next, I'll close that no-longer-empty file, and then view it with a standard text editor (probably NOTEPAD). This should clearly demonstrate that, while the file was being transmitted (and as long as it resided on my hard disk without being accessed), it was in essence just a number; and therefore inherently un-copyrightable. Finally, I'll cite a recent US Supreme Court decision which indicates that even if the *contents* of my first file had been copyrighted, there is currently no reason to assume that the copyright applies to my second file. Take that, you Recording Industry Association of America (RIAA) lawyers!

That may sound simple enough, but to actually *do* it, I'll need to work with four numbering systems, or mathematical "languages". (Aha! We have a tie-in). Going with the *'Allo 'Allo* analogy: For English we have Decimal numbers (based on powers of ten, so also called base-10). They're the usual, every-day "language" of most of our "viewers". For French, we have Hexadecimal numbers (based on powers of sixteen, so base-16; and also called Hex numbers). Many of them may look like English words (Decimal numbers), but they're pronounced differently (have different values). For German, we have Binary numbers (based on powers of two, so base-2). They're large, intimidating, and technical. For Italian, we have Octal numbers (based on powers of eight, so base-8). They only come up once, much further down, so they hardly contribute anything to our "plot". All the calculations I'll be doing are fairly simple, but I'll have to do them over and over (and over and over) again. So, let's begin:

We'll start small. On computer number one (my XP computer), I created a text file named MYNAME.TXT,

*Continued*

containing the following (*not* counting the quotation marks); “Bob.” That’s four characters, including the period after the second b. Then, before saving the file, I hit the Enter key. That added a carriage return and a line feed, bringing the total to six characters. Running DIR from a command prompt, I got (after I removed all but one blank space between each item):

```
02/12/2008 04:20 AM 6 MYNAME.TXT
```

As you can see from the 6, the resultant text file is, in fact, six bytes long. Note that if I had done this on a Linux/UNIX computer instead of a Windows/DOS computer, the file would have been only five bytes long. I had an extensive tirade describing the cause for this difference, vigorously denouncing anything and everything along the way. This is, in fact, one of the three major reasons why I haven’t done more to switch my personal (as opposed to professional) computer use to Linux in the last few years. However, since I won’t be using any Linux machines in this article, I decided to just note the discrepancy here, then drop it and move on. I’m sure I’ll be able to work my indignant rant into some future article. You should consider yourselves fortunate this time.

Anyway, returning to our main thread: I looked at MYNAME.TXT (running a twenty-one year old DOS file viewing program from the XP command prompt), and saw the following (again, not counting the quotation marks): “42 6F 62 2E 0D 0A”. While only four of them are obviously different, all six are actually hexadecimal numbers, not decimal numbers. Hex 42 (which is pronounced four-two, *not* forty-two, and is equivalent to 66 in decimal notation) is the ASCII (American Standard Code for Information Interchange) code for an upper case B. 6F (111 in decimal) is the code for a lower case o. 62 (98 in decimal) is the code for a lower case b. 2E (46 in decimal) is the code for a period. 0D (13 in decimal) is the code for carriage return. Finally, 0A (10 in decimal) is the code for a line feed. Furthermore, those aren’t even really six numbers. The spaces between them were only inserted by the DOS file viewer, to make it easier for us to comprehend what is being displayed on the screen. Those twelve characters actually make up just *one* hexadecimal number: 426F622E0D0A.

Before continuing, we need to briefly go over the definitions of four more concepts: “bits”, “bytes”, “serial transmissions”, and “parallel transmissions”. (I could go into a *whole lot* more detail here, but I won’t. Lucky you!) A bit has only two possible states, which can be represented by a single binary digit (either a zero or a one). A byte is a group of eight bits, which can be represented by either eight binary digits or *two* hexadecimal digits. Serial transmissions are done through serial ports, one bit at a time. Parallel transmissions are done through parallel ports, eight bits (and thus one byte) at a time. The most common devices connected to the original IBM PC serial ports were mice (mouses?) and external modems. The most common device connected to the original IBM PC parallel port was a printer. Nowadays, due to the rise of USB (Universal Serial Bus) ports, hardly anybody uses the older style serial or parallel ports any more. Indeed, they’ll probably both be completely eliminated in the next great computer

re-design (which is almost upon us). Personally, I *don’t* like this. (I’m a huge believer in backwards compatibility). But aside from wailing and gnashing of teeth, there’s nothing I can do about it.

Now, just for this article, I’m going to create my own computer output device; which I’ll call the S/PQ (Serial/Parallel-and-a-Quarter) port. It’s parallel in that it has *ten* signal transmission lines (labeled zero through nine), and it’s serial in that only *one* of those transmission lines can be in use at any one time. Best of all, my research and development budget and my start-up costs will both be *zero*; because it’s made of scrap paper, and it only requires a pencil to operate. (How’s that for a killer combination of silliness and new technology)? Actually, we *could* invent a device that would emit one of ten possible voltage states at any one time, thus transmitting an output signal as decimal digits. It’d be stupid and wasteful, but it might be necessary if our legislators are so dense they can’t see that as far as their inherent mathematical values (and thus their intelligence transmission capabilities) go, there’s *no* difference between a decimal number and its corresponding binary number.

Getting back on track again: I next had to convert the space-separated contents of MYNAME.TXT (42 6F 62 2E 0D 0A) from hexadecimal-represented bytes to binary-represented bytes. That was easy. The only reason we even bother with hexadecimal digits at all is because each and every one of them is *instantly* convertible into four binary digits. Thus, I got: 0100 & 0010 from 42, 0110 & 1111 from 6F, 0110 & 0010 from 62, 0010 & 1110 from 2E, 0000 & 1101 from 0D, and 0000 & 1010 from 0A. After removing commas, ampersands and Hex digits, I got: 01000010 01101111 01100010 00101110 00001101 00001010. Remember, there really were *no* spaces between each group of eight digits in the actual binary number itself. Like the commas we usually stick between groups of three digits in a decimal number, those spaces were inserted between each byte for clarity, *only* when they were being displayed on-screen by the file viewer. From now on, though, we’re going to leave them in. Otherwise, not only would it be very confusing for us to read, but our newsletter’s desktop publishing program might go crazy trying to wrap the resulting extremely over-long lines. (Or would it just wrap cleanly like Word does, or maybe stick a dash at the end of each solid line of ones and zeroes? Either way would still be practically unreadable, but at least the program wouldn’t bomb. We’ll have to try it some time and see what happens).

Next, I had to convert 01000010 01101111 01100010 00101110 00001101 00001010 into decimal notation. This was tedious but not difficult. I simply had to add the values of those powers of two that contained a one. In the USA and most of its good buddies, the *right*-most digit is always raised to the smallest power (which is *zero*). Any number, raised to the zeroth power, is equal to unity (or one). However, in this case, there was a zero in that position, so I *didn’t* add a one. Next, any number raised to the first (oneth?) power is equal to itself. Since there was a one in that position, I started by

*Continued*

adding a two. The *left*-most digit is the highest power for a particular number. (In this case, forty-seven). Two to the forty-seventh power is equal to 140,737,488,355,328; but in this case, that position contained a zero. The highest non-zero-occupied power was forty-six, equal to 70,368,744,177,664. From that information, I could tell that my decimal equivalent would come out somewhere in between 70,368,744,177,664 and 140,737,488,355,328. Then, I quit stalling and actually *did* the calculations:

The powers of two that I had to add were: one, three, eight, ten, eleven, seventeen, eighteen, nineteen, twenty-one, twenty-five, twenty-nine, thirty, thirty-two, thirty-three, thirty-four, thirty-five, thirty-seven, thirty-eight, forty-one and forty-six. That's  $2 + 8 + 256 + 1,024 + 2,048 + 131,072 + 262,144 + 524,288 + 2,097,152 + 33,554,432 + 536,870,912 + 1,073,741,824 + 4,294,967,296 + 8,589,934,592 + 17,179,869,184 + 34,359,738,368 + 137,438,953,472 + 274,877,906,944 + 2,199,023,255,552 + 70,368,744,177,664$ . Those numbers added up to 73,046,155,988,234; just over seventy-three *trillion!* Quite a large number, especially when you consider that it uniquely defined a file containing only *six* characters of information! Okay. Then, carrying *only* that last fourteen digit decimal number (written on a piece of paper), I walked over to the room containing computer number two (my 98SE computer). It's no longer allowed to access the Internet, so it must not *ever again* be connected to my current TCP/IP via DSL Router network. (Lately, I've been pondering the possibility of reconstructing my old "thin" coax cable network to connect my older machines; but, like more and more stuff these days, I haven't actually got around to doing anything about it yet.). Incidentally, when I took that walk, I *was* wearing sneakers.

At the 98SE computer, I created an empty six byte text file called WHATNAME.TXT, into which I intended to insert my number (after I had re-converted it). This is actually a pretty good simulation of what actually happens when you download a file from the Internet. *None* of the information (not even the filename) from whatever version of an FAT (File Allocation Table) that is being used on the source computer is transmitted during the download itself. Just the stream of ones and zeroes that make up the contents of the sectors on the hard (or whatever kind of) disk that the FAT points to. In other words, just *one* humungous binary number. *Nowhere* in that stream is there *any* indication of what that file's name might be, when it was made, or how long it is. You do, however, get some information *before* the download starts, via a different conduit. (Typed-on-the-screen-net, if you will). You get a "save as" window, which lists the file's current name and a general description of its size (used only to estimate download time). Mostly, we accept the name as given, but we don't have to. We can change it to anything we want. The file isn't affected in any way by whatever name is listed in your computer's local FAT; and the program managing the download never even knows that name. It just cares about the target sectors on your local drive that your FAT points to. After the download is completed, your local operating system writes

the length of the file into the "size" field of your FAT by counting the sizes of the sectors actually being used on *your* hard disk. Likewise, it assigns the file's date and time using the current information that it gets from *your* local clock/calendar. (It's always irked me that downloaded files don't retain their original creation times and dates. In this instance, however, the discrepancy supports my argument, so I won't complain).

You should know me well enough by now to *not* be surprised by another digression: Other than downloads, if you ever copy a file from one location to another, and the new file's time and date are the current time and date, rather than the time and date from the source file, you've definitely got a *bad* copy. In most instances, you'll find that the file size is obviously smaller, indicating an incomplete copy; but whatever the case, it's still bad. Wipe it out and do it over. I've been professionally embarrassed *twice* by bad copies. (Unfortunately, neither of *them* gave me such a clear clue). One time, I was able to determine the cause: Three *bytes* of one file (out of 144 files totaling 81 MB) had been copied incorrectly. That time, I just replaced the one file (once I found it); but the job went from "This will only take a few minutes" to "You won't be able to do any of your own work on this computer for a few hours". The other time, I put together an entirely new computer in the main office, and tested it as completely as I could. At the job site, the *one* piece of auxiliary equipment that we didn't have in stock at the office just flat out refused to work on the new machine. (Although it worked just fine when tested on a different computer already in service there). I could tell it was a software rather than a hardware problem, and deleting and re-entering all the relevant configuration options didn't help. To fix it, I had to take everything back to the office, *including* that one piece of equipment (another lesson learned), erase the hard disk and start all over from scratch. *Then*, it worked with no trouble. That took a whole extra day, and I was so rushed that I couldn't take time to figure out the cause of the original failure. Occasionally, even all these years later, it still bothers me that I'll never, ever know exactly what went wrong then. (Talk about obsessive). For ages, I've had this saying; "Once is an accident, twice is a warning, three times is a habit". Maybe I heard it somewhere, or maybe I made it up myself after the third (and *last*) time I accidentally locked myself out of my first college dorm room. Whatever the source, I took it to heart. Since the incidents above, I've always double-checked to make sure that I'm never again embarrassed on the job by a third undetected copying mistake. Sure, it takes more time; but not nearly as much time as I lost on those two jobs.

We now return you to our regularly scheduled math adventure: When last we left our intrepid hero (that would be me), he was just about to convert a fourteen digit decimal number into binary notation. However, there was an ominous cloud on the horizon. According to an ancient urban legend that I just made up, our newsletter's desktop publishing program has been haunted by dark, evil spirits for *years*. (Cue the eerie background music, and lay in a sinister laugh on top of the

*Continued*

soundtrack). It's been almost three years since I began contributing monthly articles to the ACGNJ newsletter, and *every single time* that I tried to include a list of some sort in multiple columns, that desktop publishing program has found some way to sabotage me. Space delimited, tab delimited, whatever. Everything I tried just turned out *wrong!* The best way for me to present the results of my next round of calculations would be in two columns; but I'm tired of being stabbed in the back, so I won't even try that. Instead, I'll attempt to confound the dark forces by sending them only a single column of numbers, and not telling them (or you) what it means until *after* it's been printed. Take that, you avatars of evil! (Boy, am I feeling silly today. Please bear with me).

36,523,077,994,117  
18,261,538,997,058.5  
9,130,769,498,529  
4,565,384,749,264.5  
2,282,692,374,632  
1,141,346,187,316  
570,673,093,658  
285,336,546,829  
142,668,273,414.5  
71,334,136,707  
35,667,068,353.5  
17,833,534,176.5  
8,916,767,088  
4,458,383,544  
2,229,191,772  
1,114,595,886  
557,297,943  
278,648,971.5  
139,324,485.5  
69,662,242.5  
34,831,121  
17,415,560.5  
8,707,780  
4,353,890  
2,176,945  
1,088,472.5  
544,236  
272,118  
136,059  
68,029.5  
34,014.5  
17,007  
8,503.5  
4,251.5  
2,125.5  
1,062.5  
531

265.5  
132.5  
66  
33  
16.5  
8  
4  
2  
1  
0.5  
0

Now, all kidding aside, what did I just do? The first line is my "transmitted" decimal number (73,046,155,988,234), *after* it had been divided by two. However, we're not actually interested in that number itself (except that it's needed for the next consecutive step; like *all* the rest, another division by two, because base-2 is our conversion objective). What we're interested in is the *remainder* of that calculation. (That's what would have been in my hypothetical second column). In this case, the remainder is zero. That means that the *right*-most digit of our resultant binary number is 0. The number on the second line ends in a decimal point and a five, or one half (which is another way of saying "one out of two"; in even more other words, a remainder). That would have put a value of one in my non-existent remainder column. Then, that one would have been *thrown away* from the first column. I accomplished that action by subtracting 0.5 before performing the next calculation. The remainders from the third and fourth lines were zero and one, and the remainders from the fourth through eighth lines were all zero. That means that the *last* eight digits of our binary number answer were 00001010. Look familiar? Unfortunately, I've already taken up a whole lot of space, and we haven't even gotten to the good part yet. So I'm going to save some space by skipping to the final eight lines. (The bottom line represents the *left*-most digit). The forty-first, forty-third through forty-sixth, and forty-eighth lines yielded remainders of zero. The forty-second and forty-seventh lines yielded remainders of one. (Just to confuse things, those lines *actually* represent two to the forty-*first* and forty-*sixth* powers). So the *first* eight digits of our binary number answer were 01000010. Look familiar as well? I'll have to leave it to the more adventurous among you to verify that all the middle digits match up exactly, too. (Trust me. I checked. They do).

Nobody out there should be surprised that this binary number was then instantly converted into a hexadecimal number that was indistinguishable from the Hex number that we started with. Running into the home stretch, I used a *different* twenty-one year old DOS program to insert those hexadecimal digits into my previously described empty destination file. (1987 was a vintage year for DOS utilities, so don't read too much into that dating coincidence). I should mention here that my old DOS program writes its information directly to the target drive's sectors, bit by individual binary bit, bypassing the operating system's disk writing function completely.

*Continued*



Of course, such an old program doesn't work on any of the current file systems in use today. I had to use a special temporary target drive, in an old-style FAT12 partition; which I especially created only to hold that one text file. Windows 98 SE sees it as an FAT16 partition that's smaller than thirty Megabytes in size; but it *can* see it. (This misidentification is just one more indication of Microsoft's lack of interest in backwards compatibility). Opening WHATNAME.TXT, I saw 20 20 20 20 20 20. You might think it should have been all zeroes. However, 00 is the ASCII code for a blank, Hex 20 (decimal 32) is the ASCII code for a space. There *is* a difference. Indeed, many programmers have made clever use of that difference; but that's a subject for another time. I overwrote those six groups with 42 6F 62 2E 0D 0A, then closed the file. Finally, when I double-clicked on WHATNAME.TXT in Windows Explorer (*not* Internet Explorer), I saw:

Bob.

Let's recap for emphasis: I transferred that information from one computer to another, carrying *only* one single fourteen digit decimal number (written in pencil on a piece of scrap paper) as I did so. Originally, I planned to do all my calculations in pencil on scrap paper as well, because my good old college calculator (still in service after more than thirty years, though *not* with the same batteries) can only handle twelve digits. However, the calculators that came with Windows XP and Windows 98 SE *could* work with fourteen digits, so I used them instead. (Nit pickers among you will note that the scientific versions of both those calculators could have converted between hexadecimal and decimal with the press of one single button; but what fun would *that* have been?) Now, we'll go on to the next logical step; transferring a whole sentence, with subject, predicate, and everything.

Going back to my XP computer, I created another new text file (named TYRANNY.TXT), containing the following sentence (once again, *not* counting the quotation marks); "I hereby claim this file in the name of their supreme highnesses, the RIAA!" That's seventy-five characters, including thirteen spaces, one comma and one exclamation point. Then, I hit the Enter key before saving the file. As before, that added a carriage return and a line feed, bringing the total to 77 characters. Running DIR from a command prompt, I got (again, after removing all but one blank space between each item):

```
02/18/2008 02:33 PM 77 TYRANNY.TXT
```

Again running my old DOS file viewer from an XP command prompt, I saw: 49 20 68 65 72 65 62 79 20 63 6C 61 69 6D 20 74 68 69 73 20 66 69 6C 65 20 69 6E 20 74 68 65 20 6E 61 6D 65 20 6F 66 20 74 68 65 69 72 20 73 75 70 72 65 6D 65 20 68 69 67 68 6E 65 73 73 65 73 2C 20 74 68 65 20 52 49 41 41 21 0D 0A. That's 77 bytes, represented by 154 hexadecimal digits; the leftmost signifying sixteen to the one hundred and fifty-third power. Remember that, being base-16, any Hex digit instantly converts to *four* binary digits. (Also remember that the intervening spaces are *not* really present in the actual number, in either Hex or binary form. They've only been inserted into the on-screen display, by the file viewer, as an aid

to *our* comprehension). Even before I converted our number, that four to one ratio told me that the result would contain 616 binary digits. (Well, 615, actually: Because hexadecimal 4 converts to binary 0100, our *leftmost* (616<sup>th</sup>) digit would have been a zero. As you'll see in just a minute, we actually lucked out there). Now, as promised oh so long ago, we'll take a brief look at octal numbers. Being base-8, any octal digit instantly converts to *three* binary digits, and vice versa. So I divided 615 by three. I *didn't* really convert our number to octal; but if I had, the result would have been 205 digits long. Calculating that 205 was the *only* reason I brought up octal notation. I needed it to help me predict the approximate size of our "sneaker-net" decimal number. Because each decimal digit can represent ten values, while each octal digit can only represent eight values, I could theorize that decimal numbers are more "dense" than octal numbers. Contrarily, since each hexadecimal digit can represent sixteen values, I could say that decimal numbers are (a lot) *less* "dense" than hexadecimal numbers. Therefore, I concluded that our decimal number would certainly be somewhere between 154 and 205 digits long. Furthermore, I speculated that it would be much closer to 205 digits. I wish I could tell you how right or wrong I was. Unfortunately, at that point my tools failed me.

Of course, doing calculations using 205 discrete decimal digits would yield a whole lot more accuracy than anybody ever actually needs for most real-world computations; but I should have been able to do it. After all, that's *well* short of the upper range limit for unsigned long integers (232 decimal digits). However, I couldn't figure out how to get any of my currently available computer programs to do so. It doesn't really even matter whether the failure came from me or from my programs. Either way, I couldn't do the math directly; but I had another choice. Our brains aren't capable of working with even fourteen decimal digits at the same time. Yet I could have done all of my first round calculations by hand if I had to, because we break up our calculations into small steps. So I *could* have tried to do this second round by hand. Unfortunately, it would have taken much too long. Furthermore, typographical errors would have been statistically inevitable, rendering a successful outcome virtually impossible.

My only other chance would have been to write my own program. There, I had one viable option left. As I've mentioned in previous articles, I once wrote programs professionally; even if it *was* over ten years ago, and only in the DBase programming language. I've still got the programming tools, plus the all-important reference manuals. Conversion of hexadecimal digits to and from binary numbers could easily have been done in small steps, using a look-up table. All my required calculations involve addition, multiplication by two, or division by two; and I didn't even really need multiplication. That could be easily spoofed by just adding a number to itself. Inputs for any calculation involving addition would have been two single digits, and the output would have been 19 or *less*; representable by a single digit and a remainder of 0 or 1 (to be carried over into the next step). The maximum input for any division step would also have been 19, made up of

*Continued*

a 0 or a 1 carried over from a previous step, plus a single new digit. *All* of those calculations could also have been accomplished using a few more look-up tables. I wouldn't have to do any real math at all. When I worked with UPC codes (mostly eleven digits long), I always stored them in character fields (rather than any of the available types of numeric fields). Things just worked better that way. Databases using character fields would have had no problems containing strings of 205 discreet digits. Writing my own program wouldn't have been all that difficult, but it would have been extremely complicated. Make that extremely, *extremely*, *extremely* complicated. It would have required lots of small, easy steps; but repeated so many times that it would make your head spin. I *could* have done it, though, except for one thing: time.

Look at the date on TYRANNY.TXT above. I only had a week left before my deadline. Not nearly enough time to start such a complicated project. Thus, I had only two options. I could drop this article completely (but then I'd have nothing to submit this month). Or I could invoke the spirit of the late, great Gilda Radner (1946-1989) and move on. Hopefully, my first small (but completed) demonstration will be enough to make my point. Therefore, as Gilda's legendary newswoman Roseanne Rosannadana used to say; "Never mind".

So, on to legal matters: The doctrine of "Fair Use" has *always* been a provision of United States copyright law. It allows limited re-use of copyrighted material without requiring permission from the rights holders. Anyone who ever used a VCR to tape a TV show was invoking an instance of that right. Now, the RIAA just flat out *doesn't believe* in Fair Use; in any way, shape, or form. They've been bringing extremely one-sided multi-lawyer lawsuits against ordinary people, who just can't afford to fight back. One guy, however, did. His crime: He had copied his CD library onto his computer. In point of fact, he bought and paid for every single one of those CDs legally. **No one**, including the RIAA, has denied that; but they claim that his act of copying those CDs (even though *only* for his own private use) was a crime, requiring a substantial penalty. There will be far-reaching consequences if the RIAA wins this particular case. For instance: If you have a collection of old vinyl record albums (or 45s), and you copied them to tape or CD so you can still listen to your music after your now-obsolete turntable wears out; then you would be just as guilty too, and just as subject to prosecution. Welcome to corporate terrorism.

Now for the Supreme Court decision I mentioned earlier. It applies to patents rather than copyrights; but if the RIAA can twist the law to suit their own ends, then so can I. The case is Microsoft Corp. v. AT&T Corp. (No. 05-1056. Argued February 21, 2007-Decided April 30, 2007). Here's an extremely abbreviated partial summary: Microsoft sends each foreign manufacturer a master version of Windows. Those manufacturers then make multiple copies of that master, and install those copies on the computers they make and sell. AT&T

claimed that, because each master copy was created in the United States, the resultant computers, although foreign made, were still subject to a US patent owned by AT&T. Microsoft didn't deny the patent. However, it argued that the computers were *not* made from the master; but from *copies* of the master that were created on foreign soil, and thus not subject to US patent law. The Court ruled in favor of Microsoft, citing as one (of several) reason the *ease* with which multiple copies can be made. In other words (*mine*, not theirs), the patent rights were lost because it was so easy to copy the master. I maintain that if patent rights can be lost that way, so can copyright rights.

Even ignoring Fair Use, I've already demonstrated that a download is just *one* big number, and thus inherently un-copyrightable. It would be easy to show that the same situation applies to *any* other kind of copying process as well. I've also shown that, as stored on a hard (or any other type of) disk, it's still just one big number; and therefore *still* just as inherently un-copyrightable. The only thing that might be made proprietary is the filename stored in the FAT; and even that could only be trademarked, not copyrighted. (I won't go into the difference here, but even a trademark wouldn't necessarily be a sure thing). However, the filename isn't actually required by the file. Any name will do. In fact, you could rename all your music files as if they were generically named text files; and (in Linux, at least), you could re-write and re-compile your media software to play TXT files. Then, there wouldn't be anything *stored* on your computer that violated anybody's rights. Even when you actually *played* those files, that Supreme Court decision at least suggests that no rights would be violated.

Now, you might think that my interpretation of things is unfair to content providers; but to them I say; "Quit crying and suck it up! That's the way things are in this world. Deal with it". Manufactured CDs and DVDs, being physical artifacts, would still be copyrightable; and so (probably) would analog signals. If they want to keep their copyrights, they shouldn't convert their products into digital form. Furthermore, they shouldn't look to further legislation for relief, either. A new law couldn't make numbers copyrightable any more than (as legend has it) it could set Pi equal to three. (Or if it did somehow; remember, I've got dibs on 28).

I haven't even mentioned that the DMCA allows virus-like programs to be surreptitiously installed on your PC, and *forbids* you to take any action to interfere with their operation, much less to remove them. It took fifty-eight years (1896 to 1954) to overturn the egregiously wrong-headed US Supreme Court decision in the case of Plessy v. Ferguson. (You don't know about that case? You should! Look it up). So it could be a while before the DMCA is defeated; but someday, if we don't lose all of our rights completely, it will be. Viva la Revolution!

See you next month. ☺

# From The DealsGuy

*Bob (The Cheapskate) Click (bobclick@bellsouth.net), Greater Orlando Computer Users Group*

## **\*Looking Back**

Time sure passes quickly. I wrote my first DealsGuy column in November 1994 and have never missed a month since. I am not a journalist by trade, nor do I pretend to be one, but I am flattered that this column has stayed popular as long as it has. Editors sometimes forward complimentary comments from their members about the DealsGuy column. Two groups print only part of it in the newsletters they place around their community to attract new members, and readers must become a member to get the entire column. I am also grateful for the many friends I made over the years through the column. I have been offered places to stay just about anywhere in the US.

Years ago, I received a request from a professional journalist to be added to my e-mail list for the column, and I told him I was honored by the request from him. He told me something that I have thought about a few times since. He said I had blazed a trail with the syndication of my DealsGuy column to user groups and that others would probably follow. At that time, most articles written were from the editor and the group's own members, mostly reviews, but some of the better ones were reprinted selectively in other newsletters. However, the DealsGuy column certainly has its hard-line critics. Some editors strongly dislike my column, and other editors feel I write too much about myself. In fact, I'm still reeling from one editor's strong comments at a conference. People sometimes request they be put on my e-mail list because their editor refuses to carry the DealsGuy column. A few editors only carry the product parts of the column because they say their members have no interest in my personal comments at the beginning, but I sometimes hear from UG members asking how to see the entire DealsGuy column.

In the early days of the column, it was not uncommon for user group people I met at conventions to ask how they could get into writing a monthly column as I was doing. I tried giving them tips, but how can a guy who began writing a column accidentally offer helpful tips when he himself doesn't really know what he is doing. Nowadays it's great to see so many authors writing interesting monthly columns that help provide a packed newsletter for any editor and there are many user groups with regular material from their own members. I guess that I'll stick with it a while longer since nobody else wants this job.

## **\*Tax Tips**

If you haven't done your 2007 income tax yet, don't forget about Tax Act <http://www.2ndstorysoftware.com> for computing your income tax for free, although I use the pay version because it brings forward information from last year's tax return (if you used it last year) along with some comparison features. You can even e-file with the free version. If you would rather someone else did the work, check when and where the AARP volunteers are working to help seniors out. There are other free ways to do your taxes on the Government site.

## **\*Goodbye FedEx, and Good Riddance**

Remember my bad experience with FedEx delivery last month? They refused my claim saying that according to their log the packages were delivered to the address and that's all they were required to do since no signature was requested. Actually, they could simply throw them out the window as they were driving by, throw them away if they were running late and enter "delivered" in the log, or even just set them beside the road, as they would have had to do in our case, at 9:06 PM according to their log. When I was told it wouldn't be delivered after 8 PM, my son closed the driveway gate. They don't seem to have my conversation with the Phoenix office in their log, yet they called me back the next morning to offer a delivery time because the packages had been in the truck for two days. No packages were ever found at the address and their letter denying the claim says they hope they can count on my continued business. After another bad experience, not a chance!

## **\*They Claim To Simplify Launching**

This is designed to replace the standard Quick Launch. The program emulates the standard features of Quick Launch while including lots of grouping and menu options, a many useful plug-ins and some skinning abilities. True Launch Bar helps clear your desktop working space by removing randomly placed shortcuts and organizing them in convenient groups and menus. True Launch Bar provides users with a brand-new functionality enabling ultra-fast access to any of your PC contents!

True Launch Bar stores shortcuts in the same folder as Windows Quick Launch. All the icons installed into Quick Launch are automatically installed for True Launch Bar. True Launch Bar can be docked into the taskbar; you can simply drag your shortcuts onto the toolbar or menu by pressing any of the mouse buttons. Right button dragging activates a Context menu, grouping links into popup menus. The Virtual Folders feature allows you to add any folder as a menu and control it through Windows Explorer-like context menus. It can be any folder on your disk or on a local network (Favorites, Programs, Recent, etc.), as well as file system folders such as My Computer, Control Panel, Printers, etc. Toolbar buttons will not only launch the applications, but also act like small applets. If you add a Media Control plug-in onto the True Launch Bar, the button will become a real control center of the media player with Stop, Play, Pause and volume adjusting options.

True Launch Bar runs under Windows 9x, NT, 2K, XP, 2003 and Vista. A 25% discount makes the cost \$14.90 (USD) for a single-user license. Links to purchase with the discount are:

Personal License (one person, one or more computers) (\$14.90) [regsoft.net/purchase.php3?productid=51538&pc=7L0L7](http://regsoft.net/purchase.php3?productid=51538&pc=7L0L7).

Home license (one copy on multiple computers and multiple users) (\$35) [regsoft.net/purchase.php3?productid=53346&pc=7U014](http://regsoft.net/purchase.php3?productid=53346&pc=7U014).

Licensed customers are entitled to lifetime technical support and free updates. Additional information on True Launch

*Continued*

# Year 2007 Tax Software

Milton G. Gugenheim Jr. ([mgug\(at\)hal-pc.org](mailto:mgug(at)hal-pc.org)), HAL-PC ([www.hal-pc.org](http://www.hal-pc.org))

## Personal Software

Most of us seem to put the dreaded tax chore off until the last moment and then find ourselves faced with incomprehensible IRS forms, shoeboxes of receipts, check registers, antacids and headache pills. The return must be filed by Tuesday, April 15, 2008 (you can file an extension to delay filing until August 15, 2008. But payment, without P&I, is due April 15, 2008 – the IRS is nice, but not that nice!)

Fortunately help is on the way in the form of a couple of good tax preparation programs from Intuit – TurboTax, H&R Block – TaxCUT and 2nd Story's TaxACT. This review covers the two most popular programs.

In addition to well-crafted interfaces and good online help, both TaxCUT and TurboTax include Microsoft's Internet Explorer Web browser for seamless integration with the World Wide Web for updating. An internet connection is required to obtain updates as the software is released in December, before the IRS has completed all the forms, etc.

Even if you think that you need the skills of an experienced CPA in the preparation of your return, either of these

programs will help you to become better organized and possibly keep accountant fees to a minimum.

I found the following software tax packages for the 2007 tax year: TurboTax Basic, TurboTax Deluxe, TurboTax Premier, TaxCUT, TaxCUT Deluxe, and TaxCUT Premier, for Windows 98, 2000, ME, XP, Vista and MacPowerPC processor. Most of the local office supply stores and other retail and software outlets stock the software.

There are free tax preparation programs on the web. Go to a search engine and enter "free federal income tax programs". TaxACT is a good free program. The program is easy to use and includes forms most tax payers require. A paid version is also available for more complex returns.

## Features

TurboTax Basic is the basic package needed to file all individual returns including professional or sole proprietor, and includes Internet Explorer on the CD. TurboTax Deluxe includes all the features of TurboTax Basic and one free e-file (after rebate). Plus extra help for deductions – the deduction finder (library resources, tax planner, on-screen references

*Continued*

## DealsGuy, *continued*

Bar, as well as its fully functional evaluation version with a 30-day trial period is available from [truelaunchbar.com](http://truelaunchbar.com).

Download link: 32-bit version (4,30MB):

<http://download.truelaunchbar.com/install/truelaunchbar42.exe>

64-bit version (4,69MB):

<http://download.truelaunchbar.com/install64/truelaunchbar64v42.msi>

Company website: <http://www.tordex.com>

E-mail: [info@tordex.com](mailto:info@tordex.com)

### \*Another Free PDF Maker

Patrick Sullivan reads the DealsGuy column in The DataBus, a great newsletter from The Dayton Microcomputer Association Inc. <http://www.dma.org>, and he sent his favorite application for converting a file to PDF. He said a friend needed a free one and his search found PrimoPDF at <http://www.primopdf.com/>. He says its PDF file is not as small as Adobe Distiller creates, but he is well satisfied with it and has not found it to implant ads for itself. There is now a new release on their Web site, but he has not tried it because his version works fine.

### \*This Product Offers Canned Replies

IT-Services Thomas Holz announces the release of version 1.0 of Textmodules for Software Support, a set of ready-to-use replies to quickly answer typical software-related questions by e-mails. The product is absolutely free and comes as an add-on to the new version of ReplyButler for Outlook. Enlarge the assortment of reply patterns and make your reply on the fly.

With a proper set of text modules, you can answer your e-mails quickly. In Textmodules for Software Support, you'll find 55 new text modules properly sorted into 18 folders. The

modules include typical phrases, answers to common problems, questions for details and more. In addition, there are many reply patterns related to office work and journalism. It uses the correct name and gender in the addressing phrase by itself, securing against any typos in names.

You can get Textmodules for Software Support free of charge, as well as the trial version of ReplyButler for Outlook at <http://www.replybutler.com/en/produkte/replybutler.php>.

ReplyButler for Outlook runs under Windows 98 / ME / NT / 2000 / XP / 2003 / Vista and Outlook 2000 / 2002 / 2003 / XP / 2007, and costs 15.00 (EURO) for a single-user license. The company offers user group members 25% discount on the purchase of ReplyButler Business Edition. Licensed customers get the fully-functional version of the product, free technical support and free upgrades. Further information on ReplyButler for Outlook is available at our Web site. (DealsGuy note: I included this item for the free part of it, but was unable to get through using their e-mail address for information about using the discount on their business version. Try a contact from their Web site.)

Product page: <http://replybutler.com/en/produkte/replybutler.php>

Product download link: [download](#)

Free add-on link: [add-on](#)

That's it for this month. I'll have more new product announcements on my Web site (most not offering a discount). Meet me here again next month if your editor permits. This column is written to make user group members aware of special offers or freebies 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. Visit my Web site at <http://www.dealsguy.com>. ☞

# IRS Again Offers Free Online Tax Preparation and “e-Filing”

Ira Wilsker ([iwilsker\(at\)apcug.net](mailto:iwilsker(at)apcug.net)), APCUG Director

## Websites

<http://www.irs.gov/efile/article/0,,id=118986,00.html> - Free File page

<http://www.irs.gov/efile/article/0,,id=118992,00.html> - Free File Instructions

<http://www.irs.gov/efile/article/0,,id=118993,00.html> - Information

<http://www.irs.gov/app/freeFile/jsp/index.jsp> - List of participating Companies

[http://www.irs.gov/pub/irs-efile/free\\_file\\_agreement.pdf](http://www.irs.gov/pub/irs-efile/free_file_agreement.pdf) - Free File Alliance Agreement

<http://www.irs.gov/espanol/article/0,,id=163297,00.html> - Free File in Spanish

Whether we like it or not, April 15 is fast approaching. It does not matter if we are due a refund, or owe Uncle Sam a bundle of money, we still must complete our income tax forms and file them appropriately with the IRS. This is a task that very few enjoy, and many more do not relish. While preparing our tax returns becomes more complex and time consuming, the IRS has once again contracted with a number of tax services to prepare our taxes online for free, if we are eligible. According to the IRS, the goal of the free file program is to enable 70% of taxpayers (97 million people, according to the IRS) to take advantage of the free online service; for calendar year 2007 (taxes due April 15, 2008), the calculated ceiling on eligibility for the free service is an adjusted gross income (AGI)

*Continued*

## Year 2007 Tax Software, *continued*

and IRS publications, video advice and a financial planner). TurboTax Premier includes all the feature of TurboTax Deluxe plus help for investments, complex taxes, Schedule C business and Rental Property.

TaxCUT Deluxe is almost identical to TurboTax including Internet Explorer 6 on the CD. TaxCUT Deluxe includes all the features of TurboTax Deluxe, tax tips, on-screen IRS instructions and publications. All the programs will import financial data from most popular financial programs, and include details on preparing a return, reviewing a return, electronic filing (e-file) via a second party, planning for next year, plus help locations.

### Installation

All packages were easy to install following the given directions. TurboTax Basic requires 175 MB of disc space without the installation of Explorer. TaxCUT Deluxe requires 170 MB of disc space without the installation of Explorer

### Manual

Both TurboTax and TaxCUT include a on-screen user guide with typical screens of the described function. All the usual files, edit, forms, tools and help are in the tool bar. TaxACT has almost as much on-screen help.

### General Overview

All of the packages have an easy step-by-step program to walk the taxpayer through the various steps required to do a return. The experienced taxpayer may prefer the forms method after completing a basic information page. The taxpayer selects the form and fills in the required information. Some have supplemental sheets for recording information, which is then transferred to the form. Help is available from any screen. All programs import from Quicken and Microsoft Money.

### Details

The latest tax changes are incorporated in the packages (at the time of release). Each package allows the taxpayer to enter data on various forms after completing the basic information sheet. The return is then saved. Be sure to give the file a name

if more than one return will be prepared using the same program. The programs may be used whether you are the organized type or the shoe box type. The shoebox type should organize the various types of entries first.

### Printing

TurboTax and TaxCUT allow you to print an IRS return or select a form or schedule to be printed. The current computer printer setup does not have to be changed. Check to be sure you have the latest updates prior to printing the return for filing. Print a return for filing and a return for your records. The record return will contain detail sheets. I have no experience using these programs to e-file.

### Summary

The Basic package of TurboTax or Deluxe of TaxCUT is more than adequate for most users. The upgrade packages are great for users who like the “bells and whistles” that include lots of helpful literature, suggestions, etc. The street price for the basic packages is around \$20, TurboTax Deluxe, and TaxCUT Premier is about \$40 Each company has an extensive business program for about \$70 +. A new program is required for the each tax year. TurboTax and TaxCUT sites, each sell the programs and it will cost more than the local stores.

### Helpful Hints

I suggest the return be prepared in all caps since this is preferred by the IRS. All returns are mathematically corrected based on the input data. Most of programs have promotion tie-ins, such as a money program, anti-virus, etc. Read carefully the conditions before buying the program.

TurboTax, for more info [www.turbotax.com/support](http://www.turbotax.com/support).

Block TaxCUT: [www.taxcust.comand](http://www.taxcust.comand)

TaxACT: [www.taxact.com](http://www.taxact.com)

*Milton G. Gugenheim Jr has been an AARP Tax Aide Instructor and Local Coordinator for over 12 years. This article has been provided to APCUG by the author solely for publication by APCUG member groups. All other uses require the permission of the author (see e-mail address above).* ☐

of \$54,000. In addition to preparing federal tax returns for those eligible, the providers will also “e-file” (electronically file) the returns at no charge to the taxpayer. It should be noted that the IRS does not charge for receiving e-filed returns, but does not currently accept e-filed returns directly from individuals without first going through a third party service, for which a fee may be charged. There is no e-file fee for taxes prepared by the free preparers who participate in the IRS free file program.

The free filing service was created in 2002, and renewed again in 2005, when the IRS created a public – private partnership called the “File Free Alliance, LLC” where the IRS contracted with several tax preparation companies to offer free online tax preparation and filing. The Free File Alliance evolved from a “President’s Management Agenda”, which created a series of 24 “e-government” initiatives designed to improve government to citizen electronic capabilities. Originally, the program was limited to 60% of taxpayers, but the 2005 contract expanded the eligibility to 70% of taxpayers. The current agreement between the IRS and the preparation companies expires in October, 2009. The income eligibility ceiling, currently at an AGI of \$54,000, is adjusted annually such that 70% of taxpayers will remain eligible. Members of the Free File Alliance must conform to strict IRS established security and privacy requirements which insure the sanctity of the free filing service.

According to the IRS, there are several advantages and reasons for using the free tax services provided. The IRS claims that users can get their refunds in as little as 10 days, if they opt for direct deposit. Unlike commercial tax preparation offices, the online services are available 24/7, and taxes can be completed and filed at any time of the day prior to April 15. The IRS also claims that the service is environmentally friendly, in that it saves mountains of paper. Users of the free online services will benefit through the automatic checks for accuracy, and will receive a confirmation within 48 hours that the return was received by the IRS.

Users of the free filing service must start at the IRS website, [IRS.gov](http://IRS.gov), and initially access the free tax services through the IRS website. Many of the companies that are a part of the Free File Alliance also offer paid commercial tax preparation services, and the only way to get the service for free is to initialize the process through the IRS website. The list of participating companies, 19 of them, includes such well known companies as H&R Block, and software companies such as TurboTax. It is the responsibility of the user to verify his eligibility both for the program (up to \$54,000 AGI), and for the Free Alliance partner selected, as many of the partners have additional eligibility requirements for the free service. The user can either browse the list of individual companies ([www.irs.gov/app/freeFile/jsp/index.jsp](http://www.irs.gov/app/freeFile/jsp/index.jsp)), or can use the button “Guide Me To A Company” to narrow down the choices of free tax preparers. Several of the companies, such as H&R Block’s “TaxCut Free File”, “TaxSimple Deluxe Version”, and “eSmart Tax by Liberty Tax Service” are available to anyone with an AGI of less than \$54,000, and who are also aged 50 or less. “TaxSlayer Free Returns” is available to any-

one aged 25 to 68, or active military who meet the income requirements. “TurboTax Freedom Edition” is free to anyone with an AGI of less than \$30,000, or active duty military with an AGI of up to \$54,000. “Complete Tax” will do any age with an AGI of \$12,000 to \$54,000, while “Free TaxAct” will do anyone aged 19 to 54 who has an eligible AGI. Other free preparers have different eligibility requirements, including several that will prepare taxes for people for any age, but have geographic restrictions, in that they only prepare taxes for residents of specific states. Some of the preparers, such as “Online Tax Pros” specify that they also prepare taxes in Spanish. While not a requirement covered in the agreement with the IRS, many of the preparers listed will also prepare and file state income tax returns for residents of states that have a state income tax (Texas does not have a state income tax). While a few will prepare state income taxes for free, most have a nominal charge to prepare and e-file state taxes.

Once the taxes are prepared and completed online through one of the free providers, the returns are electronically checked for accuracy, and then e-filed directly with the IRS. The preparer will receive an electronic confirmation from the IRS that the return was received, and forward that confirmation to the taxpayer, typically within 48 hours of filing. If the taxpayer is due a federal refund, and selects direct deposit, the refund is deposited to the taxpayer’s specified account in as little as 10 days.

The IRS is to be commended for coordinating this service, available to nearly 100 million taxpayers. One improvement to the service that I would like to see is to allow those of us who prepare our taxes ourselves with commercial software, to be able to upload our returns directly to the IRS without having to go through a third party. That would be a great service to the millions of us who choose not to use, or who are not eligible for, the free filing programs, but would like the convenience of e-filing without sending our personal and private information to a third party.

For the eligible 70% of taxpayers who can utilize the free service, there are few good reasons not to use the service. The price can not be beat.

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# What's a Good Computer to Buy?

*Some Tips by Doug Fairchild (dbfair(at)verizon.net), Director, Exton PC Council (www.extonpccouncil.org)*

As a person who is active with a computer user's group and who has had formal training in Windows 2000 and Windows XP, I'm often asked "what computer should I get?"

This is an age old question in terms of computer technology time. Almost any professional that provides unbiased advice will tell you that it is not an easy answer. The first question that comes to mind is, what do you intend to do with it?

Many persons, who are not involved with what's current, do not really know just what's encompassed with their regular routines. A typical answer is, "I don't do that much and don't need an elaborate machine".

It seems to me that as technology advances, more and more uses will become commonplace requiring more oomph from the computer being bought today. Therefore, my recommendations focus on a machine that is good enough for now, with specifications that would hopefully add enough to carry over for a little time to come.

Any professional who keeps up with technical publications can tell you that ratings change faster than the weather. Also, new machines and technology keep changing. So how's a person to choose?

Typically, in the past, the common time frame was to hope for a machine that would last 5 years before being outdated. Today, the best equation I can offer is that it's like buying a new car. How much can you live with, before getting something that has great new features?

That being said, let's look at the core components of a computer with what, in **my opinion** would be the minimum for a **Windows machine** to last for a little while. These choices are based on using equipment with name brand components and include web sites where applicable for further research of these products. I strongly recommend that if you are considering an alternate to name brands, you research that brand.

Some comments about Apple computers follow after the discussion on recommendations for Windows machines.

**Operating System** – Windows XP (any version) – Windows Vista (Home Premium or better)

Since the release of Vista, many computers are still being offered with Windows XP. Vista Home basic is considered by most professional reviewers as less desirable than any version of Windows XP. While there has been a lot of Vista bashing, some of the derogatory statements are not true. For clarification and a better understanding of problems related to Vista see: <http://blogs.zdnet.com/Ou/?p=785>.

It is definitely true that some peripherals like various printers and some other devices do not work with Vista. However, it needs to be said that at some point, progress needs to preclude older technology. For example, how many people can work on their automobiles like they used to. It takes much more sophisticated and expensive equipment. To see what devices will be affected by Vista, download and run [upgrade advisor](#). Even though you are not upgrading but considering a new computer this will let you know what devices will be affected by Vista.

**CPU - Processor** - Intel® Core™2 Duo or AMD equivalent.

<http://www.intel.com/> - <http://www.amd.com/us-en/> .

**RAM** (base memory) – Window XP -1GB (or more – consider 2GB)– Vista -2GB (or more). The type and specifics will be controlled by the computer model you select. One consideration is to allow for expansion at a later date. Check to see if there are open slots to add additional memory. It can be worthwhile and can save in the long run to pay a little more upfront by having the memory configured to allow for this upgrade. While Windows Vista states 1GB as minimum, you probably will want 2GB.

**VRAM** - Video Ram (Memory on your graphics card) – 256MB (or more). This is frequently ignored by inexperienced shoppers, but can make a world of difference on the performance of a PC. For a detailed explanation see [searchstorage.techtarget.com/sDefinition/0,,sid5\\_gci213325,00.html](http://searchstorage.techtarget.com/sDefinition/0,,sid5_gci213325,00.html).

A few popular graphic card manufacturers: [ati.amd.com/products/index.html](http://ati.amd.com/products/index.html), [nvidia.com/](http://nvidia.com/).

**Hard Drive** – 100GB (or more). Most new hard drives use a newer type of interface referred to as SATA (Serial ATA). Look for this specification unless you have an older hard drive you wish to use in your new computer (which is more likely a PATA (Parallel ATA)). One of the newest technologies is a FLASH Hard Drive. Currently this is primarily for notebooks (laptops). It has some definite advantages but also some drawbacks. It's expensive and has limited capacity. It may be the upcoming future of Hard Drives. See <http://www.pcworld.com/article/id,126833/article.html> for a PC World review.

A couple of popular hard drive manufacturers: <http://seagate.com/> (note that Maxtor has been acquired by Seagate Technology); <http://westerndigital.com/>.

**Power Supply** – Varies with the devices built into the computer. If you believe that you may be adding internal devices, consider a computer with a power supply that has more capacity than needed for preconfigured devices. This can be a little complicated, but should be an answerable question to the person selling the computer (get someone who has technical awareness). For an explanation of the power supply see: <http://computer.howstuffworks.com/power-supply.htm>. There is also an excellent video at this site to gain a basic understanding of the core components.

**Motherboard** – Normally this will be controlled by the computer model you select unless you are purchasing with the option to customize. Being aware and specifying the other core components listed, the motherboard should be suitable and not normally something you choose independently. If you are buying a desktop, you may want to inquire about available PCI slots or other expansion capabilities. In the past, this has afforded the ability to economically install hardware upgrades which may keep your machine current for a longer period of time. Laptops do not, as a rule, offer the same capability to expand and upgrade other than memory and optical drives.

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# Painter X Product Review

Tom Ekvall ([tekvall@new.rr.com](mailto:tekvall@new.rr.com)), Northeast Wisconsin PCUG (<http://webpages.charter.net/newpcug/>)

Painter X is everything a photo artist, like myself, could ever want in the way of a digital imaging program—or should I say a digital natural media painting program. Corel Corporation has done a fantastic job upgrading its marquee program for both traditional painters, who create art from scratch, and those like myself who enjoy creating photo art.

The newest version, released in 2007, is geared to run on Windows Vista (as well as XP and Macs) and incorporates improvements designed to make creating photo art a pleasurable experience – without the mess of paints.

I installed Painter X on my laptop, an Acer with Pentium Dual Core processors at 1.60 GHz, and 2 gigabytes of RAM. In the several months I have tried out the product, not once did my computer crash or significantly slow down due to running out of resources.

I first became hooked on the full version of Painter after using Painter Essentials 3 (a stripped down version but with plenty of power to create photo art). I got the Painter Essentials 3 free with my Intous3 tablet. A tablet with pen is essential to get the most out of the program, although a mouse will work. Using a mouse does not give you the pressure controls and other things that a “brush” can do using the pen.

After installing the program, which did not involve any problems, I was greeted with a Welcome Screen in the form of a flipbook. The welcome screen gives you tabbed options such as retrieving documents, a gallery of what others have created, extra resources such as tutorials, setting up Painter, and resources on the web. It can be turned off after you get familiar with the program.

I was pleased with all the tutorials, including video learning, to help learn the product, which is a complex program but once mastered produces incredible, realistic painted creations with the feel and texture of a traditionally painted piece of art. Corel goes the extra mile to make sure you have the resources

to get the most out of the product and provides links to these resources.

For photographers, a key feature is the Photo Painting System, which includes three modules: Underpainting, Auto-painting and Restoration.

## Underpainting

The feature that I really enjoy is its cloning capability, whereby the colors come from the original source photo (rather than a separate color palette) with the brushes used to transform the image to a desired style. A Quick Clone feature of the creates a copy upon which the photo art will be created. A tracing paper is also created which can be toggled on and off to show the original photo (when on) as a guideline for the applying the brush strokes in the appropriate direction. Turned off, only the painted image is visible on the workspace. This is true whether using the auto-painting feature or applying the brush strokes by hand (pen).

Painter X provides a selection of color schemes as part of the Underpainting palette, such as Impressionist, classic, modern, watercolor, sketchbook and chalk. Each style of painting may require changes to the original photo, such as increasing or decreasing saturation, increasing or decreasing contrast or making the colors more or less vivid. Pastels and chalks tend to be softer by nature while oil and acrylics tend to do best with increased saturation. Painter X allows you to use the Photo Enhance sliders as with Painter 9.5 and Painter Essentials 3 to make changes to the color, contrast or saturation; you can even use both to get the desired effect.

## Auto-Painting

Beside the numerous brushes, effects, and paper textures that enable you to create every possible style of painting, Painter X also provides an enhanced auto-painting tool for those that may be somewhat artistically challenged as to painting, but

*Continued*

## What's a Good Computer to Buy?, *continued*

**Optical Drive and Other Peripherals** – There are many choices and most computers today offer a DVD drive with read/write (this is the ability to play and create DVD and CD disks). Ask what it has and what it will do – also compared to other options.

**Notes on Apple Computers** - While I do not have firsthand knowledge about Mac (by Apple) computers, the reviews and information I've seen tends to make me believe that the new Mac's are superior to many other brands of PC's. I would emphasize new versus computers manufactured prior to 2007. One of the indicators that this is true, is the fact that while sales of other PC manufactures are falling, Mac's have realized an increase in sales. They are, however, more expensive.

If I had the money I would look seriously at a new Mac with the idea of loading Windows as a second OS (operating system). Mac has a feature called Boot Camp which accommodates adding other OS's. Boot Camp is software in-

cluded with Mac OS X 10.5 Leopard that lets you run compatible versions of Microsoft Windows on an Intel-based Mac. While they do not offer technical support for other OS's, Mac's will run multiple OS's (including VISTA) as well as other PC OS. You, of course, have to own or buy the additional OS's to be installed.

See: <http://www.apple.com/>

**Notes on Linux OS** – Again, I do not have firsthand knowledge about Linux OS's. However, I've been led to believe that they make a lot fewer demands on the computer. From what I've heard, you probably in most cases do not need a new computer to install and run.

For more information see <http://www.linux.org/>.

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want to create watercolor, oil, pastel, acrylic, chalk, charcoal or impressionist-style artwork.

After making selections of brush stroke, opacity, brush size and other variables, you then rely on the program to automate the process of creating the art work with the touch of the "Play" button on the palette. No continuous drawing of brush strokes is required.

The auto-painting feature does a very good job of creating a realistic "painted" photo. Some may wonder why a high-end program would even offer an auto-paint palette. I find it desirable, as it gives me a chance to experiment with different strokes, brush sizes, paint brush styles, and other factors and produce a final product within a relatively short period of time. If I apply by hand (not using auto-paint), I use a low level of opacity to gradually build up the color values and style, and this takes time.

What is new, and which I favor, is the addition of a speed setting with the auto-paint tool that allows you to slow down the process of creating the picture so that you can stop it, make changes to types of brushes, opacity or size, and continue the process of painting the picture

Another new feature of the Auto-painting palette is Smart Stroke Painting and Smart Settings, where Painter will vary the stroke width, length, and pressure to follow the forms within the original photo as it randomly applies the brush strokes. There are 16 Smart Stroke Brushes including watercolor, chalk, acrylics, sponge, charcoal, colored pencil and more. This is especially helpful to those who may be new to "painting" as they learn and master the types of brushes and effects that can be created.

### Restoration

The Restoration feature includes two brushes (a soft edge cloner and a hard edge cloner) that enables you to restore original detail of the photo without a "painted" effect. This is invaluable when working with a portrait and you want to bring out facial features. Also new is the ability to open another photo/image with the desired color scheme and use those colors on the photo being cloned. This is called the Match Palette effect. I have not tried this effect yet.

### Brush selection

There are so many brushes, more than you can imagine. Some of them soon become favorites as you experiment and see how each performs. I like to use the cloner brushes which are adept at creating photo art from colors in the source photo rather than the Colors palette. Other brush categories can be used to draw color from the source photo by applying the Clone Color option from the Colors palette. It looks like a rubber stamp. If you forget to apply the Clone Color option, the color applied will be from the Colors palette, which I have done on occasion wondering why the color was green (the active color on the palette), rather than the underlying color from the source picture

Brush selection and control can be accessed on a toolbar on top of the workspace, with more than 30 types of brushes and many more variants for each brush style available. The

opacity, brush size, and other relevant factors for a brush are also changed on the top toolbar below the menu items.

A major new brush category in Painter X is the RealBristle Painting System, which provides the most realistic rendition of a brush on a canvas, down to individual hairs (bristles) on the brush showing up as if created by a real brush on a real canvas. It seems each new version of Painter comes up with added realism and this one is no different as the RealBristle brushes reproduce the natural movement of the artist's brush. There are a number of brush variants to choose from such as Real Round Bristle, Real Tapered Wet Flat, and Real Fan Soft. Multiple colors can be achieved with brushes with strokes fading as color is used up in the brush.

As with prior versions of Painter, you can create your own mix of colors on a palette and blend and apply them to the canvas either to a photo or as a painting from scratch.

What has become an invaluable reference guide for me is Martin Addison's book, *Painter X for Photographers*, published by Focal Press. Everything in the book is geared for creating photo art and he goes into detail about each brush and brush variant, applications of the brush where best and pictures of the effect of each brush on the canvas. He also talks about Hand Tinting a photo with Painter X using layers, how to choose brushes, and how to customize brushes. The information is very understandable and reduces the learning curve associated with mastering the brushes. My next project is to create "hand tinted" photographs using Painter X. Looking forward to some really cool results.

There are a number of other new features of interest to professional designers, photographers, and artists. Suffice to say, this is a great product whether upgrading from a previous version of Painter or Painter Essentials 3, or buying for the first time. I cannot think of any cons about this program. It does what it is supposed to do, providing the ultimate in realism, flexibility and brush control. There are so many goodies provided through Corel and others to make the experience fun, such as brush variations, paper texture effects, new gradients, and more. It is a great creative tool as part of my digital photo art studio, which also includes Photoshop CS3. Note: Corel has continued to make enhancements to Painter to complement Photoshop, preserving layer effects and masks.

The regular price for upgrading is \$219; purchasing new costs \$419. Corel is presently offering discounts at [www.corel.com](http://www.corel.com) at \$199 for an upgrade and \$394 for new users. A 30-day fully functional trial version is also available as is Painter Essentials 3 (\$99/discounted to \$79). The product is worth the upgrade, especially if you are using a computer with Vista. Those with Painter 6 or higher qualify for the upgrade price as well as those with Corel's CorelDraw Graphics Suite X3.

System requirements for PCs with Windows include Vista, XP, or Windows 2000 OS; a Pentium III with 700MHz or greater of processing speed, and 256 MB of RAM (512 MB recommended). The more power the better.

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# SIG News

## C/C++ Programming

Bruce Arnold ([barnold@ieee.org](mailto:barnold@ieee.org))

<http://home.earthlink.net/~barnold2002/Acgnj/index.html>

This group is devoted to programming languages in general and C, C++, and C++ for Windows programming in particular. Each month a small but hopefully useful program (complete with source code) is presented for discussion.

### February: Ship Guru (part 2) - A Package Shipping Utility

The subject for January and February was a utility for packing shipping containers. It uses the latest C++ compiler in Microsoft's Visual Studio 2005. Here are the details of this utility.

This program takes as input a list of boxes to be shipped in a container. It then iterates a large number of possible locations for the placement of the boxes while calculating the volume of the container. When the program finishes, the dimensions of the smallest container is displayed along with the packing efficiency. The ideal is 100 percent. For example: 5 boxes dimensioned 3x4x4 will fit in a 9x4x10 container with a packing efficiency of 66.7 percent.

The program demonstrates a number of tools as well as Monty Carlo iteration techniques.

Our [download site](#) has code and programs from most of our meetings.

**Our next meeting March 18.** ☐

## Java

Mike Redlich ([mike@redlich.net](mailto:mike@redlich.net))

<http://www.javasig.org>

The Java Users Group covers beginner, intermediate, and advanced level Java programming. Primary focus is on developing useful/practical applets and applications, but can include topics such as Java I/O, JavaBeans, Reflection, object-oriented programming and software design issues. Meetings are held the second Tuesday of the month starting promptly at 7:30 PM.

**February 12:** Technical Overview of iScript. As we celebrate our 7-year anniversary this month, Manny Goyenechea will introduce his own personal scripting language called iScript, an open source object-oriented scripting language written in Java that mixes the best of JavaScript, Basic Script, Ruby, Groovy, PHP, Python, Perl and other scripting languages in rich new ways.

**Our next meeting March 11.** ☐

## LUNICS (Linux/Unix)

Andreas Meyer ([lunics@acgnj.org](mailto:lunics@acgnj.org))

<http://www.acgnj.org/groups/lunics.html>

LUNICS is a group for those who share an interest in Unix and similar operating systems. While we do quite a bit with Linux, we've also been known to discuss Solaris and BSD too. We generally meet on the first Monday of the month at 8 PM at the Scotch Plains Rescue Squad. See the web page for directions and more information. **Next meeting April 7.** ☐

## Web Dev

This SIG is intended to be an open forum for all Website Development techniques and technologies, to encourage the study and development of web sites of all kinds. All languages will be considered and examined. Anyone interested please contact the Chairperson in charge. The current project is a CMS for the club. Anyone interested in starting a new project, come to the meeting and announce / explain. Provide as much detail as possible. One can also send projects to the ACGNJ Newsletter editor for inclusion in the next volume.

WebDev should be an all-encompassing development and examination forum for all issues, applications, OS, languages and systems one can use to build Websites. We currently have two Web dev languages .NET and Java as SIGs but the other languages and OS need to be investigated, examined and tested; Windows, Linux, UNIX, DEC, Vax, HP etc. Intel-PC, Motorola-MAC etc. **Our next meeting March 12.** ☐

## Main Meeting

<http://www.acgnj.org/groups/mainmeet.html>

Mike Redlich ([mike@redlich.net](mailto:mike@redlich.net))

**March 7:** Using Slingbox on Different Devices, by David Eisen

**April 7:** Cool/Useful/Fun Web Sites Paul Natanson ☐

## Window Pains

John Raff ([jraff@comcast.net](mailto:jraff@comcast.net))

<http://www.acgnj.org/groups/winpains.html>

Our intent is to provide the members with Windows oriented application discussions both Microsoft and Linux style. The presentation will be directed toward the more heavy technological level of attendee, although newbies are welcomed.

**March 21:** Performance Tuning, TBD (Geek Squad or MicroCenter)

**April 21:** No Meeting — Come to TCF! ☐

## Investment Software

Jim Cooper ([jim@thecoopers.org](mailto:jim@thecoopers.org))

[http://www.acgnj.org/groups/sig\\_investment.html](http://www.acgnj.org/groups/sig_investment.html)

The Investment SIG continues with presentations on how to use analysis programs TC2000 and TCNet. Large charts are presented on our pull down screen and illustrate the application of computer scans and formulas to find stocks for profitable investments. Technical analysis determines buy points, sell points and projected moves. Technical analysis can also be used on fundamentals such as earnings, sales growth, etc.

We're no longer focusing on just Telechart -- if you are using (or interested in) Tradestation, eSignal, VectorVest -- or just in learning how to select and use charting and technical analysis, come join us !!

**Our next meeting: March 13.** ☐

# So You Have a New Digital Camera

Robert M. Mayo (bobmayo1(at)cox.net), Cajun Clickers Computer Club (www.clickers.org)

If you were lucky enough to get a new camera, congratulations! However, along with this jewel, I'm sure you also got a complicated user's manual. I hate 'em! But cheer up; all the mystery will soon go out of that book.

When I bought my first digital camera, I felt lost. I had never worked from menus before, and they seemed so overly complicated. However, after a couple of dozen shots of my refrigerator, washing machine, and the cats, I began to feel comfortable with my new toy. And now, it seems intuitive; I can make changes in the settings without mental effort. In fact, I don't know how I ever got along without the wonderful features this camera has! So the point is: play with it; check out all of the menu options in the privacy of your home so you won't have technical problems later. Following directions in the manual, you're not going to hurt it!

Between photo sessions, it's best not to leave your rechargeable batteries on the charger. Many chargers provide a trickle that's excessive over a period of time, and this will degrade the cells.

In what we laughingly call "the good ol' days," we had a choice of films to use in our cameras. That was wonderful!

There were so many films for color pictures available, as well as the still popular black-and-white shots. And within those two groups, there were fast (ISO 400) Kodak Tri-X films for B&W news (action and nighttime) pictures, as well as slower (ISO 25) Kodachrome film for beautiful, fine-grained slides. If you were happy with black-and-white prints, there was very fine grained Panatomic-X (ISO 32) that could produce great enlargements. There was a film for everything! But what if you had the Panatomic-X in your camera, and six frames hadn't been used yet; and you wanted to shoot a night baseball game under floodlights? You could remove the unfinished film from the camera, or you could bang away at the kids in order to finish the roll. Cheez! What a waste! Plus, you had to obtain a roll of the faster film, too. But with your digital camera, you have all of those "films" in the camera at the same time — color or B&W — with a choice of ISO values to be selected as you need them, regardless of the number of shots you've already made. If only they had done this years ago!

*This article has been provided to APCUG by the author solely for publication by APCUG member groups. All other uses require the permission of the author (see e-mail address above).* ☐

## SIG News, continued

### Layman's Forum

Matt Skoda (som359@aol.com)

<http://www.acgnj.org/groups/laymans.html>

**We meet on the second Monday of the month** (no meetings in July and August) to discuss issues of interest to novice users or those who are planning to get started in computing. Watch our Web page for updates and announcements. ☐

### Mobile Devices

David Eisen (ultradave@gmail.com)

**Our next meeting March 19** ☐

### Genealogy

Frank Warren (kb4cyc@webwarren.com)

<http://www.webwarren.com/kb4cyc/gensig.shtml>

Genealogy SIG is for genealogists interested in computers and computer users interested in genealogy, and is a forum to assist members in furtherance of both. We meet at 8 PM on the fourth Thursday each month. We do not meet in November or December. In addition to our Web page, we also have an electronic mailing list. Messages to the list should be addressed to [gensig@webwarren.com](mailto:gensig@webwarren.com). To subscribe, include the line "subscribe gensig" in the body of the message.

*Due to work schedule conflicts, the SIG Leader cannot make the meetings. If anyone else would like to pick up the baton, carry the banner, help the SIG along, please let us know.* ☐

### DotNet

Manuel J Goyenechea

<http://www.acgnjdotnetsig.org/about.html>

<http://www.acgnjdotnetsig.org/index.html>

### Firefox Activity

Firefox@acgnj.org

This SIG is intended to be an open forum for all FireFox and Mozilla techniques and technologies, to encourage the study and development of web sites of all kinds. All the browsers will be considered and examined. All are encouraged to "think out of the box" about new web site design. All members and guests are invited to check out the design concepts and voice their opinion. **Meeting third Monday of the month at 7 PM. Next meeting March 17.** ☐

### NJ Gamers

Gregg McCarthy (greggmc@optonline.net)

<http://www.NJGamers.com>

[www.lanparty.com](http://www.lanparty.com)

**The next Friday Night Frag will be March 14, 6 p.m. to Saturday 12 noon — 18 hours for 5 bucks!**

BYOC - Bring your own computer

BYOF - Bring your own food.

and if you don't like sitting on metal chairs... BYO chair! ☐

# Guru Corner

If you need help with any of the technologies listed below, you can call on the person listed. Please be considerate and call before 10 PM.

## Software

HTML	Mike Redlich	908-246-0410
	Jo-Anne Head	908-769-7385
ColdFusion	Jo-Anne Head	908-769-7385
CSS	Frank Warren	908-756-1681
	Jo-Anne Head	908-769-7385
Java	Mike Redlich	908-246-0410
C++	Bruce Arnold	908-735-7898
	Mike Redlich	908-246-0410
ASP	Mike Redlich	908-246-0410
Perl	John Raff	973-560-9070
	Frank Warren	908-756-1681
XML	Mike Redlich	908-246-0410
Genealogy	Frank Warren	908-756-1681
Home Automation	Frank Warren	908-756-1681
<b>Operating Systems</b>		
Windows 3.1	Ted Martin	732-636-1942

## Discount Computer Magazine Price List

As described by the DealsGuy

	1 yr	2 yr	3 yr
Computer Games	\$10.95	20.95	29.95
Computer Gaming World	14.95	28.95	41.95
Computer Shopper1	16.97	32.95	47.95
Dr. Dobbs Journal	15.95	30.95	
Mac Addict	10.97		
Mac Home Journal	15.97	29.97	
Mac World	12.95		
Maximum PC	9.95	18.95	27.95
Microsoft System Journal	21.95	39.95	
PC Gamer	12.95		
PC Magazine (22/44/66 Issues)	25.97	48.95	68.95
PC World	16.95		
Wired	6.00	12.00	17.00

These prices are for new subscriptions and renewals. All orders must be accompanied by a check, cash or Money Order. Make payable to Herb Goodman, and mail to:

Herb Goodman, 8295 Sunlake Drive, Boca Raton, FL 33496

Telephone: 561-488-4465, e-mail: [hgoodman@prodigy.net](mailto:hgoodman@prodigy.net)

Please allow 10 to 12 weeks for your magazines to start. For renewals you must supply an address label from your present subscription to insure the correct start of your renewal. As an extra service I will mail a renewal notice about 4 months prior to their expiration date. I carry more than 300 titles at excellent prices — email for prices. ☐

## ACGNJ MEMBERSHIP APPLICATION

Sign up online at <http://www.acgnj.org/membershipApplication.html> and pay dues with PayPal.

	US/CANADA	FAMILY OF MEMBER (No Newsletter)	Dues	FOREIGN	STUDENT	SENIOR CITIZEN (Over 65)
1 Year	\$25	\$10		\$55	\$20	\$20
2 Years	\$40					
3 Years	\$55					\$45

Mail this application and your check to:  
**AMATEUR COMPUTER GROUP OF NEW JERSEY, INC., P.O. BOX 135, SCOTCH PLAINS, NJ 07076**

New Member  Renewal  Address Change

First Name \_\_\_\_\_ Last Name \_\_\_\_\_ Phone \_\_\_\_\_

Mailing Address \_\_\_\_\_ E-Mail \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ URL \_\_\_\_\_

What topics would you like to see covered at club meetings? \_\_\_\_\_

Other Local Computer Groups		
<b>Princeton Macintosh User Group:</b> 7:15 pm 2nd Tuesday, Jadwin Hall, A-10, Washington Rd, Princeton, (609) 252-1163, <a href="http://www.pmug-nj.org">www.pmug-nj.org</a>	<b>Linux Users Group in Princeton:</b> 7 pm, 2nd Wednesday, Lawrence Branch Mercer Library, Rt#1 & Darrah Lane, Lawrence NJ <a href="http://www.lugip.org">http://www.lugip.org</a>	<b>New York PC:</b> 3rd Thurs, 7 pm, PS 41, 116 W 11th St. For info call hotline, (212) 533-NYPC, <a href="http://www.nypc.org">http://www.nypc.org</a>
<b>Computer Education Society of Philadelphia:</b> Meetings & Workshops at Jem Electronics, 6622 Castor Ave, Philadelphia PA. <a href="http://www.cesop.org/">www.cesop.org/</a>	<b>Brookdale Computer Users Group:</b> 7 pm, 3rd Friday, Brookdale Community College, Bldg MAN Rm 103, Lincroft NJ. (732)-739-9633. <a href="http://www.bcug.com">www.bcug.com</a>	<b>NJ Macintosh User Group:</b> 8 pm, 3rd Tuesday, Allwood Branch Library, Lyall Rd, Clifton NJ. (201) 893-5274 <a href="http://www.njmug.org">http://www.njmug.org</a> .
<b>PC User Group of So. Jersey:</b> 2nd Mon., 7 pm, Trinity Presb. Church, 499 Rt 70 E, Cherry Hill, NJ. L. Horn, (856) 983-5360 <a href="http://www.pcugsj.org">http://www.pcugsj.org</a>	<b>Hunterdon Computer Club:</b> 8:30 am, 3rd Sat, Hunterdon Medical Center, Rt 31, Flemington NJ. <a href="http://www.hunterdoncomputerclub.org">www.hunterdoncomputerclub.org</a> , (908) 995-4042.	<b>NY Amateur Computer Group:</b> 2nd Thurs, 7 pm, Rm 806 Silver Bldg, NYU, 32 Waverly Pl, NYC. <a href="http://www.nyacc.org">http://www.nyacc.org</a>
<b>Morris Micro Computer Club:</b> 7 pm 2nd Thurs., Morris County Library, Hanover Ave, Morristown NJ, (973) 267-0871. <a href="http://www.morrismicro.com">http://www.morrismicro.com</a>	<b>Central Jersey Computer Club:</b> 8 pm, 4th Friday, Rm 74, Armstrong Hall, College of NJ. Rich Williams, (609) 466-0909.	<b>NJ PC User Group:</b> 2nd Thurs, Monroe Rm at Wyckoff Public Library, 7 pm. Maureen Shannon, (201) 853-7432, <a href="http://www.njpcug.org">www.njpcug.org</a>
<b>Philadelphia Area Computer Society:</b> 3rd Sat, 12 noon Main Meeting, groups 8 am-3 pm. Upper Moreland Middle School, Hatboro PA. (215) 764-6338. <a href="http://www.pacsnet.org">www.pacsnet.org</a>	<b>NJ Computer Club:</b> 6:15 pm, 2nd Wednesday except Jul & Aug, North Branch Reformed Church, 203 Rt 28, Bridgewater NJ. <a href="http://www.njcc.org">http://www.njcc.org</a>	<b>Princeton PC Users Group:</b> 2nd Monday, Lawrenceville Library, Alt Rt 1 & Darrah Lane, Lawrenceville, Paul Kurivchack (908) 218-0778, <a href="http://www.ppcug-nj.org">http://www.ppcug-nj.org</a>

## Classified

**FREE TO MEMBERS.** Use our classified ads to sell off your surplus computer stuff. Send copy to Classified, ACGNJ NEWS, P.O. Box 135, Scotch Plains NJ 07076 or e-mail to the editor, [bdegroot@ptd.net](mailto:bdegroot@ptd.net). Classified ads are free to members, one per issue. Non-members pay \$10. Send check payable to ACGNJ Inc. with copy. Reasonable length, please.



<http://www.apcug.net>

### Radio and TV Programs

**Computer Radio Show,** WBAI 99.5 FM, NY, Wed. 8-9 p.m.

**Software Review,** The Learning Channel, Saturday 10-10:30 p.m.

**On Computers,** WCTC 1450 AM, New Brunswick, Sunday 1-4 p.m. To ask questions call (800) 677-0874.

**PC Talk,** Sunday from 8 p.m. to 10 p.m., 1210 AM Philadelphia. 1800-876-WPEN, Webcast at <http://www.pctalkweb.net>.

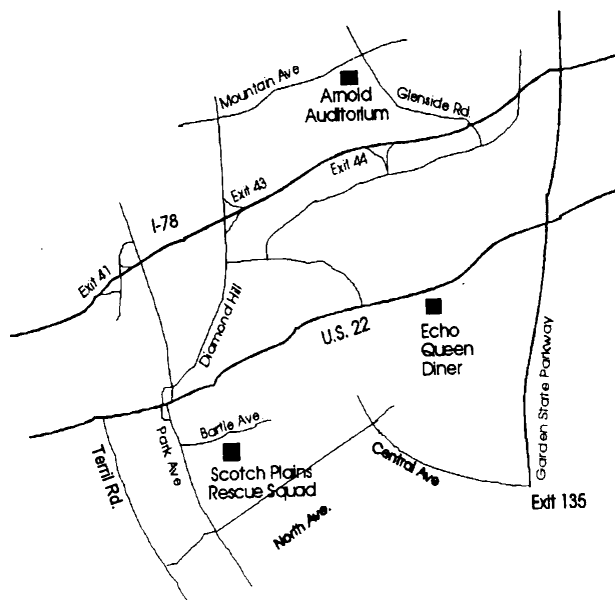
### MarketPro Shows

<http://www.marketpro.com/>

**March 15 & 16:** Meadowlands Expo Center, Secaucus

**April 19 & 20:** Meadowlands Expo Center Secaucus

**April 26 & 27:** Trenton Computer Festival (TCF) at The College of New Jersey, Ewing NJ Saturday 10-5 & Sunday 10-4



### Directions to Meetings at Scotch Plains Rescue Squad, 1916 Bartle Ave., Scotch Plains NJ

#### From New York City or Northern New Jersey

Take Route 1&9 or the Garden State Parkway to US 22 Westbound.

#### From Southern New Jersey

Take Parkway north to Exit 135 (Clark). Stay on left of ramp, follow circle under Parkway. Bear right to Central Avenue; follow to Westfield and under RR overpass. Left at light to North Avenue; follow to light in Fanwood. Right on Martine (which becomes Park Ave). Right on Bartle Ave in middle of shopping district. Scotch Plains Rescue Squad (2-story brick) is located on the right. Do not park in the row next to the building — you'll be towed.

#### From I-78 (either direction)

Take exit 41 (Scotch Plains); follow signs to US 22. Turn right at light at bottom of hill and use overpass to cross Rt. 22. Follow US 22 Westbound directions.

#### From US 22 Westbound

Exit at Park Avenue, Scotch Plains after McDonalds on the right, diagonally opposite Scotchwood Diner on the left, immediately before the overpass. After exiting, turn left at the light and use overpass to cross US 22. Bear right at bottom of ramp to continue south on Park Avenue. Turn left at the second light (a staggered intersection). Scotch Plains Rescue Squad (2-story brick) is on the right. Do not park in the row next to the building — you'll be towed. We meet on the second floor, entering by the door at the right front of the building.

#### From Western New Jersey

Take US 22 Eastbound to the Park Avenue exit. The exit is about a mile past Terrill Road and immediately past the overpass. Exit onto Park Avenue South and follow the directions above to the Rescue Squad building. ☐

# Free Text-to-Speech Programs

Cass Lewart ([rlewart@monmouth.com](mailto:rlewart@monmouth.com)), ACGNJ

Several years ago I wrote an article about a text-to-speech conversion program called Monolog. The program was created by First Byte Corporation in the early 90's and has been licensed to sound card manufacturers. The program came bundled with my sound card with no instructions but I was able to use it to proofread a book I was then writing about modems. I fed to the Monolog program ASCII text, and out came a robot-like, more or less understandable male voice booming over my computer sound system.

Proofreading is one of several steps you have to follow when writing an article or a book. The first step is to sweat until you finally complete your manuscript. Then you send the manuscript to your publisher hoping never to see it again before it appears in print. Well, if you send it to a reputable publisher you won't be so lucky. Assuming that your work is accepted, it will come back to hound you after a few weeks or months, full of corrections, additions, suggestions and changes. To make sure that none of your great thoughts got lost in the process you should proofread the revised manuscript and compare it with the original submission. Proofreading is also required when you manually enter data into a database or a spreadsheet and would like to check the results against the original hard copy. In either case somebody has to read from the hard copy and compare it with the computer file, or vice versa. Asking your spouse to read aloud from a boring spreadsheet or manuscript can be detrimental to your marriage. A

much better solution is to let the computer "read" and do your own proofreading.

A text-to-speech program is also helpful if you have a visual impairment, or if you would just like to curl up and let the computer read to you.

I have been experimenting with a number of text-to-speech program since Monologue. Certainly progress has been made in this area. The voices now have inflection and do not sound as mechanical as in the early versions.

The programs also got more sophisticated, e.g., \$55.25 is pronounced as "Fifty-five dollars and twenty-five cents."

A recent Google search for free text-to-speech software gave me several programs to choose from. The two I found best were Natural Reader from NaturalSoft ([www.naturalreaders.com](http://www.naturalreaders.com)) and Swift Talker from Cepstral ([www.cepstral.com](http://www.cepstral.com)). The free versions of the programs I have been using have limited text file size, a single voice, and limited input sources. The professional versions priced at \$40 and up provide additional features such as custom dictionaries, selection of voices, input from clipboard, spreadsheets or PDF files. However, the basic text-to-speech engine in free or paid programs is the same. I found the free versions of both programs completely adequate. Both programs will run with any version of Windows from Win98 on and with minimum system requirements. ☐

## ACGNJ MEETINGS

For the very latest news on ACGNJ meetings visit the ACGNJ Web Page (<http://www.acgnj.org>)

### Monday, March 3

8 P.M. - Lunics (Linux/Unix). Andreas Meyer ([lunics@acgnj.org](mailto:lunics@acgnj.org))

### Tuesday, March 4

7 P.M. - Board of Directors meeting.

### Friday, March 7

8 P.M. - Main Meeting, Mike Redlich ([mike@redlich.net](mailto:mike@redlich.net)).

### Monday, March 10

8 P.M. - Layman's Forum, Matt Skoda ([som359@aol.com](mailto:som359@aol.com)), 908-359-8842.

### Tuesday, March 11

7:30 P.M. - Java, Mike Redlich ([mike@redlich.net](mailto:mike@redlich.net)) 908-246-0410.

### Wednesday, March 12

7 P.M. - WebDev SIG, Evan Williams ([tech@evanwilliamsconsulting.com](mailto:tech@evanwilliamsconsulting.com))

### Friday, March 14

6 P.M. to 5 A.M.- NJ Gamers. Gregg McCarthy ([greggmc@optonline.net](mailto:greggmc@optonline.net)), 732-721-6507. Break 8 to 10 P.M.

### Thursday, March 13

8 P.M. - Investing Software, Jim Cooper ([jim@thecoopers.org](mailto:jim@thecoopers.org)).

### Monday, March 17

7 P.M. - Firefox Activity, David McRitchie ([firefox@acgnj.org](mailto:firefox@acgnj.org))

### Tuesday, March 18

7:30 P.M. - C/C++ Users, Bruce Arnold ([barnold@ieee.org](mailto:barnold@ieee.org)), 908-735-7898

### Wednesday, March 19

7:30 P.M. - Mobile Devices, David Eisen

### Thursday, March 20

8 P.M. - Dot Net, Manuel J Goyenechea

### Friday, March 21

8 P.M. - Window Pains, John Raff ([john@jraff.com](mailto:john@jraff.com)).

### Tuesday, April 1

7 P.M. - Board of Directors meeting.

### Friday, April 4

8 P.M. - Main Meeting, Mike Redlich ([mike@redlich.net](mailto:mike@redlich.net)).

### Monday, April 7

8 P.M. - Lunics, Andreas Meyer ([lunics@acgnj.org](mailto:lunics@acgnj.org)) ☐

All meetings, unless otherwise noted, are at Scotch Plains Rescue Squad, 1916 Bartle Ave., Scotch Plains, N.J.  
Directions and map inside back cover.