

# COMPUTER CONNECTION

Monthly Newsletter of the  
Rockland PC Users Group

Volume 18 Number 5  
May 1998

## MINOLTA'S SUPER DIGITAL CAMERAS AND SCANNERS

Whenever we have a hardware presentation, the excitement in the meeting room is palpable. Maybe it's because many of us are really not all that interested in the latest and greatest office suite. Or maybe it's because we have been burned so often that we have become sceptical of the extravagant claims made by software vendors.

At the May meeting we'll turn to cutting-edge peripherals for the home user. Minolta, an established name in photography and photographic equipment, will show us how their cameras and scanners make it feasible for us to turn our personal photos into digital images. Until now, if we wanted to take a picture and place it into a computer document—a greeting card, Web page or presentation—we first had to have it digitized. That meant delivering our photos, negatives or slides to a commercial developing service and having them digitized and then returned to us as computer files on floppies, CDs or ZIP or JAZ cartridges.



Recent imaging technology has put this capability into all of our hands. Digital cameras can now record high resolution images and transmit them to a PC through a serial cable or a SCSI connector. Digital flat-bed and transparency scanners can digitize existing images and save them in importable file formats. Price reductions have put this technology within the grasp of the average home user.

On May 12, Minolta will demonstrate several of their digital cameras (you may have your picture taken!) and will show their Dimâge Scan Dual which can transmit digitized negatives, positives and slides to a PC. Hint: It might be a great idea to bring along one of your own 35mm slides to see what the Dimâge Scan Dual might do for you.

When you come out on May 12, be ready to smile and say cheeeese! ■

### FEATURES

President's Message .....	2
Visiting an Internet Service Provider .....	3
The Why of Y2K .....	4
Teach Me Piano .....	6
Discovering Music .....	7
Review: Infinite Disk.....	8
A V.90 Primer .....	9
Is Your PC Ready for Year 2000? .....	10
How to Join Our Group .....	12

### MEETING SCHEDULE

*Rockland Conservatory of Music 7:30 P.M.*

**Tuesday, May 12 – Minolta Digital Cameras**

**Tuesday, June 9 – Visioneer Scanning Products**

**Tuesday, July 14 – Windows 98**

(All are welcome)

# PRESIDENT'S MESSAGE

by Stan Smith



## June Elections

Once again, we are looking for members to come forward and declare their candidacies for president, vice president, secretary, and treasurer. Our elections will take place at the June meeting, and nominations for all positions may be offered by attending members. Consider helping out. We need new people and new ideas if we are to remain a vital organization.

## PC Expo

PC Expo will open on Tuesday, June 16 at the Javits Convention Center, and will continue through Thursday, June 18. RPCUG members can receive complementary admissions to all PC Expo exhibits. Early enrollment will insure that you receive your admittance badge by US mail before the event, and you won't have to wait in any lines at all. Online registration



is now available at [www.pcexpo.com](http://www.pcexpo.com). When you see the field requesting the Source Code, enter GP98 (all capital letters) and your registration will be processed at no charge to you. Request a three-day pass rather than a specific single day. That will allow you more flexibility in your scheduling.

If you do not have Internet access, pick up and fill out a paper application at our May 12 meeting.

## E-mail Addresses

We frequently have time-sensitive information to convey to our membership and use e-mail to accomplish this communication. However, we only have e-mail addresses for a very small number of our members. To make sure we have your correct e-mail address, stop by the Activity Center at the next meeting and speak with Alain Lajoux to verify your listing in our database. If we don't have your address, please add it. If you cannot attend an upcoming meeting, send Alain an e-mail message at [allx@juno.com](mailto:allx@juno.com) to inform us of your correct e-mail address.

## Pirated Software

I am seeing more and more instances of software piracy. Recently a town in Rockland sponsored a course on "Building Your Own Computer." During the course the instructor installed "operating system software" on all of the student's computers. Neither the students nor the town had purchased the software. Since the software vendor was deprived of revenue for those installations, those acts were acts of software piracy. As president of RPCUG, I provided the town with an informed opinion on the impact of the instructors actions. To the town's credit, they are purchasing and providing to each student a valid copy and license of the software that was installed.

Several of our members have encountered software or configuration problems after purchasing new computers. These new computers have been pre-loaded with operating system software, applications, and utilities. From time to time I have been consulted about a problem by these purchasers. When I indicate that they will have to use the distribution CD-ROM (or diskettes) to correct the problem, their response has frequently been, "I don't have any diskettes or CD-ROM—the software came pre-installed on my computer." Every piece of software that has been pre-installed on a newly purchased computer **MUST BE ACCOMPANIED BY AN OFFICIAL SOFTWARE LICENSE, MANUALS OR INSTRUCTION SHEETS, AND THE DISTRIBUTION MEDIA** (or the ability to create the media via an installed Diskette Factory application). If you did not receive them, you have probably received pirated software. Immediately return to your place of purchase and demand your properly licensed product. If the vendor offers any resistance, inform him that you will pursue the issue by contacting the applicable software vendors and the trade associations that investigate software piracy.

Remember, if you have pirated software on your computer you are liable under the law whether you installed the software yourself or someone else did, whether or not you knew the installed software was pirated.

## July Presentation

Mark your schedule for a stellar meeting on July 14 from 7:00 P.M. to 10:30 P.M.—note the early starting time and the late ending time. Microsoft will be joining us for two different presentations on Windows 98—which is scheduled for release on June 25.

(continued on page 8)

# EDITOR'S DESK

by Sy Ribakove

Sometimes, while surfing the Internet or answering my e-mail, I try to picture the scene at my ISP (Internet Service Provider). I imagine efficient-looking technicians in clean lab coats checking out the mainframes in a roomful of super computers. The big tape reels are answering simultaneous requests from hundreds, maybe thousands, of users, silently sending and retrieving words and pictures from other mainframes all around the world. And, in my imagination, all this takes place in a surgically-sterile, atmospherically-regulated environment.

Since, at the time of this writing, my ISP was more than an hour's ride away, I decided to look in on an Internet Service Provider here in Rockland. Keeping my fingers crossed, I chose ACD, the ISP that hosts our RPCUG Web site. I was afraid that, instead of the confidence-inspiring, pristine scene described above, I would find three nondescript teenagers huddled around a computer in a garage.

My fears were unfounded. ACD turned out to have a nice suite of offices and a spacious warehouse in the industrial park on the old Ramapo Airport property. I saw four people the day I was there: Ron Bucell, the owner of ACD (American Computer Distributors), Greg, an enthu-

siastic pony-tailed young man, who was responsible for managing ACD's own Web site as well as the general configuring and maintaining of the servers, Lisa, ACD's Gal Monday, Tuesday, Wednesday, Thursday and Friday who oversees billing and clerical functions, and Rahim, a personable young man who, I learned later, is a kind of jack of all trades.

I was shown the workroom where ACD assembles computers (providing Internet services is only one part of ACD's operation) and the warehouse facility in which sheaves of telephone wires and that precious digital T-1 line link ACD and its customers directly to the backbone of the Internet. Although I was impressed by the sheer volume of the "spaghetti" the phone company had installed, I yearned to get a look at the Internet Web servers I had been imagining so vividly.

Greg led me to a medium-sized room in which the temperature was a good ten degrees warmer than the rest of the office. The source of the heat was a battery of ACD-built computers that were busy handling the Internet chores. There were Pentium, Pentium Pros and Pentium IIs. One of them was handling the "lookups," finding the numerical addresses that match the URLs we type. Another computer



stored ACD's customers' own Web sites, among them our own *rpcug.org* Web site. Another was a mail server and still another held customer IDs and passwords. (Newsgroups were handled on a remote server, to keep as much bandwidth as possible for users.) There were also impressive racks of long black boxes with flashing lights. These controlled the phone lines, seventy-four of them, to handle incoming calls. A small monitor and keyboard allowed the ACD staff to observe and regulate the traffic the system was currently handling.

There was not a mainframe in sight, but neither were those three garage computer nerds. When I asked Greg about ACD's

*(continued on page 10)*

## OFFICERS

President	Stan Smith	<i>stan.smith@ibm.net</i>
Vice President	Sondra Coulter	<i>mscoulter@aol.com</i>
Secretary	Gerald F. Lee	<i>tirnalee@aol.com</i>
Treasurer	Paul Shapiro	<i>pshap123@compuserve.com</i>
At-Large	Jack McDermott	<i>jackmac001@aol.com</i>

## Committees

Programs	Rich Caunitz	<i>rich_caunitz@prodigy.com</i>
Membership	Phil Van Riper	<i>pdvr1@ibm.net</i>
Webmaster	Steve Weinberg	<i>rpcug@acd-pc.com</i>

The Rockland PC Users Group, a tax-exempt educational organization, meets monthly, usually on the second Tuesday. Meetings begin at 7:30 P.M. The Rockland PC Users Group supports the computing interests of the community as well as the interests of its own members. The latest information about meeting programs and dates is available on the Internet at <http://www.rpcug.org>.

## NEWSLETTER EDITOR

Sy Ribakove  
100 Doctor Davies Road  
Congers, NY 10920-1706  
[sribakove@acd-pc.com](mailto:sribakove@acd-pc.com)

No portion of **ComputerConnection** may be reproduced without permission. APCUG members may use material if it is credited to the author and **ComputerConnection**. Articles and letters will be published at the discretion of the Editor.

# THE WHY OF THE Y2K BUG

by Ken Blake, TCS Journal Publisher

There are many programs, mostly running on mainframes, that are processing files in which each date has a fixed-length two-byte field for the year, so that January 31, 1999 is stored, for example, as 990131, rather than 19990131. This means that a date in the year 2000 will be stored with 00 in the year field. So January 31, 2000 will be 000131.

Such programs often make decisions concerning which of two dates is earlier and then take action based on the result. The computer will treat year 00 (2000) as earlier than 99 (1999). For example, a March 15, 2000 payment against a credit card purchase made on December 30, 1999 will be identified as a late payment, and interest will be charged, but a program with two-byte years will almost certainly treat the payment as having been received early, and *not* charge interest.

## What Programs Does It Affect?

Many people think the Y2K problem is hardware-dependent, or language-dependent, affecting, for example, only programs written in COBOL. Although much of the Y2K problem dates back to the COBOL era, it's really independent of which hardware or software platform the programs run on. Even more than its being a program problem, *per se*, it's a file design problem. The vast majority of programs written in the 1960s and 1970s, and many written even later, were written to handle files with two-byte year fields.

## Why Did It Happen?

Many people blame the shortsighted programmers who should have known better than to write the programs the way they did. But it was rarely their fault. The programmers did not design the files with two-digit year fields; it was the systems analysts, the people who designed the systems. The programmers came behind them and wrote the code to the designers' specifications.

Year fields were usually designed as two-byte fields for two reasons, both excellent from the standpoint of the designers:

➤ Management, hardware vendors, and trade magazines assured the designers that the files and software in question would never be in use for as long as the year 2000—the hardware, software, and applications would be replaced long before then.

➤ The space the files took (and, even more important, the RAM required to handle larger files) was in such short supply that saving every possible byte was an economic necessity.

That latter point is the most significant of all. I started programming in 1962. The first computer I programmed was an IBM 1401, a popular model of its day. Between 1962 and 1966, the 1401 grew from 4K bytes of RAM to 12K bytes. That's K, *ki-*

*lobytes*, not megabytes, and 1K, in those days, meant 1,000 bytes, not 1,024. 4,000–12,000 bytes of RAM seems tiny to us today, but a lot of useful work was accomplished on those machines.

Most files were stored on magnetic tape. Disk storage was expensive, and not yet widely used. A typical program might have two input tapes, one a master file, and the other a transaction file, with an updated master file produced as output. The transaction file might have had a single date field, and the master file probably contained several dates, perhaps three or four.

To minimize the time required to read and write tape files, records were necessarily stored in blocks, with several logical records making up one physical record, or block. Space had to be allocated within RAM for each logical record in the block for each file a program processed. So, in the hypothetical three-file program above, if each block in a file contained ten logical records (a fairly modest size for a block), there were 30–40 dates in the input master block, 30–40 dates in the output master block, and ten dates in the transaction file block. That's up to ninety dates in all in this very modest example program.

Increasing each of those ninety dates by the two-bytes required to have a four-byte year would have cost 180 bytes of RAM in the program in question (and more in other programs). Today, 180 bytes sounds like a trivial number, but it's a very significant number when you're dealing with a computer with only 4,000 bytes in total—4.5% of the total RAM available. Very often I was required to add functionality to a program that already had every one of those bytes in use. When that occurred, I was forced to take all kinds of shortcuts, and to use programming practices that probably made the programs I wrote incomprehensible to anyone who had to maintain them after me; having year fields only two bytes long was an extremely minor sin in comparison to many of the things I had to do.

What was my choice? There was no choice—I had to work with the resources at my disposal. What was the choice of my boss, the Data Processing Manager? There was no choice—he too had to work with the funds allocated by upper management. Although we both would have liked to have a bigger computer without the constraints imposed by having so little RAM, that was not a choice we had.

And what has happened to those programs with two-byte year fields that I and others like me wrote in the 1960s, 1970s, and perhaps 1980s? Have they vanished as predicted, as hardware and software and software have changed? Well, some of them have, and have been replaced with more modern systems, and many of those newer systems fortunately store their years as four-byte

*(continued on page 5)*



## from the Journal of the Tucson Computer Society

fields. But in other cases, even where programs have been replaced, many of the original files were simply converted to the new hardware, and continue to be used in their original format, with those same two-byte year fields. It was the fast way, the cheap way, to make the conversion.

If anyone was shortsighted, it's probably those who elected to convert existing files and retain their existing two-byte year formats, rather than those who designed those formats years ago. But in their defense, in many cases they were given no choice. Schedules and funds allocated for conversion were often dictated from above by upper management; it either was meet the schedule or lose your job.

### Is There a Fix?

It's a piece of cake, right? Changing a format from two bytes to four can't be hard. You simply find each date field and change it. In COBOL you simply change PIC 9(2) to PIC 9(4)

### Why Isn't It That Easy?

For a bunch of reasons:

➔ In any single organization, there can be a *lot* of programs to change. And each of those programs may have many date fields to change. Even something easy becomes hard when you have to do lots of it.

➔ Identifying all the programs that need to be changed can be difficult. And finding all the dates to change in each program can be similarly difficult. And you have to get them *all*. If, in a given application system, a hundred programs need to be changed, with an average of ten date fields to change in each program, and only 999 of the 1,000 dates are actually changed, the single incorrect date can result in total failure.

➔ An occasional program may require a more significant change than just changing of date definitions.

➔ Incredible as it may seem, some organizations are running programs that haven't been modified in so long that they no longer have source code that accurately reflects the production version that's being run. If a non-current version of a COBOL program is modified to have two-byte year fields and then compiled and put into production, undesirable changes will be introduced. Worse, some organizations may have source versions that they *do* trust, but nevertheless these versions are, in fact, non-current versions.

(For non-programmers reading this, note that almost all programs exist in two versions: the high level language in which it was written—such as BASIC, Pascal, C, or COBOL—called the source version, and the machine language version which is

actually executed. The process of translating the high-level language into an executable program is called compilation.)

➔ After a program is changed, it needs to be tested. Even seemingly trivial changes often don't work correctly.

The purpose of the testing is twofold: 1) to show that the change works as desired; 2) to show that everything else works the way it used to.

There are two problems here:

1) Lots of effort and time are required to accomplish the testing and evaluating of results.

2) The testing requires a body of data designed to adequately exercise the programs. In many (perhaps most) instances, this data doesn't exist; in others, it does exist, but must be modified for the changed data formats. If the data doesn't exist, there is a substantial expenditure of time and effort required; in many instances it will not be done, and the results will therefore be fraught with error.

➔ The files themselves, not just the programs that use them, need to be converted. In many instances this requires writing and testing extra programs that will only be used a single time. In all instances, the conversion is a time-consuming process, and one that is inherently error-prone.

➔ The coordination of the changeover can be a nightmare. Ask anyone who's been involved in any kind of a conversion. This one is a conversion that probably affects almost every file and every program used in the organization. Because of its scope it's probably not feasible to do everything at once, in a single stroke. It's more likely to be done one application at a time. But even there, batch programs are run on varying schedules, and getting each component in place at the appropriate time is a daunting endeavor. Moreover, everyone is likely to forget that the particular application being converted today produces an output file needed by some other application not yet converted.

➔ Finally, there's a deadline. This deadline is a *real* deadline, and not one where you can say, "Well, we missed it, we'll try again next week." It *must* be done by January 1, 2000.

### So What's Going to Happen?

It will be different in different companies. Some well-run, far-sighted companies have already done it. Some of the others will do it fairly gracefully, with few problems. Still others will fail to manage it correctly at all, foul up their records, and go out of business as a result.

One thing's for sure. If any organization with this problem hasn't started to address it yet, it's probably too late. There are fewer than two short years left, and lots of work to do. ■

# TEACH ME PIANO

by Sy Ribakove



I'm the wrong person to be reviewing piano-teaching software. However, I could not find a member with a multimedia computer and an attached MIDI keyboard who was also willing to produce a timely newsletter review.

Voyetra's **Teach Me Piano** is designed for the person who wishes to learn to read music and to play familiar folk, show and light classical tunes well enough to give pleasure to himself and others, but who has had little or no formal keyboard training.

I am not a beginner. I have actually been playing the piano for sixty years and teaching for forty. When I was in high school I earned date money playing in bars and cocktail lounges. Later I put the \$4,000 my parents had spent on classical piano lessons to good use when I earned a Masters degree from Juilliard.

A couple of years ago, I had a disappointing experience with another computerized piano instruction program, the one widely advertised as *The Miracle*. At a demonstration, I volunteered to play the simple song that was on the screen. After five minutes I gave up; I could not get past the second measure without the computer giving me the razz and flashing Oops! on the screen. I simply was unable to restrain my musical instincts and provide the mechanical performance the computer demanded.

**Teach Me Piano** is far more sophisticated and far more forgiving. At the outset the user is offered the opportunity to choose a level—Beginner, Intermediate or Advanced—at which evaluations are to be scored. All three levels contain the same lessons and songs. The difference between the levels is in how the playing is evaluated. The higher the level, the more rigid the evaluations when the playing is tested. After I had foolishly “signed in” as Advanced, the only way I could find to adjust the level was to re-enroll as a new user and choose a lower level.

If you want to achieve a perfect score in the exercises you have to sign on as a Beginner. Advanced level produced the same cruel assessments that I had experienced with *The Miracle*. It was simply not possible to achieve 100% in rhythmic accuracy. (Is it possible that my parents didn't get all they should have for their \$4,000?) Intermediate level often rewarded me with 100% on pitch performance (hitting the right notes) but never more than 99% for rhythmic accuracy.

If any of this sounds downbeat, let me say right here that **Teach Me Piano** is sensitively done and well worth its \$79 list price. It is not designed to help the would-be pianist develop a whiz-bang technique, a beautiful tone or valid interpretive skills. It will, however, if used according to the instructions provided in the helpful manual and the onscreen audiovisuals, assist young and old alike to acquire an understanding of music notation, a smattering of keyboard skills, an ability to translate printed scores into identifiable songs and—perhaps—the desire to continue with a human teacher on a real piano.

**Teach Me Piano** includes 150+ lessons. The student gets to try new skills on more than seventy-five well-known songs. The songs can be printed as sheet music and, when perfected, can be performed with the provided instrumental accompaniment and enthusiastic prerecorded applause. It is all grand fun and sure to give the brave learner a great feeling of accomplishment.

Because the program makes it easy to keep records for many students, family members can start at their own levels and proceed at their own rates.

A valuable Musician's Reference provides an online intro to notation and commonly encountered musical terms.

There's also a Media Check utility that's almost perfect. It is designed to inventory the existing multimedia capability of the user's MIDI setup and provide instruction for installing a MIDI keyboard correctly. There was a glitch, however. My SoundBlaster AWE32's MIDI capability had not been properly recognized by Windows 95; it took a call to Creative Labs' Tech Support to get the configuration corrected. Even so, Media Check proclaimed that “MIDI In” was not functioning, even after **Teach Me Piano** seemed to be working fine. Voyetra's Tech Support acknowledged a glitch and told me that a patch would soon be available on their Web site.

**Teach Me Piano**, while no substitute for conventional piano lessons, offers a gentle introduction to musical and keyboard skills. It allows parents to assess their youngster's musical interest; adult beginners can use it to discover whether they wish to take on the painstaking work (musicians call it “practicing”) involved in developing instrumental proficiency. ■

# DISCOVERING MUSIC

by Nancy Ribakove

Voyetra's **Discovering Music** (\$79.95) on CD-ROM is, for the most part, a charming program that affords children and adults alike the opportunity to explore music history and try their hands at the process of musical creation, from jamming to notating and recording. It is so cleverly organized that even a person who cannot play and knows nothing about notation can use it—and it is fun!

Here's what you need, *minimally*, to run it: 486DX-33 multimedia computer running Windows 3.1 or 95, 8MB RAM, SVGA monitor, 6MB disk space, 2X CD-ROM, 16-bit sound card, optional MIDI keyboard and microphone.

The manual's concise instructions made installation a breeze. I could choose to run **Discovering Music** from my hard drive or from the CD-ROM. A nice touch, considering the difference of 9MB. (Response from my 4X SCSI CD player was smooth and snappy.)

The opening screen is divided into four areas representing the program's main modules; *Music Conservatory*, *Jammin' Keys*, *Music Write* and *Recording Station*. I could choose to watch a video introduction to each module. Music Conservatory offers sections on composers, music theory, music history, musical instruments and a glossary. I opened the history section first. Click anywhere on its nicely delineated time line, and little essays pop up. They are short, but sufficiently informative to convey flavor. There are also very clever descriptions of things like the difference between "classic" and "romantic." Plenty of links to related information, pictures, videos and complete recordings of works by the major composers fill out the history module, making it all quite attractive and interesting.

The Musical Instruments section was the only disappointment. The synthesized sounds which accompany the videos of

instruments are really unrecognizable. According to Voyetra, I would have heard much more acceptable sound had I been using their Turtle Beach sound card, but I am skeptical. I use a high-end synthesizer in my studio but the fact of the matter is, synthesized sound just doesn't cut it. It is no substitute for acoustic sound, especially when attempting to demonstrate what individual instruments sound like. Why not have WAV files here, so that people, most of whom don't listen to classical music any more, except as background to TV commercials, can hear how instruments really sound? Without realistic sound, in my opinion, the value of this visually excellent section is pretty much nullified.

In the Music Theory section, I was quite impressed by the instructions geared to people who don't read music. Keyboard animations are synchronized with audio examples so you can really make a connection between what you see and what you hear. Unfortunately, **Discovering Music** crashed when I clicked on one of these examples, ending my theory session early. I'll wager that Windows 95 was to blame.

Once you leave the Music Conservatory module, you leave the world of Classical Music. All the hands-on stuff is in the popular vein. The Jammin' Keys module is a real hoot and probably the one that kids will take to first. You can select a variety of accompaniment styles, instrumental sounds, chords, intros and fills to enhance the session. The onscreen keyboard or your own MIDI keyboard is divided into areas for chord accompaniments, auto riffs (different musical patterns for each key), and improvisation. You can improvise by clicking with the mouse (slow and clunky), or with your own MIDI keyboard. If you don't have a keyboard or just feel too unskilled to improvise, try the auto riffs, which practically play themselves while teaching you something important about

repetition in music. On top of all that, you can drag the mouse across the grid in the center of the display, and simultaneously change keys and riffs midstream. Its great fun. You can even record your jam sessions and save the good ones.

The two remaining modules, Music Write and Recording Station also have much to offer. You can use Music Write even if you don't know how to read music. The notes play as you click them onto the staff, so you can hear if you are on the right pitch. Notes can be dragged up or down, all the while sounding pitches to help you find what you want. You can play back any portion of your score to check it as you go. The program will not allow you to place too many beats in a measure, although I managed to create a written measure that was missing a rest. I finally had to erase it and start over again. You can also play simple tunes on your MIDI keyboard and the music appears a split second later in written form. You can even add lyrics. There are a few drawbacks. When you print your score it will, most likely, be unconventional in appearance but readable. If you have a chord with one wrong note, dragging the note moves the whole chord. A lot of erasing produces bizarre-looking note stems and spacings. However, if you get to the point where you are bothered by these glitches, its time for the next level of music-writing software. As for Recording Station, which, by the way, is the only section for which a MIDI keyboard is required, I am certain I would have had a far easier time learning how to use my own four-track recorder if I had had **Discovering Music** to play around with first.

One final thing: Although the manual was incomplete in its description of procedures, and once or twice misleading, **Discovering Music's** online help was excellent and I came to rely on it. ■

# INFINITE DISK (R.I.P.)

by Steve Weinberg

These days, huge hard disks are available for just pennies per megabyte. So why would anyone want to use software whose only mission is to save disk space?

As with closets, garages and filing cabinets, the amount of space used always expands to approach the amount available. With huge software applications and graphics libraries installed from CD-ROM, it doesn't take long to gobble up hard disk space. I have a penchant for installing such programs, and so my disk space frequently diminishes to the point where I wonder if I will be able to install the next application.

I've thought of adding a second hard drive. But without additional special software, my older Pentium 60 can support hard drives no larger than 1.6GB. Last summer someone had a 1.6GB drive for sale at RPCUG's Swap and Sell meeting. I could really use that drive now.

**Infinite Disk** for Windows 95 (formerly \$41.99 from Cheyenne Software) claims to offer unlimited disk space. It attacks the problem in several ways. It compresses files while they are not active and expands them to their original size when you need them. I tested this on the files of an application that I rarely use. Compressing the files saved several megabytes.

Next, I selected individual files that had not been used recently. Windows 95 keeps track of the last access date for each and every file on the system. Want to see that date? Go to Windows Explorer, highlight any file, right click the mouse and click on properties. There, you will see three dates. *Created* shows when the file was originally written, including the time. *Modified* shows the last time you or some program changed that file. *Accessed* shows only the date when the file was last used. Many of the files found in the Windows and Windows\System directories are called into play each time you turn on your com-

puter. These, of course, will show the current date as the date last accessed.

**Infinite Disk** gave me a nice listing of the files sorted by access date. Some of these files hadn't been used in six months, so why not compress them?

However, there is a significant amount of system overhead imposed by **Infinite Disk's** background operation; this allows it to uncompress any of these files on demand. I was unwilling to further slow down my already slow system. Still, there was an alternative. I could select those same files for migration to what is called "near-line availability." In my case, this meant moving these rarely used files to a tape in my tape drive. This cleared them off the system, making room for new software. They were still available, should I ever need them, albeit very slowly. **Infinite Disk** even saw to it that the tape copy was verified as readable and then made a second tape copy just for insurance. I did find this to be inconvenient and very tedious to perform.

The review package was version 1.0. It performed somewhat unpredictably during installation and had to be reinstalled. My experience with the application was, however, very educational. I learned lots about my system and how many hundreds of files on my hard disk I rarely or never used.

Computer Associates has acquired this package from Cheyenne Software and it has subsequently disappeared from store shelves. Perhaps it will be reincarnated under a new title. My experience with **Infinite Disk** has not been a waste of time and effort. I saved many megabytes of disk space on my C drive by moving little used files to a zip-compressed file that I keep on another disk partition. If some program complains of not finding a file, I can easily restore the necessary file from the zip file. I now have breathing room on my

disk for at least another round or two of software installations. Without **Infinite Disk**, it would have been difficult to identify the files that I could safely move. ■

---

## President *(continued from page 2)*

The first presentation will cover Win98 from the user's perspective. It will begin promptly at 7:20 P.M. and last about 90 minutes. We will then have a short break after which the second presentation—Windows 98: A Technical Presentation—will begin promptly at 9 P.M. Attendees who are not interested in the Technical Presentation may leave quietly before it starts. This second presentation should be a real eye-opener. I am eagerly looking forward to both.

## Meeting Notes

I was very pleasantly surprised at the April presentation given by Jerry Kuntz from the Ramapo Catskill Library System (RCLS). I hadn't expected to hear much of interest since I have never thought of using the Internet for library research and services. Well folks, I was really wrong on this one!

Jerry showed us some of the many powerful research tools that are available on the Internet. And he introduced the library system's premier Web Site—<http://www.rcls.org>. I have stored the RCLS site at the top of my Bookmark list (Favorites, for Internet Explorer users). I have also visited the site numerous times and been able to complete the task at hand with the tools available there. Do not fail to visit and bookmark [www.rcls.org](http://www.rcls.org). Thanks, Jerry for an educational, practical, quality presentation.

See you all on May 12 at 7:30 P.M. at the Rockland Conservatory of Music, 7 Perlman Drive, Spring Valley, NY. ■



# A V.90 PRIMER

by H. Stanley Smith

In February 1998 the International Telecommunications Union (ITU), a formal worldwide telecommunications standards body whose charter organization is the United Nations, officially ratified the V.90 communications standard. V.90 is the communications standard that will affect most PC users. This new worldwide standard will allow asynchronous modems—the kind that are usually used with PCs—to communicate at speeds up to 56,000 bits per second (bps). (A minor issue for anyone in the United States: current FCC regulations limit the maximum speed to 53,000 bps.) Yesterday's standard, V.34, originally allowed speeds up to 28,800 bps and was subsequently modified, in V.34+, to allow an increase to 33,600 bps.

Prior to the approval of the V.90 standard, two rival technologies competed for supremacy in the modem speed races: X2, developed and championed by U.S. Robotics (now 3COM Corporation) and K56flex, developed by Lucent Technologies and Rockwell International. The V.90 standard includes features from each of the competing technologies and creates an even better hybrid. Before V.90, the competing technologies would only deliver their higher-speed benefits when connecting to a modem that also supported the same technology. X2 connected to X2 was good. X2 connected to K56flex was bad. K56flex connecting to K56flex was good. K56flex connecting to X2 was bad. V.90 allows any manufacturer's V.90 modem to connect at the newer high speeds with any other manufacturer's V.90 modem.

Up to the present time, communications between your computer and remote modems have generally been at equal speeds: if your modem connected at 24,000 bps you would both be sending and receiving data at 24,000 bps. The V.90 standard creates a dual speed connection, i.e., one speed when you are receiving data (up to 56 Kbps) and a lower speed when you are sending data (up to 33.6 Kbps). The new technology will be of benefit if you receive more data than you send, as is typical with most connections to the Internet. But if you regularly send more data than you receive, as you might if you normally transfer very large files to a remote computer, the V.90 technology will not increase your overall transfer speed.

Another difference between V.90 and the V.34 standard that preceded it is that the remote modem must be connected to a digital telephone line. Analog lines are used in most residential telephone service. So when you connect your modem to a friend's modem on the other side of town, you will be limited by the previous V.34+ standard.

Yet another change is that your modem must be within a specific distance from the central office equipment that services your telephone line. For most of us Rocklanders, that will not be a

problem. However, rural areas of the U.S. may not provide the requisite conditions necessary for V.90.

Here's how you can tell whether your home telephone line supports V.90 connection speeds. ① Use any dialing program (such as Qmodem, Windows Terminal, or Dial Up Networking) to command your modem to dial 888-877-9248. ② Press the Enter Key when the remote system asks about supporting graphics. ③ When asked for your first name, enter "Line" (without the quotes) and press Enter. ④ When asked for your last name enter "Test" (without the quotes) and press Enter. ⑤ A remote program will automatically test and report on your telephone line's suitability to enable and support V.90 connections.

If you have any U.S. Robotics (USR) modem that is X2 capable, a free firmware upgrade is available to download from 3COM/U.S. Robotics at <http://www.3com.com/56k/usr/upgrade/native.html>. Just follow the instructions of the modem advisor at that location to download and install your V.90 upgrade. (Upgrading my own USR Courier modems only took about four minutes and was very easy to accomplish.)

If you have any non-USR X2-capable modem or any K56flex modem, contact your modem manufacturer for instructions on an upgrade to V.90.

When you upgrade to V.90, you may initially be disappointed as your modem seems to report slower connections speeds than it did under X2 or K56flex. The slower speeds are not real. X2 or K56flex modems did not accurately report their true connection speeds—they reported a connection speed that they thought they might be able to achieve. They rarely, if ever, actually achieved their anticipated connection speed. With V.90, the actual connection speeds are correctly reported and will generally not be any lower than your previous X2 or K56flex connections. And some times they will be even faster than X2 or K56flex!

Once you have completed your V.90 upgrade, be prepared for some new and strange modem connection tones when your modem connects with a V.90 counterpart. I am certain that you will really enjoy the new higher speeds! ■



# IS YOUR PC Y2K READY?

compiled by the Editorial Staff

You'd have to be Rip Van Winkle not to know about the computer bug known as Y2K (Year 2000). Y2K is a programmer's nightmare that some believe will start a global meltdown at the stroke of midnight less than two years from now. Government computers may refuse to spit out Social Security checks, airlines will be grounded because the FAA's ancient computers won't be able to handle the date change, sophisticated military weapons will cease to function, even your VCR may not be programmable. That's in the United States where things are comparatively well-organized. Just think of what's going to happen in Russia and in the third-world countries.

It has long been felt that any government entity or business that hasn't gotten a jump start updating its computers will never complete the task in time. Here in Rockland, our own County legislature has just begun to allocate funds for dealing with the mess. It's probably too late.

Your own computer, too, may be at risk. Discovering if a small business or home computer is ready for the Millennium is no easy task. Anyone who is running Windows 3.x will never be ready: Microsoft has announced that it will not provide software patches to address the Y2K problem.

While software compliance is beyond the scope of this article, there are five fairly simple tests you can perform to find out whether your *hardware* will boldly go where no one has gone before—into the year 2000. Before implementing any of these tests, be sure to do a full system backup just in case any of your applications fail or become corrupted by temporary changes to the system date. Some programs have date-related licenses or reference files: they may not work after you have run this experiment. And remember that in the brief time the date is

changed, you must not open date-sensitive applications like Quicken or Managing Your Money or project management or financial applications; you could find that, when you restore your system to its proper date, any reminders or scheduled transactions will have been wiped out. With those cautions in mind, here's how to test your hardware:

Note: These tests are more easily performed from a DOS prompt since they involve restarting the computer five times. At a DOS prompt, the way to set and check the date is by typing DATE and the time by typing TIME. Except where indicated in Test 3 and Test 5, you can restart the computer from DOS by holding Ctrl-Alt and tapping Delete.

## **Test 1: Can the clock be set beyond the Year 2000?**

- ✓ Set the date to 01-01-2000
- ✓ Check the date to see if it displays the year 2000 correctly
- ✓ If the date is OK, restart the computer and then recheck the date

## **Test 2: Will the PC automatically roll over into the year 2000 while it is on?**

- ✓ Set the time and date to 23:58 and 12-31-99
- ✓ Wait five seconds
- ✓ Check the date
- ✓ If the date is OK, restart the computer and then recheck the date

## **Test 3: Will the PC automatically roll over into the year 2000 while it is off?**

- ✓ Set the time and date to 23:58 and 12-31-99
- ✓ Power off the computer
- ✓ Wait three minutes
- ✓ Power on the computer and check the date

# Y2K

## **Test 4: Will the PC recognize the Year 2000 as a leap year while it is on?**

- ✓ Set the time and date to 23:58 and 02-28-2000
- ✓ Wait five seconds
- ✓ Check to see if the date is 02-29-2000
- ✓ If the date is OK then restart the computer and then recheck the date

## **Test 5: Will the PC recognize the Year 2000 as a leap year while it is off?**

- ✓ Set the time and date to 23:58 and 12-31-99
- ✓ Power off the computer
- ✓ Wait three minutes
- ✓ Power on the computer and check to see if the date is 02-29-2000.

If the PC passes all five tests, your *hardware* is Year 2000 compliant. Yes! ■

---

## **Editor** *(continued from page 3)*

reliability, I learned that each computer was "mirrored," which means that if one of them went down, another stood ready to take over.

I left the ACD offices so reassured that I subsequently hired the company as my own Internet Service Provider. It's been a month now, and there's not been a single glitch logging on, browsing or dealing with my e-mail. I'm also greatly enjoying the fast surfing and downloading. (In this regard, be sure to read Stan Smith's modem article on page 9.) All I can say is, I hope you are enjoying your Internet experience as much as I am now. ■

# MEET OUR ADVERTISERS

## 2 MONTHS FREE TRIAL - UNLIMITED ACCESS



Spiral Net is Rockland's Fastest Internet Service Provider. Using H.S. Robotics x2 technology Spiral Net is able to offer a maximum connecting speed of 56bps. Call (914) 348-7676 for more information about our 2 month trial period with unlimited usage and 5 email boxes.



Offering the best in service repairs and upgrades for individual and corporate accounts. Open 6 days a week. Special \$995 complete multimedia PC. Call or stop by for details.

**PTI**, 58 East Rt. 59, Nanuet, NY (next to Hamilton Learning Center)  
Call (914) 623-4126, fax (914) 623-4143

## OUR CUSTOMERS HAVE THE ADVANTAGE



Advantage Business Products: Full line of computer and office products, accessories, furniture. Mention this ad.

Advantage Business Products, 3 Cross Street, Suffern, NY  
Call (914) 368-3990, fax (914) 368-3967



Custom PC's upgrades repairs hardware accessories. IT's service after the sale that counts.

Call (914) 735-1381, fax (914) 735-1424

Inaccess from the PR Post Office; Email: eagletech@quad.net

EagleTech Computers, 40 S. Main St., Pearl River, NY 10965



## Beauty Secrets,

Pearl River offers a full day of beauty and relaxation for only \$150. Give yourself or loved one a place to feel good.

Call (914) 735-6100 for programs and gift certificates



You will enjoy a visit to *Marta's World* in Piermont located behind the Happy Dog Art Gallery. Marta is a Rocklander whose mission is to bring beauty to one's life through fine things. You will find one of a kind items for home or office. Accessories and Gifts.

Call (914) 398-3093

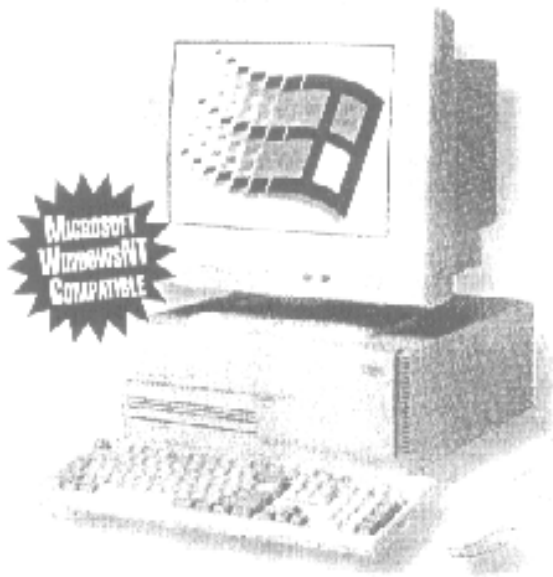
Does anyone know how to use Introworks? Please call (914) 685-4817

**Accountants on Call**

Place your services on this page, Call: (914) 620-9083

## N. ROCKLAND COMPUTER SALES

- New Custom Made Pentium, & Pentium Pro Systems
- Pentium II
- Used Computer Systems, Printers & Monitors Available
- Upgrades & Repairs
- Accessories



RT. 9W, STONY POINT, NY

(914) 429-7237 • 1-800-850-7117 • FAX (914) 429-7288

Open Tues. thru Sat. 10:00am - 6:00pm

www.nrcs.com



## Having Nightmares About Computer Training?

Is your expensive computer just gathering dust?

## HOW DOES THIS SOUND?

One on one friendly instruction.

We help set up, install programs, and get started. Learn Basics: Copy, Format, Install Programs, Etc. Learn Word Processors, Spread Sheets, Graphics.

**\$20 OFF**  
YOUR FIRST  
SESSION  
WITH THIS AD

**P & L PROFESSIONAL SERVICES, LTD. • 914-353-6432**

**WANT TO JOIN THE GROUP? HERE'S HOW!**

Annual membership in the Rockland PC Users Group includes a subscription to ComputerConnection. Bring your completed application and a check payable to RPCUG to a meeting or mail your application and check to RPCUG at 169 South Main Street, Suite 384, New City, NY 10956-3358.

Name ↓ (please print all information)

Address

Day phone:

Evening phone:

Birthdate(s)

I (We) desire:

- Individual membership ..... \$35
- Joint membership ..... \$40
- Family membership ..... \$45
- Student membership ..... \$15
- Corporate sponsorship ..... \$100
- Renewal                      Membership No. \_\_\_\_\_

5-98

**PROFESSIONAL SERVICES**

*TZ-Link*, a Rockland County full Internet Service Provider, offers a 10% discount to RPCUG members. There is a two-week trial period during which service can be cancelled without charge. For information and to obtain the discount phone 623-1720.

Survival Specialties, Inc.                      Stan Smith                      (914) 634-6618  
 9 Chestnut Grove Court, New City, NY 10956-2713  
*We Help You Survive in Today's Electronic World*  
 Hardware - Software - Installation - Servicing - Consulting

Personalized consulting in the areas of applications design, office automation, database development, networking, disaster planning and support services  
 Software Design Technologies; Bob Sieffert (914) 634-2051

SAVE BIG \$\$\$ ON LONG DISTANCE PHONE BILLS  
 Residential/Commercial Toll-Free Numbers & Calling Cards.  
 Low flat rates day or night, 6-second incremental billing.  
 For free analysis/details, Contact Sandy at 914-446-3444

Coulter's Creative Financial Planning (CCFP, Inc.)  
 Offers Comprehensive Financial Planning and Insurance Advice  
 For Individuals, Families and Businesses.  
 Call Thomas Coulter, ACM, for a free, discreet consultation.  
 914-347-8002 or 914-446-3444 or e-mail: coulter@financier.com

Rockland Technology Associates    Rich Caunitz    (914) 623-2347  
 45 Sturbridge Court    Nanuet, New York    10954-1034  
*Complete Web Site Design and Hosting at Reasonable Pricing*  
 Your customers want you to be on the Web! See us at [www.rocktecha.com](http://www.rocktecha.com)

Forwarding and Address Correction Requested

New City, NY 10956-3358  
 Suite 384  
 169 South Main Street

FIRST CLASS MAIL  
 DATED MATERIAL

