Amateur Computer Group of New Jersey NEWS

President's Note
Michael P. Redlich
Remembering Barbara DeGroot

On February 10, 2015, John Raff received a phone call during my Java Users Group meeting and he was informed of the passing of Barbara DeGroot. I was indeed saddened to hear this news. Barbara and her husband, Walter, were very active members and good friends of the club. Barbara served for many

ACGNJ

http://www.acgnj.org

Founded 1975

This newsletter was made by *100% pure* Linux!
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ACGNJ Meetings

For the very latest news on ACGNJ meetings, please visit the ACGNJ Website (*www.acgnj.org*).

> For news from OTHER clubs, please go to:
> *http://www.acgnj.org/joomla/*

Board of Directors Meeting: Wed, Apr 1, **7 PM**
   Mike Redlich (president (at) acgnj.org)

Main Meeting: Friday, April 3, 8:00 PM
   Mike Redlich (president (at) acgnj.org)

Lunics (Linux/UNIX): Monday, April 6, 8 PM
   Andreas Meyer (lunics (at) acgnj.org)

Mobile Devices: Wednesday, April 8, 7:30 PM
   Brenda Bell (mobdevsig (at) acgnj.org)

Investing: Thursday, April 9, 8:00 PM
   Jim Cooper (jim (at) thecoopers.org).

NJ Gamers: Friday, April 10, **6**:00 PM
   Gregg McCarthy (greggmajestic (at) gmail.com)

Computer Workshop: Saturday, Apr 11, **1:00 PM**
   Bob Hawes (cmp.wrkshp (at) acgnj.org).

Java: Tuesday, April 14, 7:30 PM
   Mike Redlich (mike (at) redlich.net)

Window Pains: Friday, April 17, 8:00 PM
   John Raff (john (at) jraff.com)

Web Browser: Monday, April 20, 7:30 PM
   David McRitchie (firefox (at) acgnj.org)

C/C++: Tuesday, April 21, 7:30 PM
   Bruce Arnold (barnold (at) ieee.org)

Main Meeting: Friday, May 1, 8:00 PM
   Mike Redlich (president (at) acgnj.org)

All meetings, unless otherwise noted, are at the Scotch Plains Rescue Squad, 1916 Bartle Ave, Scotch Plains, New Jersey. Directions and map on last page. 🖥

In This Issue

Officers, Directors and Leaders

President	Mike Redlich	(908) 246-0410	Director Emeritus	Sol Libes	(609) 520-9024
Vice President	Wendy Bell		Through 2015	Scot Jenkins	
Treasurer	Malthi Masurekar	(732) 560-1534		Gregg McCarthy	
Secretary	Brenda Bell			John Raff	(973) 533-0664
Past President	Evan Williams	(908) 359-8070		Frank Warren	(908) 756-1681
			Through 2016	Bob Hawes	
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C Languages	Bruce Arnold	(908) 735-7898		Michael Reagan	
Computer Workshop	Bob Hawes			Paul Syers	
Hardware	Mike Reagan				
Investing	Jim Cooper		**Standing Committees**		
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Layman's Forum	Matthew Skoda	(908) 359-8842	Facilities	John Raff	(973) 533-0664
LUNICS	Andreas Meyer		Financial	Evan Williams	(908) 359-8070
Mobile Devices	Brenda Bell		Historian	Lenny Thomas	
NJ Gamers	Gregg McCarthy		Membership	Bob Hawes	
Web Browser	David McRitchie		Newsletter	Bob Hawes	
Window Pains	John Raff	(973) 533-0664	Publicity	Gregg McCarthy	
			Trenton Computer Fest	Mike Redlich	(908) 246-0410
			Vendor Liaison	Arnold Milstein	(908) 753-8036
			Webmaster	John Raff	(973) 533-0664

ACGNJ News

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bob.hawes@acgnj.org

Editor Emeritus
Barbara DeGroot

Submissions: Articles, reviews, cartoons, illustrations. Most common formats are acceptable. Graphics embedded in the document must also be sent as separate files. E-mail submissions to newsletter@acgnj.org preferred. **Always confirm**. Date review and include name of word processor used, your name, address and phone and name, address and phone of manufacturer, if available.

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 (4.5 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 e-mailed to *membership@acgnj.org* or sent to ACGNJ at the address below.

Membership: Regular (now includes *all* family members who reside at the same address): 1 year $25, 2 years $40, 3 years $55. Student: 1 year $20. Senior Citizen (over 65): 1 year $20, 3 years $45. Send name, address and payment to ACGNJ, PO Box 135, Scotch Plains NJ 07076.

Typographic Note: This ACGNJ News was produced using Scribus 1.3.3.13. Font families used are Times New Roman (TT) for body text, Arial (TT) for headlines.

E-Mail Addresses

Here are the e-mail addresses of ACGNJ Officers, Directors and SIG Leaders (and the Newsletter Editor). This list is also at (*http://www.acgnj.org/officers.html*).

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Evan Williams	tech@evanwilliamsconsulting.com

years as the ACGNJ Newsletter Editor until recently when health issues forced her to retire. As-a-matter-of-fact, April 1995 was the first issue of the newsletter that Barbara wrote for the club. I only had the pleasure of meeting Barbara and Walter a handful of times. I visited their house once to deliver a couple of monitors that the club donated to them. It would be difficult for me to pay an appropriate tribute to Barbara, so I asked for some help.

The following are paraphrased memories from John Raff:

We (ACGNJ) first met Barbara and Walter back in the dark ages, i.e., last millennium, when they lived in Bloomfield, NJ. Walter would regale us with his work and friend stories at the after-meeting meeting at either the Echo Queen or Scotchwood Diners.

In time, they moved to Palmerton, PA. They would drive to the club meetings often and partake in our club activities. Between Mike Reagan and Walter, we had a continuing supply of computer parts.

I got friendly with them and spent lots of time on the phone and e-mail. Dianne and I took them to dinner up there in some eatery they suggested. Later, Alan their son, cooked a delicious dinner for me one Sunday on one of my trips to get ACGNJ stuff.

Walter was forever mixing and matching OS and equipment trying to get a working machine for Barbara's newsletters and papers.

For me, personally, I always appreciated the hard work and dedication that Barbara demonstrated as ACGNJ Newsletter Editor. The monthly newsletters were submitted in a timely fashion and filled with great articles outside of our own club news.

I'm sure that I speak for everyone at ACGNJ who knew Barbara that it was an absolute pleasure to know her and that she will be sorely missed.

How I met Barbara DeGroot
Bob Hawes, ACGNJ

About ten years ago (in early April of 2005), I sent my first e-mail to Barbara DeGroot, containing my first submission to this newsletter. It was a 3 ½ page article called *Linux Dual Boot Experiments*. Here, quoted from that article, is its first paragraph:

"Last month, John Raff ran into some difficulty while adding a Linux dual boot option (in this case, Fedora Core 3) to the club computer. Now, I've got years of computer experience, but I'm a Linux newbie, so I wasn't any help. I could only watch from the sidelines as he wrestled with GRUB (the FC3 bootloader). Of course, John finally got the computer to work the way he wanted, but not before he gave me an idea. He had to be very careful not to do any damage to the club's existing XP SP2 system, but I can recklessly and irresponsibly blow out all the hard drives I want, and that's exactly what I decided to do**"**.

After that, it was as if a mental dam had burst. I quickly wrote two more articles: a single-pager called *Paranoid Computing - An Introduction*, and a 3 ½ pager called *A Second Look at Linux*. Furthermore, I'd started work on yet another article, which eventually became a 2 ¾ pager called *Linux Throws Some Curves*. That's when I ran into a scheduling problem.

You see, I'd **just missed** the deadline for the April 2005 issue. So *Linux Dual Boot Experiments* was scheduled to appear in the May issue. Therefore, in the normal course of events, *Paranoid Computing - An Introduction* would go in the June issue; and *A Second Look at Linux* would go in the September issue. (Since we didn't publish July or August issues in those days). Thus, *Linux Throws Some Curves* couldn't possibly appear until October. **Six months** away! (Remember, it was actually still April at that time).

However, the deadline for the May 2005 issue **hadn't** yet passed. Maybe there was enough time left to include that single page article in the May issue. So I sent Barbara another e-mail explaining the situation (and, of course, containing a copy of *Paranoid Computing - An Introduction*); and she was gracious enough to add an extra empty page to her almost-completed newsletter, and then to squeeze *Paranoid Computing* into it. As a result, both *Linux Dual Boot Experiments* **and** *Paranoid Computing - An Introduction* appeared in the May 2005 issue, *A*

Second Look at Linux appeared in the June 2005 issue; and, when it was done, *Linux Throws Some Curves* appeared in the September 2005 issue.

That was my introduction to Barbara. I was definitely favorably impressed. From then on, I e-mailed her a new article every month in which we published a newsletter. I only met Barbara (and Walter, her husband for 54 years) in person a few times. Once, I drove all the way out to their home in Pennsylvania. Once, I met them "half-way", at my Aunt's house in western New Jersey; and once or twice, I met them at a club meeting. However, in addition to those e-mails, we kept in touch a lot by phone. I'll certainly miss her.

ACGNJ Announcements

Main Meeting
Friday, April 3, 2015, 8:00 PM to 10:00 PM.
Scheduled Topic: Cool/Fun/Useful Websites.
Scheduled Speaker: Bob Hawes.

Window Pains Meeting
Friday, April 17, 2015, 8:00 PM to 10:00 PM.
Scheduled Topic: Backups in the Virtual/Cloud Age.
Scheduled Speaker: Scott Jenkins.

ACGNJ Reports

ACGNJ Investment Meeting Summary (Mar. 12, 2015)
Philip Lees, ACGNJ

March's meeting had **8** attendees.

Jim Cooper started with a presentation of "Fibonnaci" levels and how they can be applied to trading. These were discussed on different time frames to find areas of confluence (re: "zones" of support and resistance). Additionally, we tried a "slightly" different usage of this to check if there is any "predictive" potential of the levels, which can be discussed at April's meeting.

Jim then did a brief discussion of the "choppiness index" (google it for more details). I had suggested trying to compare it to his "yellow-brick road" indicator, which is also used for identifying congestion.

We finished with the "Check-my-Ticker" discussion, where attendees can ask for their Ticker(s) to be checked by Jim and the group.

Thanks to everybody who attended. Please attend the meetings, everybody learns from them. We hope to see you at April's meeting, **4/9/2015**.

Also, please send an email to Jim if you would like any trading topic to be discussed, or if you would like to discuss any trading preferences that you have. Others would like to hear your trading ideas, too. Thank you.

Philip Lees

Main Meeting Report
Mike Redlich, ACGNJ

There were a total of 11 attendees at "The Future of Newspaper Reporting", our March 6, 2015 meeting, presented by Mark Kitchin.

Mark, a close friend of Mike Redlich, had 24 years experience working as a Sports Editor for The Daily Record, a local newspaper serving Morris County.

Mark discussed his experiences working at The Daily Record and how the newspaper evolved over the years as technology, especially the Internet, changed the way news is being reported.

Computer Workshop Report
Bob Hawes, ACGNJ

We had 2 attendees at our March 14 meeting. We followed our usual random-access format.

Java Users Group Report
Mike Redlich, ACGNJ

There were a total of six (6) attendees at "Technical Overview of Rust", our March 10, 2015 meeting. It was a working meeting, as we reviewed Rust for the first time as a group. A more refined presentation and review of Rust will be planned for the April meeting.

According to the Rust web site, "Rust is a systems programming language that runs blazingly fast, prevents almost all crashes*, and eliminates data races."

* "In theory. Rust is a work-in-progress and may do anything it likes up to and including eating your laundry." I don't make this stuff up, folks...

Windows Pains Meeting Report

Our Window Pains Meeting on March 20, 2015 was **CANCELED**, due to its proximity to the Trenton Computer Festival.

Still Too Big??? (Part 2)
Bob Hawes, ACGNJ

Due to unexpected circumstances, this article is now as much of a follow-up to *Let's Get Small (*from our March 2015 issue) as it is to *Still Too Big??? (Part 1)* (from our December 2014 issue); but to explain things properly, I should first say that I started *Part 1* by recapping my **ten** part *Why So Big?* series (from 2012 and 2013). However, I'm **only** going to <u>re</u>-recap a little bit of that here. (If you need further information, please refer to *Part 1*). Anyway, in the *Why So Big?* series, I examined our October 2012 through September 2013 newsletters, painstakingly deconstructing each of them by deleting all of their images, one by one. Here, restated somewhat, is one of the conclusions that I drew: Each JPG image added to a work file created by Scribus (my fun, fabulous and **free** desktop publisher) will increase its output PDF by approximately the same amount as the size of that image's source file. At the beginning of *Part 1*, I also said; **"**By the way, the short answer to our title is Yes**"**.

My original plan for **this** series was to add to the data gathered from those twelve issues listed above by examining **fifteen** more issues, from October 2013 to December 2014. I'd planned to process the

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October, November and December 2013 issues in *Part 1*; but after processing just that October issue, I got an incredibly anomalous result that was way, **way, WAY** "Too Big". This "threw me for a loop", and I ended *Part 1* quite abruptly. Ironically, our October 2013 issue only measured 2.9 MB (3,028,583 bytes). So in and of itself, it **wasn't** "Too Big". True, it **does** contain the relatively huge JPG image that completely threw off my calculations; but as a PDF file, it's OK. Because it's **smaller** than our 3 MB size limit.

Actually, it was very fortunate that I hit that anomaly so soon. I could have slogged my way through a lot more issues before I realized that **no** working theory is perfect. Lexicographers include "anomalies" and "outliers" in their dictionaries because such things **DO** exist, and always will. I'll just have to be prepared to run into them occasionally. So I thought things over, and I decided that I've **already** collected enough data. Now, I'll have to try to **use** it. Therefore, the focus of **this** series of articles has just changed tremendously; but first, as usual, more

recap:

I'm going to re-list **all** of the previous newsletters that I would definitely consider to be "too big". First, near the beginning of the initial article in my *Why So Big?* series (in our December 20**12** issue), I described the ten "practice" newsletters that I created for the club **before** I became full-time Editor (in January of 20**12**). According to my target maximum PDF file size of **3 MB** (also established in that initial *Why So Big?* article), *End-of-Year 2008 Supplement* (**4.3 MB**), *July 2010* (**6.2 MB**), and *July 2011* (**3.5 MB**) would be counted as "too big"; but there also has to be a point beyond which errors become "set in stone". I've decided (at least for now) that our Newsletter Collection CDs will be that point. In other words, if it's on one of our CDs, it's accepted, warts and all. Therefore, those practice newsletters have now become **untouchable**. (Cue Eliot Ness).

Because we **didn't** produce a CD after March of 20**12** (until March of 2015, that is, mostly due to my restricted mobility problems**)**, oversize newsletter PDF files from April 2012 upward **can** still be

"fixed". Sorted in descending size order, they are:

April 2014 (5.4 MB) *

May 2014 (5.0 MB)

October 2014 (4.7 MB) **

February 2014 (4.2 MB)

October 2012 (4.1 MB)

August 2012 (3.3 MB)

November 2012 (3.2 MB)

September 2014 (3.2 MB)

July 2013 (3.047 MB, right at "the outer limit")

(Note that the 4 biggest offenders **all** took place in 2014. Maybe a lot of people bought new cameras or phones that year.)

* April 2014 (originally 5.4 MB) has **already** been reduced to 2.8 MB. (See *Let's Get Small* in our March 2015 issue for details).

** October 2014 (currently 4.7 MB) has already been the subject of some earlier size reduction experiments. (Its initial size was **6.1** MB). Unfortunately, due to looming newsletter deadline pressures, I **didn't** record the exact actions that I took at that time. Shame on me.

One last bit of recap. Here, more or less reproduced from *Let's Get Small*, are my size reduction instructions: **"**Launch the GIMP (GNU Image Manipulation Program), then click on the Tools drop-down menu, then click on the Transform Tools sub-menu, and then click on the Scale tool. Inside the window that pops up, there are Width and Height boxes. Just to their right is a graphical indicator that controls whether the Width and Height boxes are ganged together or not. Click on it. Then go to the drop-arrow box that controls unit selection, and change it from "pixels" to "percent".

"Plus, I have to make further adjustments, because I'm decreasing my images in **two** dimensions, not just one. So to reduce an image to about half of its size, I'll reduce it to 71%. (0.71 x 0.71 = 0.504). Likewise, to get a quarter of its size, I'll use 50% (0.5 x 0.5 = 0.25). For about one tenth of its size, I'll use 31% (0.31 x 0.31 = 0.096, close enough to 0.1). For about one twentieth of its size, I'll use 23% (0.23 x 0.23 = 0.053); and for one hundredth of its size, I'll use 10% (0.1 x 0.1 = 0.01)**"**.

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Now, let's tackle that May 2014 issue. There, we need to cut at least **2** MB from its size. Furthermore, we **don't** need to bother with the 24 instances of TINY_PC2.jpg - 15.1 KB (15,068 bytes), the 2 instances of PC-3line.jpg - 39.4 KB (39,444 bytes), or the 1 instance of PC-SeeYa.jpg - 6.4 KB (6,387 bytes). So we only need to look in the "article area" (page1 and pages 3 through 12) for our image files. That leaves us with nine helpless victims. (Oops! I mean "experimental subjects"). So let's look at the nine files in question:

GK1.jpeg - 7.1 KB (7,084 bytes) on page 1.

GK2.jpeg - 16.3 KB (16,299 bytes) on page 3.

LMint1.jpg - 2.6 KB (2,584 bytes) on page 9.

LMint2.jpg - 24.8 KB (24,836 bytes) on page 9.

LMint3.jpg - 20.0 KB (19,979 bytes) on page 9.

Tiny1.jpg - 747.2 KB (747,215 bytes) on page 11. ***

Tiny2.jpg - 45.7 KB (45,659 bytes) on page 11.

Tiny3.jpg - 761.7 KB (761,676 bytes) on page 12. ***

Tiny4.jpg - 127.5 KB (127,519 bytes) on page 12. ***

At first look, **only** the three files marked with three asterisks (***) seem to be big enough to matter. So we'll start with them. Temporarily renaming those

files caused them to "disappear" without actually deleting them, and a new PDF made without them measured 2,036,218 bytes smaller (That's **1.94 MB** less, even though the sizes of those three files only add up to 1.59 MB). Removing the remaining image on page 11 produced a new PDF measuring 2,988,138 bytes smaller (that's **2.85 MB** less).

So even the **smallest** of those four images had contributed significantly to the bloated size of the May 2014 issue's original PDF. Now, I'm going to make a "ballpark" supposition: If I reduced all four of those images to one quarter of their original sizes, they might only increase a new output PDF by one quarter of 2.85 MB, or .72 MB. If those smaller images were still legible, they should produce a replacement PDF measuring about 2.8 MB, safely under out maximum size limit. At this point, it's just a guess. (**Not** really even an educated guess); but it's worth a try.

Unfortunately, although the images were still legible, they only reduced the output PDF size to 3.4 MB. So we **did** cut the PDF size by 1.6 MB, but there was

still .4 MB to go. So my "guesstimate" above was inadequate. Although it was probably "overkill", I decided to reduce all four of those images to one **tenth** of their original sizes, just to see what would happen. Sadly, that only reduced the PDF size to 3.1 MB. In my opinion, we've reached the "point of diminishing returns " with those four files. So we're going to have to look elsewhere.

Like in that issue's page 9. I cut the three images there to half of their original size, and then made another PDF. It came in measuring 2.88 MB (3,019,901 bytes). I rounded it up to 2.9 MB. Now, a reasonable person might have rounded that up to 3 MB; but I'm **not** feeling very reasonable right now. 2.9 MB is **under** our maximum size limit. So I'm calling it a win, and I'm **keeping** it. A further note: The anomalous JPG file in our October 2013 issue that completely threw off my calculations came to us in an article that was originally published in **another** club's newsletter. (We call them "foreign imports"). The seven images whose sizes we reduced above **also** came from two such articles. Maybe it's a trend.

Now, let's see what we can do about our October 2014 newsletter. (At 20 pages, it's extra long). When I made the 17 images for *Haunted Files* (the much larger of my two articles in that issue), I **did** use my experimental image reduction processes on them; but the resultant PDF file only generated eleven "resolution below 144 DPI" error messages. So obviously, I **didn't** go far enough on six of its images. Also, the two "foreign import" articles in that issue contained 3 images each. and **all** of them threw such errors; but 2 of them look like maybe I didn't go far enough there, either. So let's start with them, by temporarily renaming those possibly "too big" images, just to see how much smaller our output PDF gets without them.

Unfortunately, they only reduced that PDF by 304 KB, or 0.3 MB. (Remember, we'd actually realize only about **half** of that reduction after we re-added "shrunken" versions of those files). So we'll keep these images in mind for later, but they are definitely **not** the "biggies" that we're looking for. This means that we'll have to do things the hard way, by

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removing **all** of the images, one page at a time. Page 1 contained 4 images. Removing them gave us a decrease of 127 KB, or 0.12 MB. Chump change. So those weren't the biggies, either.

There were no images on pages 2, 3 or 4, and only 2 images remaining on page 5. Removing them gave us a decrease of 72 KB. Hardly worth talking about. There was only one image remaining on page 6. Removing it gave me a decrease of 47 KB. Negligible. Page 7 contained 1 image. Removing it gave me a decrease of 73 KB. Also hardly worth talking about. Page 8 contained 2 images. Removing them gave me a decrease of 427 KB. Still on the small side, but maybe we've finally found something worth looking into.

Page 9 also contained 2 images. Removing them gave me a decrease of 351 KB. Page 10 contained 4 images. Removing them gave me a decrease of 359 KB. Page 11 had 2 remaining images. Removing them gave me a decrease of 181 KB. Page 12 contained 1 image. Removing it gave me a decrease of 63 KB. Page 13 contained 1 image, too.

Removing it gave me a decrease of 120 KB. Page 14 had 2 remaining images. Removing them gave me a decrease of 214 KB. Page 15 had **no** remaining images. Page 16 contained 2 images. Removing them gave me a decrease of 64 KB.

I'm getting a bad feeling about this. Could it be that I've set myself a goal that is, in fact, physically **impossible**? However, there are still four more pages to investigate. They are all "boilerplate" (special reusable pages whose contents hardly ever change). Because this article is now almost 2,000 words long, I really can't take the space here to say anything more; but I recently wrote about "boilerplate" pages extensively, starting at the seventh paragraph in *Good News, Bad News* (my article in our February 2015 issue). So please look there if you have any questions. All that I need to tell you here is that they contain three more images that I've never tried to shrink before.

Page 18 contained our Newsletter Collection CD advertisement. Removing its image gave me a decrease of 254 KB. Page 19 contained our ACGNJ

T-Shirt advertisement. Removing its first image gave me a decrease of 169 KB. Removing its second image gave me a decrease of 96 KB. The resultant PDF from that last operation measured 1.8 MB. Subtracting that from the 4.7 MB starting size yields 2.9 MB. We'd need to reduce that difference to 1.2 MB (or probably *smaller*) in order to come out below our maximum PDF size of 3 MB. To accomplish that, we'd have to reduce *every single one* of the images from page 1 to page 16 (plus those last three images from the "boilerplate" pages) to *more* than half size. Surely a Herculean task. (If I hear anybody saying "Don't call me Shirley", I'll scream).

And *that's it!* We're trapped! There's absolutely *nowhere* else for us to go. Would somebody please hold me? (Whimper). Now, in the grand (and extremely cruel) tradition of movie, radio and television serials from years gone by, I'll say (in my best approximation of a professional announcer's voice): *Come back next time and find out!!!* (Cue a series of loud thunderclaps in the background, and lay in a long sinister laugh on top).

Appendix I: Leftovers

In mid-October 2014, I began writing *Let's Get Small*; but by the time I finished it, I was working on our March 20<u>15</u> newsletter. As you may know, that's our TCF (Trenton Computer Festival) issue, which we usually print out in real ink, on real live paper, for use as handouts at TCF. This required that I cut down on my loquaciousness, because this is the *one* issue each year where I *can't* run off at the mouth as much as I want.

Gritting my teeth, I cut it to about 1,300 words. (Bigger than I'd want, but *not* "Too Big"). However, I really hate it when I go to the trouble of typing something into the computer, and then *don't* use it. So I'm sticking the following paragraphs on the end of *this* article. Originally, they followed the sixth paragraph in *Let's Get Small*, which described how, working with Scribus 1.3.3.13, and using GIF, PNG and TIFF copies of three high resolution JPG photos from the April 2014 newsletter, I created three new temporary PDF files. (Plus a fourth, using the un-

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cropped original versions of those JPG photos). I got results of 8.5 MB (8,899,040 bytes), 7.3 MB (7,641,052 bytes), 7.1 MB (7,488,396 bytes) and **13.5 MB** (14,127,535 bytes). My reaction was:

"That last result didn't surprise me too much. (After all, its three source images were each also *a lot* bigger). But those *other* three results *did*. Those larger PDFs directly contradicted my previous experiences, which predicted that there *wouldn't* be any significant difference in PDF size for Scribus 1.3.3.13. However, none of my earlier experiments had used files this big. So I guess I'd made that conclusion based on an insufficient sample. Fortunately, my major conclusion still stands. The equivalent JPG versions had still produced the *smallest* output PDF. (It's good, though, that we'll be doing more experiments with significantly larger samples like these).

"Now, on to Scribus 1.4.0. There, the same three JPG files that were used in the "official" version of our April 2014 newsletter yielded a PDF measuring 5.4 MB (5,669,188 bytes). This is actually 31.7 **KB**

(32,462 bytes) *smaller* than that "official" issue made by 1.3.3.13. (Nice). The GIF files yielded a PDF measuring 8.6 MB (9,007,247 bytes), (This is actually 105.7 KB (108,207 bytes) *bigger* than 1.3.3.13 did above). The PNG files yielded a PDF measuring 7.3 MB (7,609,206 bytes). (This is actually 31.1 KB (31,846 bytes) *smaller* than 1.3.3.13 did above). The TIFF files yielded a PDF measuring 7.1 MB (7,432,732 bytes). (This is actually 54.3 KB (55,664 bytes) *smaller* than 1.3.3.13 did above). As before, the original, unedited JPG files yielded the biggest result: 13.4 MB (14,095,692 bytes). This, too, is actually 31.1 **KB** (31,843 bytes) *smaller* than the 1.3.3.13 results. (Not completely consistent; but, as we used to say in the Air Force: close enough for government work).

"So much for drama. It seems that we've invalidated one of my minor conclusions; but on the other hand, we've *reinforced* my major conclusion. For both 1.3.3.13 *and* 1.4.0, it seems that JPG files are the <u>**ONLY**</u> way to go. (I *was* surprised, though, when the GIF files produced even larger outputs than the PNG

or TIFF files. I hadn't expected that)**"**.

As you can see, I *did* make some fairly significant discoveries, so it's *good* that I didn't just throw those paragraphs away. Anyway: See you next month. ⌨

Storage Media, Interfaces, and Backups
(A Meeting Recap)
Anne Moss, Secretary, Northern Neck Computer Users' Group, NJ
Newsletter: The Computer Link (www.nncug.net) mcmillan (at) va.metrocast.net

Rob Mink, President of NNCUG, was the speaker at a recent NNCUG Meeting. Rob's discussion about storage media and interfaces was designed to pick up from Brian Riley's discussion about the use of external hard drives for computer backup. Throughout his talk, Rob passed around examples of different storage media.

There are two basic types of storage media – Magnetic and Solid State. However, optical storage may still provide a method of relatively long term data storage.

Magnetic Storage: First, Rob noted that physical media, for example punch cards, is extinct for computing. The most common form of magnetic storage is found in hard drives. Soft drives (such as tapes and floppy disks) are obsolete. Currently the maximum capacity of hard drives is 4 terabytes (TB). The 4 TB limits of hard drives dictate the use of a desktop computer. A hard drive in a desktop computer can have 4 or 5 platters to store data on each surface area. Additional storage usually can be installed in a desktop computer or attached to it. A desktop will use a 3.5 inch drive and a laptop will use a 2.5 inch one. A laptop hard drive uses a lower number of data storage platters with a maximum a capacity of about 1.5 TB. Laptop capacity can be expanded by the use of a USB flash drive which functions as an external drive. In addition, an

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external hard drive may be attached to a laptop via a USB port. Magnetic storage devices can fail quickly or gradually. They sometimes give warning of forthcoming failure.

Solid State Storage: These storage devices commonly can be Solid State Drives (SSD), USB Thumb drives or "sticks", and flash memory cards. Basically, these devices are made of transistors and capacitors in the desired format and size. Data life can be from 8 years to over100 years, depending upon the temperature in which they are used and stored. The greater the capacity, the higher the price! However, over time, the prices for a given size device usually drop. The drawback for these solid state devices is that they can suffer sudden and catastrophically failure.

Solid State Technology: This comes in single layer or multilayer forms. It is made from Floating gate MOSFET NAND FlipFlops. Floating gates keep data for a very long time - 80 years was mentioned. Even though the technology is quite difficult for the average user to understand, one sees the products everywhere – for example, tablets and memory cards. Rob was asked why sudden failures occur. Reasons can be a bad interface with a chip or sudden drops can kill a device. The technology still is immature, so it is not good at recognizing failure. He does not trust flash drive backups considering the risk of sudden failure. (In response to a question about photograph storage, Rob indicated that, in actual practice, photos by the average home user could be stored on magnetic media. Alternatively, while photos can be stored on flash drives, Rob counseled that it is probably safest to burn a CD.)

Optical Storage Technology: This includes CDs (read only and read-write), DVDs (in various types such as read only, read-write, dual layer that are burned on each side), and Blu-ray disks (in similar types). Optical storage media can be normal or archival in nature, depending upon the dye material used. Best is gold or silver dyes found in the more expensive disks. Normal grade disks are other colors such as green or blue. (Rob noted that it is best to stay away from DVDs with a purple colored dye.)

Expect a burned disk to last from 2 to 25 years. For critical data, Rob advised that it is wise to burn pairs of disks. Then if it is needed, recovery can be made by combining data from both disks. It is unlikely that both disks would fail in the exact same place. Optical media is cheap and comes in capacities of 650megabytes to 125 Gigabytes. Data can be burned in a single write session or multi-write sessions depending on the media used. The former is locked after the initial write session, and the latter can be written to or erased many times. The latter method is less reliable, and somewhat less readable by devices other than the one that was used to create the original disk.

Interfaces: Rob described a wide range of interface types. Internal interfaces in computers include SATA, IDE, and SCSI/SAS types. Some need a connector to the power supply to function. External interfaces include Serial Peripheral Interface (SPI), SATA, USB, and Firewire.

Backups: There are two major strategies for data backups. First, backups can be kept offsite using cloud storage firms such as Carbonite or Spider Oak. Costs vary, but one should estimate about $1.00 per gigabyte per year. Relatively limited cloud storage may be available for free. Second, one can use onsite storage. There are a few different types of onsite storage. Onsite magnetic storage includes using RAID and NAS hard drive configurations. (Different RAID type numbers indicate different configurations of hard drive storage.) Onsite optical storage, such as CDs or DVDs is a good means of back up storage, but is labor intensive for burning the data to disks. (Burn disks in pairs and not automatically.) Tape backups have changed and now are smaller than cassettes. However, tape backups are slow, and there are may be a number of failures. Rob indicated that the best approach is to have backups on two optical disks and another type of storage such as hard drives. Some computers have a removable hard drive bay and one can use several hard drives to have a rotating backup plan. This approach is useful for whole hard drive backups.

To sum up, Rob presented an extensive list of the available choices when choosing to back up data, as well as highlighting the changes in standards that has occurred over a relatively short time in computer technology.

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(Here, slightly late, is a New Year's article from January).
Predictions, Perceptions and Protestations
Greg Skalka, President, Under the Computer Hood User Group, CA
Newsletter: Drive Light (www.uchug.org) president (at) uchug.org

We have completed another revolution around the sun from an arbitrary starting point, and so begins a new year. Growing up in the 1960s and 1970s, the year 2015 seemed like a far-off and futuristic time. I imagined back then that in 2015 people would live in space (true for the ISS astronauts) and other planets (not true for humans, but at least we can drive our RC cars on Mars). Power would be clean (at least we are improving), abundant (true) and cheap (at least gas prices are way down right now). It seemed when I was young that nuclear power would be the solution to our future energy problems, but it unfortunately had problems of its own. I had imagined that by now we would be living a wonderful, Jetsons-like life with no strife and endless possibilities. Oh well; at least we've got smart phones and selfies.

Now 15 years into the new millennium, we don't seem as technologically advanced as I'd hoped we'd be. We do have all-electric cars, but we can't, due to speed limits and traffic, get to our destinations any faster. Air travel is safer (so long as you stay off Malaysia Airlines), more reliable and less expensive (relative to typical wages), but you can't fly any faster. In fact, commercial air travel in the previous millennium was faster due to the Concorde. A lot of people do have robots at home, but they are mostly like the timid floor-cleaning Roomba my mother has, not C-3PO, R2-D2 or the robot in "Lost in Space". Our medical technology has improved greatly, with CT scans, MRI and DNA sequencing, but we still get colds and the flu. We don't yet have a

"tricorder" handheld medical scanner like in Star Trek, but with the Qualcomm Tricorder X Prize as incentive, we might not be waiting too much longer. We don't have Star Trek phasors, but the U.S. Navy is preparing to field ship-based laser weapons. We don't have Star Trek holodecks, but we do have Oculus VR headsets and some basic telepresence devices. We don't have Star Trek replicators, but we do have 3D printers.

We don't yet have my favorite Star Trek technology, transporters, but we do have their communicators, in the form of cell phones. Our smart phones are actually more capable than any handheld device Captain Kirk had. The Internet and our computers provide an informational resource that was unimaginable when I was a child. The same information that Warren Buffet or Al Gore can get off the Internet is also available to a relatively poor call center worker in Bangalore and to a political dissident in China. Unfortunately, while we have so far managed to avoid nuclear war, we are presently fighting on the cyber battlefield with North Korea

and other foreign governments, as well as criminals.

Where will technology take us in 2015? I didn't make any predictions last year in my column, so I have no crystal ball errors to answer for now. I might as well make a few technology predictions for 2015.

1) Computer sales will be up in 2015, while tablet sales will be flat or down compared to 2014. I'm still using Windows XP at work, so there are probably a lot of companies out there like mine that will be looking to upgrade and possibly buy new computers when Windows 10 is released mid-year. On the flip side, I think almost everyone that wants a tablet has one now, and upgrades are not that compelling.

2) The paperless society is still a long way off. While we are doing a lot to reduce the amount of printed material we use, it won't be going away in 2015. While I see more coupons, offers and deals being redeemed on smart phone screens by shoppers, I still have to buy new printer ink cartridges a couple of times a year. I've been offered email receipts from some hotels and other merchants, but some merchants are going the

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opposite direction with their receipts. I recently received an Albertsons grocery receipt for a single item that was 11 inches long (5.5 inches of useful receipt and the rest useless advertising and customer survey solicitations). A recent CVS receipt for one item was 26 inches long (5 inches of receipt and 21 inches of coupons). It seemed like a lot of wasted paper.

3) Streaming video will be up but views on small screens will be down. People still don't want to watch movies on tiny screens. Fortunately devices like Google's Chromecast and Amazon's Fire TV enable streaming if your TV can't. Watching video on a smart phone or tablet might be good if you fly, ride in a car (not drive) or take public transit a lot, but I'd rather watch at home on a big screen if possible.

I'm dreaming of an iChristmas

My wife traded in her Nokia Windows phone for an iPhone in 2014. It is difficult to understand her relationship with the iPhone. It seems to always be in her hand, except when she is asking me if I know

where she left it. She reads a lot of her emails on it and is on Facebook a lot. I'll admit it is handy to be able to get instant information from the Internet wherever you are (especially since all I have is a dumb phone). This Christmas all she asked for were i-things for her iPhone. I got her several, though none were actual Apple items.

While we were on vacation a few months ago, my wife was constantly concerned about her phones charge level. My poor dumb phone can go for days on a single charge, but her iPhone needed to be charged at least every day. One gift I picked out for her was a Patriot Fuel+ 1500 mAh mobile rechargeable battery (*www.patriotmemory.com*). It works like other portable batteries, but this one has a Lightning connector for easier connection and mobile use (and higher price due to the Apple-licensed connector).

My wife used to charge her Windows phone in the kitchen, but she now charges her iPhone in our bathroom where she can be closer to it at night. This puts her phone in my way in the morning when I'm

getting ready for work. Her Christmas list included an iHome Docking clock radio (*www.ihomeaudio.com*), which solved that problem. It replaced her bedside clock radio and provides a Lightning connector for charging her iPhone and playing music through the clock's speakers.

We have a radio mounted under one of our kitchen cabinets, but it is kind of old. My wife wanted a new one that could also play music from her iPhone. I got her the iLive Bluetooth Under Cabinet Music System (*www.iliveelectronics.com*) to replace our old kitchen radio. It mounts under cabinets and can stream from most Bluetooth-capable devices.

The item she was most excited about was a selfie stick. I bought her a Noot Extendable Self-Portrait Handheld Stick Monopod from Amazon. It is an extendable pole with a phone mount. It comes with a Bluetooth remote that can be paired with your phone to actuate the camera shutter.

What Do I Want in 2015?

I'm not much for making New Year's resolutions, though there are a few things I'd like to accomplish

or improve on in 2015 related to technology. I tend to buy a lot of tech items and accessories to experiment with. These are mostly inexpensive items like adapters or cables, but sometimes they are more significant. I have a new Windows 7 desktop PC that I bought a while ago but have yet to set up to use. I bought it to replace my XP desktop computer, but for a number of reasons have not found the time to make the trade. I'd like to get my new PC running in 2015 and shut down my last XP desktop computer for good.

With my desktop PC so old, I primarily use my Windows 7 laptop. I'd like to improve the laptop's performance by putting in a larger hard drive and more RAM. I'd like to do the same for my wife's laptop.

I have a box full of VHS video tapes that I'd like to digitize. These are home videos of my kids growing up. I have a device for converting them - I just need to set it up again and do it. I also have boxes of photographic slides that I need to scan to JPEG files. Once again, I've got the scanner and have a process,

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but just need the time to finish the job.

I would like to get more use out of my iPad in 2015. I won an iPad Mini over a year ago in a drawing but don't use it that much. I use it as a web browsing device but not much more. I actually find it is not that easy to understand and use; this is probably because I have used Windows computers for so long. I even bought myself an "iPad for Dummies"-type

book but have not had time to sit down with it.

Hopefully I can get a lot done in 2015. Right now the New Year holds a lot of promise and potential. Of course I once felt that way about 2014.

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Mac Tips

Ernie Cox, Jr., Member, Computer Club of Green Valley, AZ
Newsletter: Green Bytes (www.ccgvaz.org) ecoxjr (at) cox.net

50+ Tips & Tricks for the iPhone 6 & iPhone 6 Plus!
https://www.youtube.com/watch?v=Tlh-DudoPfI

iPhone 6 – Complete Beginners Guide
https://www.youtube.com/watch?v=KSgOm6hW2Zw

How to manage your iCloud security and Apple Pay settings from the Web
http://appleinsider.com/articles/14/11/29/how-to-manage-your-icloud-security-and-apple-pay-settings-from-the-web

How to Format Text & Insert Pictures Into Notes in iOS
http://osxdaily.com/2014/11/20/format-text-insert-images-notes-ios/

Create, Find, & Modify Notes with Siri in iOS
http://osxdaily.com/2013/03/11/create-find-modify-notes-with-siri-in-ios/

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SIG News

LUNICS (Linux/Unix)
Andreas Meyer (lunics (at) 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 as well. Recent meetings have followed a Random Access format. See our web page for further information. (We meet on the first Monday of each month, at 8:00 PM). ⌨

Main Meeting
Mike Redlich (president (at) acgnj.org)
http://www.acgnj.org/groups/mainmeet.html

We meet on the first Friday of the month, at 8:00 PM. Each December, this meeting includes our Annual Business Meeting and Officer Elections. *No* meetings in July or August. ⌨

Layman's Forum
Matt Skoda (som359 (at) gmail.com)
http://www.acgnj.org/groups/laymans.html

This SIG discusses issues of interest to novice users or those planning to get started in computing. Watch our Web page for updates and announcements. We meet at the same time as the Hardware Workshop. (On the second Monday of the month, at 8:00 PM). *No* meetings in July and August. ⌨

Hardware Workshop
Mike Reagan (hardware (at) acgnj.org)

This group is dedicated to repairing, refurbishing and/or recycling older computers. Ten people attended the first meeting, so there is still a market for this type of event. Although we looked at some of the older equipment stored in he back room, most of our time was spent in talking about ast experiences and planning for the future. Hopefully, we can establish a viable long-term schedule of projects, and keep the interest of those who attended this inaugural meeting. If you have a hardware problem, bring it in and we can all help fix or demolish it. (No guarantees either way.) We meet at the same time as the Layman's Forum. (On the second Monday of each month, at 8:00 PM). ⌨

Java
Mike Redlich (mike (at) redlich.net)
http://www.redlich.net/javasig/javasig.html

This SIG covers beginner, intermediate, and advanced level Java programming. Primary focus is on developing useful/practical applets and applications. (We meet on the second Tuesday of each month, at 7:30 PM). ⌨

Mobile Devices
Brenda Bell (mobdevsig (at) acgnj.org)

The Mobile Devices SIG focuses largely on current-generation cellphones and smart phones (such as Blackberry, Android, iPhone) which bridge the gap between basic cell phones and traditional computers, and how they can help you manage and organize your life. Our membership ranges from those who have recently acquired their first, basic cellphone to those who develop applications for today's modern smart phones, iPods, and ultra-portable computers. While we expect to spend much of our time investigating the built-in features and specialized applications available to modern smart phones, if you bring your basic (or multimedia) cell phone, iPod, or other mobile device with questions on how to use it, where to find applications, or what features they have, we are always happy to help! Meet and greet and plan where this event goes. Bring all your ideas, PDAs, fancy phones, etc. (We meet on the second Wednesday of alternate months (we get the even ones), at 7:30PM). ⌨

Computer Workshop
Bob Hawes (bob.hawes (at) acgnj.org)

ACGNJ has not held a daytime meeting in quite a while, so we've decided to try again. Our inspiration: The Philadelphia Area Computer Society holds only *one* meeting a month, but it's a biggie. On the third Saturday, from 8:00 AM to 3:00 PM, they hold *seventeen* different meetings, four at a time in four different rooms. Apparently, there *is* an audience for Saturday daytime meetings. We're starting smaller, though. Just one room (our usual) from **1:00 PM** to **4:00 PM**. We're calling it Computer Workshop, after the meetings that Burke Mawby held in Aberdeen,

NJ from 1989 to 2007. Our format (to start, anyway) will be random access. We meet on the Saturday immediately following the second Friday of the month. Most times, this is the second Saturday, but it **can** occasionally be the third Saturday. Please check the schedule on Page 1 to be sure. ▯

Investment Software
Jim Cooper (jim (at) thecoopers.org)
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!! (We meet on the second Thursday of the month, at 8 PM).▯

NJ Gamers
Gregg McCarthy (greggmajestic (at) gmail.com)
http://www.NJGamers.com
www.lanparty.com

The Friday Night Frag starts at 6:00 PM on the second Friday of each month, and keeps going until 12 Noon on Saturday - 18 hours for 5 bucks!
BYOC - Bring your own computer.
BYOF - Bring your own food.
And if you don't like sitting on metal folding chairs... BYO chair! ▯

Web Browser (Formerly **Firefox**)
David McRitchie (firefox (at) acgnj.org).

This SIG is an open forum for all Firefox and Mozilla techniques and technologies, to encourage study and development of web sites of all kinds. All browsers will be considered and examined. All members and guests are invited to check out the design concepts and voice their opinion. (We meet on the third Monday of each month, at 7:30 PM). ▯

C/C++ Programming
Bruce Arnold (barnold (at) ieee.org)
http://acgnj.barnold.us/index.html

This is a forum for discussion of programming in general, beginning and intermediate level C, C++, C-Win programming, hardware, algorithms, and operating systems. We demonstrate real programming in a non-intimidating way, presenting complete code for working programs in 3-5 sheets of paper. (We meet on the third Tuesday of each month, at 7:30 PM). *No* meetings in July or August. ▯

Window Pains
John Raff (jraff (at) comcast.net)
http://www.acgnj.org/groups/winpains.html

Intended to provide members with Windows oriented discussions, Microsoft and Linux style. Directed to more technological level of attendee, but newbies are welcomed. (We meet on the third Friday of the month at 8:00 PM). *No* meetings in July or August. ▯

40th Anniversary Newsletter CD Now On Sale
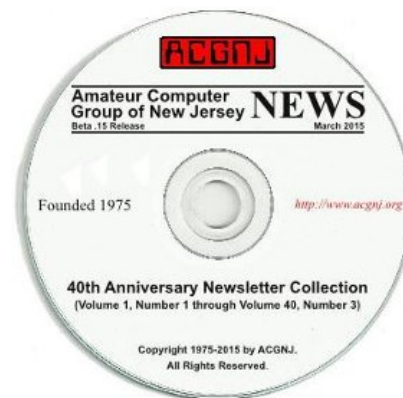
Beta .15 Release.

$8.00, including postage.

($7.00 if you pick up a copy at a meeting).

Get yours today!

Back Issues *Still* Needed

Our collection remains incomplete. Below is a list of missing newsletters. Anyone who lends us one of these (or supplies a good clear copy) will receive the next CD as our thanks.

1975: #2 and #3 (dates uncertain).
1976: January.
1984: August.
1985: June, July, August, September. ▯

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

Operating Systems

Windows 3.1	Ted Martin	732-636-1942

ACGNJ MEMBERSHIP APPLICATION

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

Dues

	US/CANADA	STUDENT	SENIOR CITIZEN (Over 65)
1 Year	$25	$20	$20
2 Years	$40		
3 Years	$55		$45

Mail this application and your check to:
AMATEUR COMPUTER GROUP OF NEW JERSEY, INC., P.0. 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

Princeton Macintosh User Group: 7:15 pm 2nd Tuesday, Jadwin Hall, A-10, Washington Rd, Princeton, (609) 252-1163, *www.pmug-nj.org*	**Linux Users Group in Princeton:** 7 pm, 2nd Wednesday, Lawrence Branch Mercer Library, Rt#1 & Darrah Lane, Lawrence NJ *http://www.lugip.org*	**New York PC:** 3rd Thurs, 7 pm, PS 41, 116 W 11th St. For info call hotline, (212) 533-NYPC, *http://www.nypc.org*
Computer Education Society of Philadelphia: Meetings & Workshops at Jem Electronics, 6622 Castor Ave, Philadelphia PA. *www.cesop.org/*	**Brookdale Computer Users Group:** 7 pm,3rd Friday, Brookdale Community College, Bldg MAS Rm 100, Lincroft NJ. (732)-739-9633. *www.bcug.com*	**NJ Macintosh User Group:** 8 pm, 3rd Tuesday, Allwood Branch Library, Lyall Rd, Clifton NJ. (201) 893-5274 *http://www.njmug.org*
PC User Group of So. Jersey: 2nd Mon., 7 pm, Trinity Presb. Church, 499 Rt 70 E, Cherry Hill, NJ. L. Horn, (856) 983-5360	**Hunterdon Computer Club:** 8:30 am, 3rd Sat, Hunterdon Medical Center, Rt 31, Flemington NJ, *www.hunterdoncomputerclub.org, (908)* 995-4042.	**NY Amateur Computer Group:** 2nd Thurs, 7 pm, Rm 806 Silver Bldg, NYU, 32 Waverly Pl, NYC. *http://www.nyacc.org*
Morris Micro Computer Club: 7 pm 2nd Thurs, Morris County Library, Hanover Ave, Morristown NJ, (973) 267-0871. *http://www.morrismicro.com*	**Central Jersey Computer Club:** 8 pm, 4th Friday, Rm 74, Armstrong Hall, College of NJ. Rich Williams, (609) 466-0909.	**NJ PC User Group:** 2nd Thurs, Monroe Rm at Wyckoff Public Library, 7 pm. Maureen Shannon, (201) 853-7432, *www.njpcug.org*
Philadelphia Area Computer Society: 3rd Sat, 12 noon Main Meeting, groups 8 am-3 pm. Upper Moreland Middle School, Hatboro PA. (215) 764-6338. *www.pacsnet.org*	**NJ Computer Club:** 6:15 pm, 2nd Wednesday except Jul & Aug, North Branch Reformed Church, 203 Rt 28, Bridgewater NJ. *http://www.njcc.org*	**Princeton PC Users Group:** 2nd Monday, Lawrenceville Library, Alt Rt 1 & Darrah Lane, Lawrenceville, Paul Kurivchack (908) 218-0778, *http://www.ppcug-nj.org*

Classified

apcug Member of
The Association of
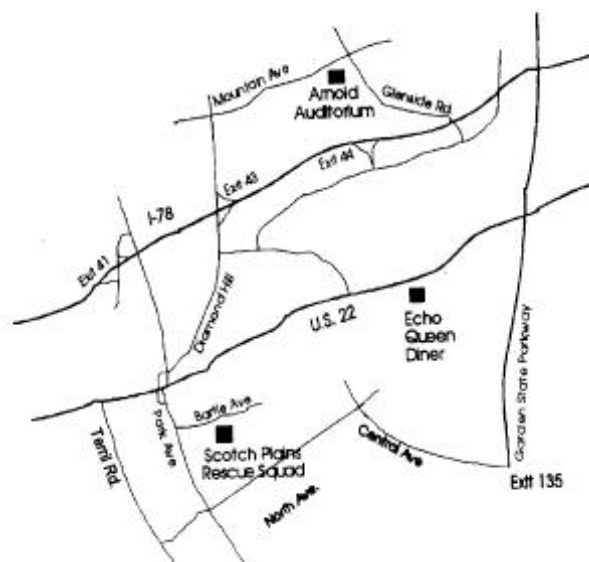Personal Computer User Groups

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

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 to 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.