ACGNJ Announcements

ACGNJ HAS AUGUST ACTIVITIES!

As you can see in the schedule on the right, some of our Special Interest Groups hold meetings in August. Have you been curious about one or more of those groups, but just haven't found the time to “drop in”? When you're not “riding the wild surf” or “catching some rays”, maybe you might consider attending a few. Have a great summer, full of fun, adventure and relaxation; and computer stuff too!

REMEMBER THESE DATES:

July 16, 2014 was the twenty-first anniversary of Slackware Linux, first released in 1993 by Patrick Volkerding. Slackware is the oldest surviving Linux distribution. (There are many Linux variants derived from Slackware).

August 16, 2014 is the twenty-first anniversary of Debian GNU/Linux, first released in 1993 by Ian Murdoch. Debian is the second oldest surviving Linux distribution. (Ubuntu is based on Debian, as are many other “flavors” of Linux).

September 27, 2014 will be the THIRTY-FIRST anniversary of GNU (GNU's Not Unix), first announced in 1983 by Richard Stallman. This is the true date of origin for the operating system that we now call Linux. (In its name, Debian GNU/Linux acknowledges its GNU “roots”. Slackware Linux, like most others, does not).

This newsletter was made by 100% pure Linux!
Operating System: Ubuntu 12.04 LTS
Desktop Publisher: Scribus 1.3.3.13
Word Processor: LibreOffice Writer 3.3.4

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/

Lunics (Linux/UNIX): Monday, August 4, 8:00 PM
Andreas Meyer (lunics (at) acgnj.org)

NJ Gamers: Friday, August 8, 6:00 PM
Gregg McCarthy (greggmajestic (at) gmail.com)

Java: (No meeting in August)
Mike Redlich (mike (at) redlich.net)

Mobile Devices: Wednesday, August 13, 7:30 PM
Brenda Bell (mobdevisg (at) acgnj.org)

Investing: Thursday, August 14, 8:00 PM
Jim Cooper (jim (at) thecoopers.org)

Web Browser: (No meeting in August)
David McRitchie (firefox (at) acgnj.org)

LABOR DAY: Monday, September 1

Board of Directors Meeting: Tues, Sept. 2, 7 PM
Mike Redlich (president (at) acgnj.org)

The following do not hold meetings in the summer:

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.

http://www.acgnj.org
Founded 1975

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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?

ACGNJ News
Introduction
I hope all of you are enjoying the Summer of 2014. So far, I had a wonderful week with my son, Michael, Jr., in the Berkshires and, by the time you read this, I’ll be spending 10 nights in my favorite city, New Orleans!

This month’s President’s Note will focus on two topics to summarize the two significant ACGNJ events in June:

• The Start of the 40th Year of ACGNJ
• Planning Meeting Summary

Start of the 40th Year of ACGNJ
As you already know, ACGNJ kicked off the start of its 40th year of operation. We were honored to have Sol Libes, the club’s founder and first President, to present at the Main Meeting on June 6, 2014. As you may have already read in the SIG Reports, Sol presented a very enlightening presentation on the history of computing, how ACGNJ was formed, and some highlights of the club’s early years. I was indeed pleased to see what great attendance we had at this special event. There were a total of 20 attendees! As we move towards our official 40th Anniversary in 2015 (along with the 40th TCF), the ACGNJ Board of Directors will be making plans to commemorate these events!

Planning Meeting Summary
As you are well aware, the ACGNJ Board of Directors decided to hold the Annual Planning meeting before the summer as opposed to near the end of the summer in an effort to attract more members. My first reaction was disappointing with regards to attendance (8), but I was ultimately very satisfied how the eight of us accomplished a very difficult task that night on Friday, June 20.

Here’s a preview of the September Main and Window Pains meetings:

Main Meeting
• Friday, September 5

and it has already been confirmed that our Window Pains meeting on October 17 will be held at The Microsoft Store for a presentation on the Windows Phone.

For a complete list of all the topics that have been scheduled, please visit: http://www.acgnj.org/pm/planning-2014-6.html.

Enjoy the remainder of your Summer and I’ll see you in September! ☀

Investment Meeting SUMMARY (Jul 10th, 2014)

Philip Lees, ACGNJ

The market continues to go perpetually higher, a contributing factor being all of the FREE money from the FED. We should all get in line for some of that, too! LOL!

We had 12 attendees at the meeting. Ernest Andalcio did a follow-up presentation on the dough.com platform from tastytrade.com, where he showed some sample option trades that he had placed last month showing entries, profit-targets and stop-losses. To reiterate, the "dough" platform provides a great visual aspect to options trades that simplifies options concepts and it again generated a lot of questions. Try out the website at www.dough.com, it has a number of short training videos, too. And, it's FREE!

Jim Cooper did a "Stocks-n-Charts" presentation, which created a lot of interest and discussion, as it always does. Also, he has been trying to develop his own trade-automation system, so that he is not "chained" to the screen, which again created a lot of
questions. Jim gets a lot of questions on the various customized indicators, which he openly discussed. Thanks to everybody who attended. Please attend the meetings, everybody learns from them. We hope to see you at August's meeting, 8/14/2014.

As an experiment, for next month, the social-break will be at 9:30 PM. Thank you. Philip Lees

ACGNJ Mini-Reports (For June AND July)

**Main Meeting**
*June 6, 2014*
"Start of ACGNJ's 40th Year"
Mike Redlich, ACGNJ

Sol Libes, ACGNJ's founder and first President, made a wonderful presentation about the history of computing and ACGNJ especially the early years. Notable attendees included:

Lennie Libes, Sol's wife of 61 years!
Jerry Entin, leader of the Concordia Group and 2000 ACGNJ HOTY recipient.
Alex Goldfinger, former long-time member of the ACGNJ Board of Directors and 2006 ACGNJ HOTY recipient.
Evan Koblentz, co-founder and President of MARCH (Mid-Atlantic Retro Computing Hobbyists). There were a total of 20 attendees.

**Java Users Group**
*June 10, 2014*
"Open Forum"
Mike Redlich, ACGNJ

This meeting was tagged as an Open Forum, but there was a focus on reviewing Java web frameworks and a brief look at the Java Unsafe class. There were a total of six (6) attendees.

**Java Users Group**
*July 8, 2014*
"Annual Review & Planning Meeting"
Mike Redlich, ACGNJ

Not to be confused with the ACGNJ Planning Meeting, this is the Java Users Group version to accomplish the same purpose - brainstorm topics for the September through June season. There were a total of five (5) attendees.

**Window Pains**
*June 20, 2014*
"Annual Planning Meeting"
Mike Redlich, ACGNJ

The Board of Directors decided to try holding the Annual Planning Meeting before the summer (as opposed to near the end of summer) in an attempt to attract more members. While the attendance was a bit disappointing - a total of eight (8) attendees - the meeting was very productive as all Main Meeting and Window Pains Meetings slots were filled with tentative and confirmed presentations.

**Distros Revisited (Part 4)**
*Bob Hawes, ACGNJ*

Two months ago (in Distros Revisited (Part 3), my article for our June 2014 issue), almost nothing went right. Except for one distro, everything that I tried to install on various hard disks failed. (That one success was an older version that I'd downloaded last year but never used. Unfortunately, it's now obsolete). So I took some time off to regroup, and now I'm back to try again; but first, some recap:

Distros are Linux Distributions. I first mentioned them nine years ago in the first article that I ever wrote for this newsletter (Linux Dual Boot Experiments, in our May 2005 issue). In the first three parts of this article (in our April through June 2014 issues), I recounted how I chose Ubuntu when I made my permanent move to Linux in 2009, and how I was quite happy with it. Until, that is, the Ubuntu developers had an attack of Gates-like behavior, and tried to force me to switch to the Unity desktop.

The thing is, I really, really, really, REALLY,
Distros Revisited (Part 4), continued

REALLY don’t like the Unity desktop, so that just isn’t an option as far as I’m concerned. In Revenge of the 13 Things (my article in our April 2013 issue), I described how I managed to produce a version of Ubuntu 12.04 LTS that was acceptable to me, thus keeping Unity away from my boot hard disk until April of 2015 at least). If the Ubuntu developers haven’t come to their senses by then, I’ll have to find another Linux distribution for my own personal use. So I’d better start searching for candidates now. In Parts 1 through 3, I examined six distros as possible replacements; Debian, Fedora, Linux Mint, Mageia, openSUSE and simplyMEPIS. Mint and MEPIS did OK. The other four failed.

Now for some new stuff: For this article, I’ve dug up two more candidates. Here are their downloads:
lubuntu-14.04-desktop-i386.iso (683 MB)
ubuntu-gnome-14.04-desktop-i386.iso (928 MB)

Both are Ubuntu variants. Lubuntu is described as “a fast, lightweight and energy-saving variant of Ubuntu using the LXDE desktop. (Lightweight X11 Desktop Environment). It is intended to have low-

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resource system requirements and is designed primarily for netbooks, mobile devices and older PCs”. Ubuntu GNOME is described as “an official flavor of Ubuntu, featuring the GNOME 3.10 desktop environment. It is intended as a mostly pure GNOME desktop experience built from the Ubuntu repositories”. In the current Distrowatch Page Hit Rankings (as I write this), Lubuntu ranks 12th, and Ubuntu GNOME ranks 30th.

I burned the Lubuntu ISO image to a CD, but the slightly larger Ubuntu GNOME image required a DVD. Then, I installed them on two spare “10” GB hard disks. Both installations went well. The Lubuntu installation took 36 minutes, and nothing remarkable happened. The Ubuntu GNOME installation took 45 minutes, with no surprises either. Except that, to my eyes at least, the color of the resultant GNOME desktop (a dark blue) was very unattractive.

Now, I’ve booted my computer from the new Lubuntu hard disk, and I’m writing these words there; but in order to do this, I had to make some changes. Of the two distros that I successfully installed in Parts 1 and 2, only MEPIS installed GParted (the GNOME Partition Editor) automatically by default. Mint didn’t. Now, neither did Lubuntu. So I had to click on the unlabeled icon in the bottom left hand corner of the screen, hover my mouse cursor over the System Tools option on the menu that came up, and then click on the Synaptic Package Manager option on the sub-menu that likewise came up.

As you might expect, that launched Synaptic Package Manager, which I used to install GParted. Then I ran GParted, and found that my hard disk contained an 8.54 GB primary Ext4 boot partition with 6.05 GB unused, and a 1,022.00 MB extended partition containing a 1,022.00 MB logical swap partition. Just about what I’d expected. What I didn’t expect was to find that LibreOffice had not been automatically installed either. So I launched Synaptic Package Manager again, and installed it myself. (Version 4.2.4.2, a much newer version than I normally use). That’s what I’ve been using to write these last two paragraphs.

Here, repeated from Part 2, is my “punch list” of the programs that I previously installed under Ubuntu. First, my hold-overs from the Thirteen Things list: gstreamer0.10-ffmpeg, gstreamer0.10-plugins-good, gstreamer0.10-plugins-bad, gstreamer0.10-plugins-ugly, mpg123, VLC Player, adobe-flashplugin, openjdk-6-jre (the OpenJDK version of the Java 6 Runtime Environment), Scribus (my fun, fabulous and free desktop publisher), Mplayer (one of the most popular Linux media players), and the Quod Libet music player. (For a link to the original article: 13 Things to do immediately after installing Ubuntu by Ambuj Varshney, please see the end of Part 2).

Next, we come to my own personal additions: Okular (my favorite PDF reader), K3b (my favorite CD/DVD burner), Abiword (my alternative word processor, which I mostly use as a file format changer), the GIMP (GNU Image Manipulation Program), Wine (the Windows emulator/compatibility layer), Fonty Python (a font manager), AcetoneISO (which mounts various disk

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image formats as if they were drives), Gnumeric (a spreadsheet, added as a just-in-case alternative), FileZilla (a File Transfer Protocol program), KompoZer (a web page authoring system), OggConvert (which converts media files to the patent-free Ogg Vorbis/Ogg Theora formats), and GikHash (my newest addition, from Part 2).

Going back to Synaptic Package Manager, I checked for my Thirteen Things list hold-overs, and I found that only gstreamer0.10-plugins-good, gstreamer0.10-plugins-bad and gstreamer0.10-plugins-ugly had already been installed. Checking my own personal list, I found Abiword and Gnumeric already installed. So I installed the rest of both lists myself. Except that Mplayer had apparently been replaced by Mplayer2 (described as the “next generation movie player for Unix-like systems”), and I couldn’t find adobe-flashplugin, gstreamer0.10-ffmpeg or KompoZer anywhere.

Since Synaptic Package Manager had failed me, I went to the Lubuntu Software Center instead. There, I searched for “flash” and got one result (Adobe flash plugin), but it was only for Mozilla. Furthermore, it was already marked as “installed”. Then I searched for “gstream” and got three results involving Gstreamer plugins, but only two of them were already marked as “installed” (I decided not to second guess the Lubuntu install routine, so I didn’t add that third result). I found no trace of KompoZer.

In my Ubuntu 12.04 installation, the description of Adobe Flash Player plugin version 11 reads: “Adobe® Flash® Player is a cross-platform, browser-based application runtime that provides uncompromised viewing of expressive applications, content, and videos across browsers and operating systems”. (Sounds like a lot more than just Mozilla). Likewise, the description of FFmpeg plugin for Gstreamer reads: “This GStreamer plugin supports a large number of audio and video compression formats through the use of the FFmpeg library. The plugin contains GStreamer elements for decoding 90+ formats (AVI, MPEG, OGG, Matroska, ASF, ...), demuxing 30+ formats and colorspace conversion”. (Sounds important, doesn’t it?)

Similarly, the description of KompoZer reads: “KompoZer is a complete Web Authoring System that combines web file management and easy-to-use WYSIWYG (What You See Is What You Get) web page editing. KompoZer is designed to be extremely easy to use, making it ideal for non-technical computer users who want to create an attractive, professional-looking web site without needing to know HTML or web coding”. What could have happened to it?

Well, that brought my Lubuntu installation to the same point as my Mint and MEPIS installations. So I made a Clonezilla backup of it, and then I ran GParted again. The partition sizes were the same, of course; but the primary partition’s unused capacity had decreased from 6.05 GB to 3.80 GB. It still had room left, though. All things considered, things had gone quite well so far. Of course, a superstitious person would assume that this thought put the “kiss of death” on my other installation. Well, something did, anyway. Because I ran into all sorts of problems when I shut down the computer, replaced my Lubuntu hard disk with my Ubuntu GNOME hard disk, and rebooted.

Once the desktop came up, I clicked on Activities in the top left corner. As I expected, that brought up a column of icons on the left hand side of the screen. The topmost icon said Firefox Web Browser. I clicked on it, and Firefox started. From it, I checked out the ACGNJ website successfully. (So far, so good). The seventh icon down said Files. I clicked on it and got a file manager. There, I selected my temporary DATA_2GB hard disk, and I clicked on the ODT (Open Document Text) file containing this article. That started LibreOffice Writer; but it hung up, and I had to reboot. (So far, so bad). After restarting several times and getting the same result, I tried out the bottom icon (which said Show Applications). Up popped a whole bunch of icons, filling the screen.

(Pseudo Navigation Tiles! Aarrgh!!!) Unfortunately, as hard as I searched, I couldn’t find either GParted or Synaptic Package Manager. What I consider to be two of the most important utilities, and they were...
extremely well hidden. Or maybe (perish the thought) they just weren't there at all. This suggested a system of thought that is SO alien to my own that it doesn't bear thinking about. Furthermore, while I was unsuccessfully searching, my screen operations often slowed down to a crawl. This indicated to me that my computer was overloaded, and coming perilously close to hanging up again. Just from moving around the screen, without even trying to run a program that would actually do some useful work.

On the other hand, I liked the GNOME 2 desktop that (before the Unity desktop) used to be installed on Ubuntu, with its drop-down menus containing nice legible text descriptions. They were logically arranged, with only a few sub-levels. It was relatively uncluttered, and when you entered one of those sub-levels, you could still see the higher levels. So it was NOT easy to get lost. True, there were also icons on those menus, but they were tiny and easy to ignore. Plus, its operation never hung up my computer. Therefore, I came to a frustrated conclusion: In my opinion, the GNOME 3 desktop is badly designed BLOATWARE, not worthy of any further attention from me.

So much for Ubuntu GNOME. However, that distro's exit leaves me with a shorter than usual article. What can I do to fill it out? Well, way back in Part 1, I wrote: “MEPIS has been displaying a message saying that 104 updates are available”. I didn't install them then. Why not do updates for my three remaining candidates now? Sounds like a good idea.

Mint is Number 1 in the Distrowatch Page Hit Rankings, so I'll start there. At first, Update Manager said that there was only one update available – a new version of Update Manager itself; but after I'd installed that (it only took about a minute), the new version said that there were 249 updates available. (They took 43 minutes to install). After that, I made a second Clonezilla backup of Mint.

As mentioned above, Lubuntu ranks 12th in the Distrowatch Page Hit Rankings, so I'll do it next. Instead of Update Manager, Lubuntu uses a similar program called Software Updater, It listed 173 updates, which took 34 minutes to install. Then, I made a second Clonezilla backup. When I ran GParted again, the primary partition's unused capacity had further decreased from 3.80 GB to 3.30 GB. Remember, this distro was installed on a spare “10” GB hard disk. Before too much longer, this installation will probably have to be transferred to a larger hard disk.

In Part 1, when I originally installed MEPIS, it ranked 75 (out of 297) in the Distrowatch Page Hit Rankings. Now, it's gone down to 91 (but I still like it). Instead of Update Manager, MEPIS uses Synaptic Package Manager to install its updates. Synaptic listed 172 updates, which took 35 minutes to install. Then, as with the others, I made a second Clonezilla backup.

The next day, I booted my computer from each of my candidates. To my surprise, all three listed new updates. Mint listed 3 new updates, which took 2 minutes to install. Lubuntu listed 11, which took 17 minutes to install, and MEPIS listed 73, which took 24 minutes to install. Then, I made third Clonezilla backups of each one. Now, understand that all three of these installations are still not finished. Each has many tweaks (both major and minor) that need to be made. So they'll be undergoing more tests, more updates, and more backups in the time before my trusty Ubuntu 12.04 system expires.

In closing, let's review: Right now, according to Distrowatch, Linux Mint is the most popular distro of all. It seems that a lot of people like it. Unfortunately, they've been releasing a completely new version every six months. Mint 17 is already out. If they follow their current release schedule, Mint 19 will have come out before I actually need a replacement distro. Who knows what changes they might have made by then?

My sentimental favorite is simplyMEPIS. As I've said before, I had a profound emotional experience back to 2005, when I ran its version 3.3 live/install CD for the very first time. A feeling of euphoria swept over me, and I thought: ”This is it! We can do it! We can send Microsoft to the Scrap Heap of History!” That's the absolute truth. (I remember it

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Distros Revisited (Part 4), continued

just like it was yesterday). Such a strong reaction should not be dismissed lightly. Plus, they only release a new version every couple of years.

In the very last paragraph of Part 3, I described my extremely **Un**favorable reaction to LXLE, another distro that features the LXDE desktop. The LXLE website gave me **two** major “Gates-like vibes”. This caused me to turn away **without** even attempting a download. (Refer to Part 3 for further details). Now, with Lubuntu, I'll get to try LXDE without those vibes, and while still retaining many of the features that I **like** about Ubuntu. Very interesting.

For a really fair comparison, I should stick to each candidate exclusively for a month **or longer**. (The one that annoys me the **least** will be declared the winner). Obviously, that will take quite some time, so that's for the future. For now, we're done.

See you next month. 

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**Backup...Backup...Backup**

*Phil Sorrentino, Past President, Sarasota PCUG, Florida*

*Newsletter: PC Monitor (www.spcug.org) philsorr (at) yahoo.com*

I know you've all heard this before, but it is very true. Backup your data and backup your system. When we talk about the Backup activity, we mean copying the files that you definitely want to have, should you lose your computer. But first, I'd like to discuss some Backup Philosophy. There are many levels of backup. The correct amount of backup is that level that lets you sleep at night. (Kind of like a well balanced portfolio.) You have to have enough backed up and you need enough backup copies. No doubt this can be taken to the extreme, as I'm sure it is by many obsessive-compulsive types. But, everyone needs to make these decisions;

1. What shall I backup
2. How often shall I backup, and
3. How many backup copies do I need.

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Before we answer these questions, a few words on why we back up. In a perfect world we would not need to backup anything. Every time we turned on our computer, it would turn on without a hesitation or problem. And, there would never be cause to worry about viruses, spyware or any such malware, because they would not exist. Unfortunately this is not a perfect world and we have to be concerned with potential hardware and software problems. Hardware sometimes fails, and software problems and malware do exist. So, backup is protection against some hardware failures, namely hard drive failures. And backup is protection against software problems or an infection of malware. In either case not having your data and system backed up may force you to re-load your system and begin from a fresh start, and/or spend a lot of time reproducing the data that was lost.

Now back to those questions. The first one, what to backup? Generally, the answer is: all of the data that you have produced and is difficult to re-create, and your system (Operating System and applications that you are using). So this really has two components, data and system. Data backup is the easier. Just copy all the files you want to backup to another drive (internal, not on the same physical drive, or external), or to other memory devices such as CDs, DVDs, and flash memory devices. The amount of data to be backed up helps determine the backup media. For small amounts of data, CD or flash memory devices work just fine. For large amounts of data, a second internal hard drive, or an external hard drive is probably a good choice. (External hard drives seem to becoming the best choice for most backup needs.)

Data Backup

So, what exactly are we backing up?

1. All of your digital pictures. These are usually .jpg or .bmp file types. Actually, there are many other file types that could be pictures or graphics. But with modern digital cameras, most of the pictures are going to be .jpg (or .jpeg, or .jpe) file types. These are probably in a general “photos” folder.
2. All of the data that you have created using "Office
like" applications. Such as .doc, .xls, .ppt, .pps, .docx, .xlsx, .rtf file types. These files usually include personal and financial data that you have created for convenience. These could be in a general “Personal Information” folder or they could be spread out among a few folders.

3. All of the video files you have created or collected. Again, there are many video file types. Some of the more common ones are .mov, .avi, .mpg, .vob, .wmv, .swf. Many of these are created by digital cameras shooting video, or video cameras. These are probably in a general “video” folder.

4. All of the music files that you have bought, created, collected, or ripped from CDs. Some common file types are .mp3, .wma, .m3u, .aac. There are many other audio file types that could be produced by common applications in use. These are probably in a general “music” folder.

5. Any other data that you feel you cannot live without, such as Quicken or Money backup files, or the data files from TurboTax or TaxCut. These may be spread out among many folders.

How often to backup is the next decision. Basically, as soon as a file is created or changed, it is a candidate for backup, but, let’s be practical. If during the day, there were a large number of files created or changed, then they are probably reason enough to backup at the end of the day. If there are very few changes from day to day, then daily backups are probably not necessary. So, some days you might backup certain folders and some days you may not. But, at the end of the week, it is time for a weekly backup. (This doesn’t have to be any specific day of the week, but must happen at least once a week.) With this philosophy, in the worst case, all of your data is only one week old, and your important data is only one day old. This should let you sleep pretty well.

Now, on to the decision of how many backup copies? This is a very personal decision. For many, one copy on an external hard drive will more than suffice. That can be augmented by copying all of the files, once or twice a year to DVDs. That way, if the external hard drive goes down, and you haven’t replaced it, in the worst case, you have the latest DVD copies to go back to, although that data could be 6 month old. For guaranteed safety, two external hard drives, one updated weekly, and the other updated once or twice a month, and a set of DVDs every six months should make almost anyone feel good and sleep well. An even greater precaution taken by most businesses and some people is to take one set of Backup files (External or DVDs) and store it off-site, in a bank vault or a friend or relative’s house. (For businesses, this is almost a necessity.)

Now, for the question, how to implement a backup strategy? If you only have a few files, you can just copy them to the backup device on the schedule that you have established. If you have a large to medium collection of files, you will probably need the assistance of a software application to make it palatable. The first backup is simply a copy of all of the files to be backed up. Each backup after the first need only to be a copy of the new files created and the files that have changed since the last backup. This is called an incremental backup. As your number of files to be backed up grows, you will grow to appreciate the incremental backup. The software will determine which files, in the folder to be backed up, are either new or changed and then only copy those files to the backup device. Some applications call this “synchronizing” the files. Synchronizing can be done in a few different ways and the application will allow you to choose the one that is right for you. For backup, make a selection that will not change the source files. Source files are those to be backed up, and target or destination files are the backup copies.

System Backup
So far, we’ve only backed up our data files. Now, on to backing up the system. The whole system has to be backed up, in total. The system is not backed up by a simple copy of the system files. The system must be backed up by saving the system as an “image”, using imaging software, specifically designed for this purpose. Normally, the system doesn’t change as frequently as the data files. However, each time you get an update from
Microsoft, the system changes, albeit slightly. The system also changes each time you install (or uninstall) an application, peripheral device (like a printer), or hardware driver.

So, how often should we backup the system, another very personal decision. A good strategy for the system backup is to “take an image” every time a big change is made (a software installation, a software un-installation, or a Service Pack installation), or a fixed amount of time has passed, say 3 months. Taking an image takes a good bit of time, so you don’t want to do this too often. If you have many large software applications on your system, it may take hours to take an image. Images are usually saved compressed, and the amount of compression is usually adjustable, for example low, medium, or high. The low compression choice will take an image quicker, with a larger image file being created. The high compression choice will be the slowest, but the file created will be the smallest. Medium will be somewhere in between. Highly compressed image files can be from 2 to 10 GB, so you need to have a good bit of storage just for the images. These images should be stored on a different physical drive from the drive that your C: drive is on. Saving them on another partition on the same physical drive will not help you if the drive goes down.

Just how many copies of the system image backup should be kept? Considering the size of the image files, you may want to keep only a few, maybe 3 or 4, and some that were taken at key points. These key images might be the initial load of the operating system, or the initial load of the operating with the initial applications installed, or before any critical application was installed and checked out. Actually, any image that you are confident is reliable, and would be a worthwhile starting point, can be kept.

Once your backup philosophy is established and a backup strategy is put in place, and you execute the strategy, that is, you routinely backup your data and your system, you will be able to sleep more soundly at night, never having to worry about “what happens if”.

If a hard disk failure occurs, your backup data can quickly and easily be copied to the new hard drive. If your C: drive with the system goes down, the last image can be restored to the new C: drive. If a software problem or malware infection occurs, the last image can be restored and you are back up and running. All of these problems are now less a problem because you can recover from them without any question and in a reasonable amount of time.

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**Bitcoin - a New Currency?**

*Phil Sorrentino, Staff Writer, The Computer Club, Inc., Sun City Center, FL*


Bitcoin is basically a payment system. It provides the ability to transfer some type of value from a payer to a payee. (There are no physical coins, only entries in a software ledger.) If you have been monitoring the news with your tablet or laptop, or you have been reading the daily papers, you probably already know a lot about Bitcoin. (Mostly negatives lately, I suspect.) But the interest here is mostly on the technology. Bitcoin uses fairly complex peer-to-peer software technology and operates with no central authority (or banks). (It reminds me of the operation of the Bit Torrent file sharing networks, only “value” files are being transferred instead of “entertainment” files.) I must say, up front, that I am not a proponent of this type of software currency. With the current levels of computer security, I feel that there is too much opportunity for problems, like hacking, spoofing and down-right dishonesty. However, progress will probably move this technology forward. I must also admit that I missed some major changes like MySpace, and Twitter, so my opinion of Bitcoin should probably be taken with a grain of salt. The idea of a digital currency, convenient and untraceable, and far from the oversight of governments and banks, has been an interesting software technology topic since the beginning of the Internet.

Bitcoin is a network of computers running Bitcoin software. The Bitcoin network manages the transactions
and the issuing of bitcoins. All this is carried out collectively by the network participants. Bitcoin is open-source. Nobody owns or controls Bitcoin, yet anyone with the proper software can take part in its operation. Proponents say that “through many of its unique properties, Bitcoin can enable uses that could not be accomplished by any previous payment system,” but I’m not sure what that really means. Bitcoin is not the only peer-to-peer based digital currency, but it is certainly the most notable. Peercoin and Primecoin are also mentioned in the literature, and in fact a research team at Johns Hopkins computer lab is developing a similar digital currency called Zerocoin. Maybe this type of currency will really be in our future.

Bitcoin, as a new currency, was created in 2009 by an unknown person using the name Satoshi Nakamoto. Satoshi Nakamoto, it is said, is almost certainly a pseudonym for the actual individual, or individuals. Transactions are made with no middle men, meaning no banks. There are no transaction fees and no need to give your real name. Some internet merchants have begun to accept Bitcoins. Supposedly, you can use bitcoins to buy things on the internet like web hosting services. There are even indications that you can buy everyday items like pizza using bitcoins. Because bitcoins are used to transfer wealth, people can send bitcoins to each other using their computers, or mobile phone, or tablet apps. It is supposed to be similar to sending cash digitally. Bitcoins can be used to buy merchandise anonymously, a characteristic that has certainly caught the interest of the government. In addition, international payments are easy and cheap because bitcoins are not tied to any country, country’s currency, or subject to any regulation. (But the lack of regulation may actually encourage volatility and add risk to the value of a Bitcoin in the future, so this may not be as good as it sounds.) Small businesses may like bitcoins because there are no, or very low, fees. Some people have even been buying bitcoins to have as an investment, hoping their value will appreciate. But bitcoins have been extremely volatile, not really like an investment, but more like a speculation similar to a roulette bet at a casino.

Bitcoin employs the use of very complex peer-to-peer software technology, along with software cryptography. Bitcoin is called a cryptocurrency, because it uses cryptography to control the creation and the transfer of bitcoins among the users. Bitcoin uses public-key cryptography in which pairs of cryptographic keys, one public and one private, are generated. (A cryptographic key is a piece of information that specifies a particular transformation of plaintext into ciphertext, and vice-versa.) A collection of keys is called a “wallet”. A Bitcoin transaction transfers bitcoin ownership to a new individual. A coded alphanumeric string is created from the use of the individual’s public key. The corresponding private key is then used to decode the transaction. Only the correct private key will complete the transaction. Additionally a digital signature is checked for validity. (A digital signature is a mathematical scheme for demonstrating the authenticity of a digital message or document.) Private key protection is critical for Bitcoin security, because anyone with the correct private key can spend all of the bitcoins sent to that individual. Security is of paramount importance for the success of Bitcoin. Theft of bitcoins has occurred on numerous occasions and the practical day-to-day security of bitcoins remains an ongoing concern.

Bitcoins are stored in a “digital wallet,” which exists either in the cloud or on a user’s computer. The wallet is a kind of virtual bank account that allows users to send or receive bitcoins, pay for goods, or save their money. Bitcoin wallet software has been implemented in several programming languages for personal computers, mobile devices, and as web applications. At the most basic, a wallet program generates and stores private keys and communicates with peers on the Bitcoin network. Unlike bank accounts, bitcoin wallets are not insured by the FDIC. Although each bitcoin transaction is recorded in a public log, the names of buyers and sellers are never revealed, only their wallet IDs are recorded. This lets users buy or sell items without anyone having the ability to trace the transaction back to them. This is why it has become the currency of choice for online illicit activities.

Bitcoins can be obtained in exchange for products, services, or other currencies, or by a process called “mining.” Bitcoins are actually created by the mining process. People compete to “mine” bitcoins using computers to solve complex math problems. In other words, Bitcoin’s mining operation consists of the network of its users’ computers solving complex mathematical problems. I’m not sure how this really works, but as a result of the effort to solve the problems, at preset intervals, an algorithm releases new bitcoins into the network. The interval is said to be 25 bitcoins every 10 minutes, with the pace of bitcoin generation halving in increments until around the year 2140. This automated pace is meant to ensure regular growth of the monetary supply without interference by third parties, like a central bank, (of which it is thought might lead to hyperinflation).
Bitcoin - a New Currency? continued

Bitcoins can be bought and traded on an “Exchange” website, however the most prominent exchange site “Mt. Gox,” has just recently “gone dark,” and is not to be found online. Another exchange, “SecondMarket,” was about to go online, but the apparent collapse of Mt. Gox may delay, or even eliminate the possibility of any new exchanges.

Because the bitcoin transactions are anonymous, there can be a dark side to this technology. Bitcoin has been the subject of government investigation due to its ties with illicit activities. In 2013 the FBI shut down the website, Silk Road, which came on line in 2011, as the first, or one of the first, websites to use Bitcoin for anonymous purchase of all sorts of illegal products and services. The acceptance of only the digital currency, Bitcoin was meant to add an additional layer of anonymity to buyers and sellers. As of September, 2012, the Silk Road site had over 10,000 listings for drugs including heroin, cocaine and LSD. Silk Road was shut down by law enforcement officials last year. This February Federal officials announced a grand jury indictment of the man accused of creating the online drug marketplace. He is in law enforcement custody, and could be behind bars for the rest of his life. He is charged with engaging in a continuing criminal enterprise, computer hacking, money laundering, and operating a narcotics conspiracy. (Sounds a lot like hacking, spoofing and down-right dishonesty, to me.)

Bitcoin as a form of payment for products and services has seen growth, because merchants have an incentive to accept the currency because transaction costs are lower than the 2 to 3% typically charged by credit card companies. Commercial use of Bitcoin, illicit or otherwise, is currently small compared to its use by speculators, which has been the cause of bitcoin’s price volatility. No one knows what will become of bitcoin. It is mostly unregulated, but that could change. Governments are concerned about taxation and their lack of control over the currency. Maybe the government will take a more active role in the development of a digital currency, but I think the government is happy with its own dollar based currency. It’s not clear if Bitcoin will be in our future, but it does look like we will have some form of digital payment technology when we get there.

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Otterbox Cases

George Harding, Treasurer, Tucson Computer Society, AZ
Newsletter: TCS eJournal (www.aztcs.org) georgehardingsbd (at) earthlink.net

Here’s a company that has grown by providing just what the customer wants. It started with a line of waterproof cases and continued with cases through which the enclosed device could be manipulated. From that point on it was matter of adapting cases to the continuing flow of new types of devices, still keeping each case waterproof and protective.

Every time I go to a computer show, Otterbox is there and has a new case to give away. I currently have two new cases, the Pursuit and the Armor, which the Company describes as “The toughest case ever made.”

The Pursuit is about the width and height of a cell phone, but is a good bit thicker, a bit over an inch. It has a latch that brings the top snugly down to the bottom. The top has a flexible strip just inside its rim, which is what makes the interior waterproof (up to 100 feet deep). Protection also includes crush (up to 1,000 pounds), drop and impact, as well as dust and debris. It’s designed to provide super protection for outdoor activities.

About: Otterbox Pursuit and Armor cases
Vendor: Otterbox (www.otterbox.com)
Price: Pursuit about $20, Armor about $100

The exterior of the case has hard plastic “bumpers” on each corner and end. There is a flexible loop attached to make it easy to fasten the case to your belt. Inside, both the top and bottom have semi-rigid pads to help soften impacts.

The Armor is a cell phone case sized for the iPhone 5, iPhone 4 or Samsung Galaxy, but could be used for others as well. The case is described as waterproof, drop proof, dust proof and crush proof.

For Otterbox waterproof is no big deal; all their cases are waterproof! For this case, however, “water proof” means submersion for 30 minutes at 6.6 feet of water. "Drop proof" for this case means protection for drops up to 10 feet. “Crush proof” is probably the most amazing – up to 2 tons! Soft foam on the interior provides a custom fit and cushioning. There is also a screen protector built in that prevents scratches and damage to the glass display. It’s hard to imagine any type of action that would damage your cell phone!

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SIG News

LUNICS (Linux/Unix)
Andreas Meyer (lunics@acgnj.org)
http://www.acgnj.org/groups/lunics.html

LUNICS is a group for those who share an interest in Unix and similar operating systems. While we do quite a bit with Linux, we’ve also been known to discuss Solaris and BSD 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
Evan Williams (president@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@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@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 the back room, most of our time was spent in talking about 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@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@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).

WebDev
Evan Williams (webdev@acgnj.org)

This SIG is an open forum for all Website Development techniques and technologies, to encourage study and development of web sites of all kinds. All languages will be considered and examined. The current project is a CMS for the club. Anyone interested in starting a new project, come to the meeting and announce/explain. Provide as much detail as possible. WebDev should be an all-encompassing development and examination forum for all issues, applications, OS, languages and systems one can use to build Websites. We currently
have two web development language SIGs: .NET and Java; but other languages and OS need to be investigated, examined and tested; Windows, Linux, UNIX, DEC, Vax, HP etc. Intel-PC, Motorola - MAC etc. (We meet on the second Wednesday of alternate months (we get the odd ones), at 7:30 PM).  

**Investment Software**  
Jim Cooper (jim@thecooperorgs.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@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@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@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@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.  

**37th Anniversary Newsletter CD Now On Sale**  
Beta .12 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.  

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August 2014
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

<table>
<thead>
<tr>
<th>Technology</th>
<th>Contact</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTML</td>
<td>Mike Redlich</td>
<td>908-246-0410</td>
</tr>
<tr>
<td></td>
<td>Jo-Anne Head</td>
<td>908-769-7385</td>
</tr>
<tr>
<td>ColdFusion</td>
<td>Jo-Anne Head</td>
<td>908-769-7385</td>
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<tr>
<td>CSS</td>
<td>Frank Warren</td>
<td>908-756-1681</td>
</tr>
<tr>
<td></td>
<td>Jo-Anne Head</td>
<td>908-769-7385</td>
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<td>Java</td>
<td>Mike Redlich</td>
<td>908-246-0410</td>
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<tr>
<td>C++</td>
<td>Bruce Arnold</td>
<td>908-735-7898</td>
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<td></td>
<td>Mike Redlich</td>
<td>908-246-0410</td>
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<td>ASP</td>
<td>Mike Redlich</td>
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<td>Perl</td>
<td>John Raff</td>
<td>973-560-9070</td>
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<td>Frank Warren</td>
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<td>XML</td>
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<td>Genealogy</td>
<td>Frank Warren</td>
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<tr>
<td>Home Automation</td>
<td>Frank Warren</td>
<td>908-756-1681</td>
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</tbody>
</table>

Operating Systems

Windows 3.1  Ted Martin  732-636-1942

ACGNJ T-Shirts For Sale

L, XL: $15.00
M: 2 for $15.00
bob.hawes (at) acgnj.org

ACGNJ MEMBERSHIP APPLICATION

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

<table>
<thead>
<tr>
<th>US/CANADA</th>
<th>Dues</th>
<th>STUDENT</th>
<th>SENIOR CITIZEN (Over 65)</th>
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<td>1 Year</td>
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<td>2 Years</td>
<td>$40</td>
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<tr>
<td>3 Years</td>
<td>$55</td>
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</table>

Mail this application and your check to:

AMATEUR COMPUTER GROUP OF NEW JERSEY, INC., P.O. BOX 135, SCOTCH PLAINS, NJ 07076

☐ New Member ☐ Renewal ☐ Address Change

First Name  ___________________________ Last Name  ___________________________ Phone  __________

Mailing Address  ___________________________________________ E-Mail  _________________

City  ___________________________ State  __________________ Zip  __________ URL  __________

What topics would you like to see covered at club meetings?  ___________________________________________
Other Local Computer Groups

<table>
<thead>
<tr>
<th>Group Name</th>
<th>Meeting Location</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux Users Group in Princeton</td>
<td>7 pm, 2nd Wednesday, Lawrence Branch Mercer Library, Rt#1 &amp; Darrah Lane, Lawrence NJ. <a href="http://www.lugip.org">http://www.lugip.org</a></td>
<td></td>
</tr>
<tr>
<td>New York PC</td>
<td>3rd Thurs, 7 pm, PS 41, 116 W 11th St. For info call hotline, (212) 533-NYPC, <a href="http://www.nypc.org">http://www.nypc.org</a></td>
<td></td>
</tr>
<tr>
<td>Computer Education Society of Philadelphia</td>
<td>Meetings &amp; Workshops at Jem Electronics, 6622 Castor Ave, Philadelphia PA. <a href="http://www.cesop.org/">www.cesop.org/</a></td>
<td></td>
</tr>
<tr>
<td>Brookdale Computer Users Group</td>
<td>7 pm, 3rd Friday, Brookdale Community College, Bldg MAS Rm 100, Lincroft, NJ. (732) 739-9633, <a href="http://www.bcug.com">www.bcug.com</a></td>
<td></td>
</tr>
<tr>
<td>NJ Macintosh User Group</td>
<td>8 pm, 3rd Tuesday, Allwood Branch Library, Lyall Rd, Clifton NJ. (201) 893-5274 <a href="http://www.njmug.org">http://www.njmug.org</a></td>
<td></td>
</tr>
<tr>
<td>PC User Group of So. Jersey</td>
<td>2nd Mon., 7 pm, Trinity Prep Church, 489 Route 70 E, Cherry Hill, NJ. L. Horn, (856) 983-5560</td>
<td></td>
</tr>
<tr>
<td>Hunterdon Computer Club</td>
<td>8:30 am, 3rd Sat, Hunterdon Medical Center, Rt 31, Flemington NJ. <a href="http://www.hunterdoncomputerclub.org">www.hunterdoncomputerclub.org</a>, (908) 995-4042</td>
<td></td>
</tr>
<tr>
<td>NY Amateur Computer Group</td>
<td>2nd Thurs, 7 pm, Rm 806 Silver Bldg, NYU, 32 Waverly Pl, NYC. <a href="http://www.nyac.org">http://www.nyac.org</a></td>
<td></td>
</tr>
<tr>
<td>Central Jersey Computer Club</td>
<td>8 pm, 4th Friday, Rm 74, Armstrong Hall, College of NJ. Rich Williams, (609) 466-0909</td>
<td></td>
</tr>
<tr>
<td>NJ PC User Group</td>
<td>2nd Thurs, Monro Rm at Wyckoff Public Library, 7 pm, Maureen Shannon, (201) 853-7432, <a href="http://www.njpcug.org">www.njpcug.org</a></td>
<td></td>
</tr>
<tr>
<td>Philadelphia Area Computer Society</td>
<td>3rd Sat, 12 noon Main Meeting, groups 8 am-3 pm, Upper Moreland Middle School, Hatboro PA. (215) 764-6338, <a href="http://www.pacsnet.org">www.pacsnet.org</a></td>
<td></td>
</tr>
<tr>
<td>NJ Computer Club</td>
<td>6:15 pm, 2nd Wednesday except Jul &amp; Aug, North Branch Reformed Church, 203 Rt 28, Bridgewater NJ. <a href="http://www.njcc.org">http://www.njcc.org</a></td>
<td></td>
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</tbody>
</table>

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. 1-800-876-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 McDonald's on the right, diagonally opposite Scotchwood Diner on the left, immediately before the overpass. After exiting, turn left at the light and use overpass to cross US 22. Bear right at bottom of ramp to continue south on Park Avenue. Turn left at the second light (a staggered intersection). Scotch Plains Rescue Squad (2-story brick) is on the right. Do not park in the row next to the building — you'll be towed. We meet on the second floor, entering by the door at the right front of the building.

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