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DATA BUS

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IN THIS ISSUE

The SouthEastern Michigan Computer Organization, Inc. (SEMCO) is a non-profit, 501(c)(3), group dedicated to providing information, education and a forum to computer users (professional and amateur) and other interested individuals. Membership in SEMCO is open to all individuals 18 years or older. Persons under 18 years may become members through the sponsorship of a parent or guardian. Dues of $30/year include monthly DATA BUS and free personal ads.

All SEMCO correspondence should be addressed to

SEMCO - P.O. Box 707 - Bloomfield Hills, MI 48303-0707
Web site: **http://www.semco.org**
E-mail: **semco@semco.org**
General information: (voice) answering device in Royal Oak **(248) 398-7560**

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**Solving a Puzzle
By Dr. Bill Landrum**

In October 1984, the SEMCO DATA BUS issued a programming challenge. It invited readers to write a computer program to solve a puzzle that was something like:

> *A person has some pennies, nickels, and dimes. There are 128 coins in all. The total value of the coins is $6.14. How many coins of each type are there?*

People were just starting to own personal computers at that time. The program was to be written in Basic, since virtually all PCs had that language as part of their operating system.

In those days, computers were slow (and computer time was expensive on mainframe computers). It was common practice to spend a great deal of time studying the problem so as to not waste the computer's time. Programs were to be efficient.

When I studied the puzzle, it was obvious that the problem could be stated as needing to simultaneously solve two equations in three unknowns. It was easy enough to use high school algebra to reduce the two equations to one equation with two unknowns—something of the form $aX + bY = c$. Unfortunately, such an equation has an infinite number of solutions. I assumed that other puzzle solvers would use a brute-force iterative solution to solve the problem.

I remembered, though, that I had had this particular equation in a number theory course in college—namely to solve one equation in two unknowns

for integer solutions. A third century Greek mathematician, Diophantos, had developed a general method of solving this particular problem (called a Diophantine Equation).

Unfortunately, a Diophantine Equation can be solved if and only if the greatest common divisor (g.c.d.) of A and B divides C evenly. The method most often used to find the g.c.d. was developed by Euclid, and is called the Euclidean Algorithm.

So I set about programming the Euclidean Algorithm in Basic. It is an iterative solution, but it converges extremely fast—usually in fewer than five iterations. Now I could use the g.c.d. to divide A, B, and C.

Next I programmed the Diophantine Equation solution. It is complicated by the fact that it uses modular arithmetic (not often taught), and it is also an iterative solution. It also converges extremely fast—usually in fewer than five iterations.

Now I had one solution with almost no computer time required to obtain it. Once you have one solution, then there is an easy formula for obtaining other solutions. It only takes one iteration per solution. I was only interested in positive integer solutions, so I was able algebraically to set upper and lower bounds for my iterations to constrain the program to positive solutions.

I ran the completed program on my relatively slow 2 MHz 8080 IMSAI PC, and it gave all non-negative solutions in about one second. I thought then, and I still think now, that the program was the finest computer program that I had/have ever written—Very elegant indeed.

I knew that anyone who tried to follow my program would be completely baffled. They would see that it worked,

but they would have no clue as to why. So I included a letter to the editor that explained my whole technique in detail. I included numerical examples for how to execute the Euclidean Algorithm, and how to solve a Diophantine Equation.

I was sure that I would be announced the winner of the programming contest, but the editor chose no winner. Instead he published my letter, and my program, and the programs of the other eight entrants. Oh well!

Recently, as part of the 35th anniversary of SEMCO, I was thinking back over my years and experiences with SEMCO, and I started thinking about this computer program. I started wondering as to how I would solve the problem today if I didn't know about Diophantine Equations. It occurred to me that I could write a very simple little brute-force program where I did a FOR-loop for the pennies, allowing them to go from 0 to 128, and then nest inside that a second FOR-loop for nickels, allowing them to go from 0 to 128, and calculate the number of dimes by subtracting the number of pennies and nickels from 128. I could then calculate the value and see if it was $6.14 or not. I realized that the inner loop would be executed $129 * 129 = 16,641$ times. As I thought about it, I realized that on a modern PC that would require essentially zero seconds to execute. I went to my PC and wrote the necessary 7-line program in about three minutes. It executed the first time, and generated all solutions virtually instantly. After a little more thinking, I was able to apply one small modification that cut the number of iterations in half—but that was of academic interest only.

If I had been asked to judge the programs in 1984, I would have said that the Diophantine Equation program was clearly the best. But if I was asked to judge the programs today, I would probably choose the 7-line program. I would ask myself such questions as:
- Which program would be easiest to understand?
- Which program is least likely to have an error in it?
- Which program would be easiest to modify or upgrade?
- Which program would give acceptable response times?

I would no longer ask the question, "Which program is the most efficient in the use of CPU cycles?" I no longer care. I finally have enough speed, memory, and disk space on my personal PC to do anything that I want to do—virtually instantly.

Dr. Bill Landrum's Puzzle Solution Number 2 (New Solution):

```
INPUT "Enter Number of Coins and Total Value as integers:"; NoCoins,TotValue
FOR i = 0 TO NoCoins
    FOR j = 0 TO NoCoins - i
        k = NoCoins - i - j
        IF i + 5 * j + 10 * k = TotValue THEN PRINT i, j, k
    NEXT j
NEXT i
```

Note: See below—How to run QBasic under Windows-XP.

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[Editor's Note: Dr. Landrum has pointed out that the old QBasic can be downloaded and run under Windows-XP. Also, the two programs mentioned and background information can be found on the SEMCO WEB site at <http://www.semco.org> → Useful Links → Shareware/Freeware.]

Information on QBasic:
<http://en.wikipedia.org/wiki/QBasic>

To Download QBasic:
Within the Wikipedia QBasic article there is a pointer to the QBasic download site at:
<http://download.microsoft.com/download/win95upg/tool_s/1.0/w95/en-us/olddos.exe> -or-
<http://tinyurl.com/getqbas>.

Association of PC User Groups (APCUG) Conference Announcement

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[Editor's note: We received the following announcement from APCUG. SEMCO members are eligible to attend this conference. See Bob Clyne for car-pooling information].

You are invited to the following event: APCUG 2011 User Group Conference & Annual Meeting Friday, July 15, 2011 at 3:00 PM - to - Sunday, July 17, 2011 at 2:00 PM .

The 2011 APCUG Annual Computer Conference will be held this year at the Crown Plaza Cleveland South in Independence, Ohio.

So if you are looking for a rocking place to go this summer meet us in Cleveland, Ohio the home of the Rock & Roll Hall of Fame.

Attend the numerous workshop and educational sessions and socialize with your fellow user group members from around the world.

More info at <http://bit.ly/gtqpCs>.

The conference will start with a sign in and registration on Friday night the 15th of July at approximately 3:00 PM EDT and will be followed by a meet and greet in the lounge.

The attendance fee for the conference is $50 until end of May, and $65 thereafter. This will cover the Friday night meet and greet, a full day of workshop sessions on Saturday, and a half-day on Sunday.

[Editor's Note: The conference hotel is the Crown Plaza Cleveland South at 5300 Rockside Rd., Independence, Ohio 44131. It appears that the best way to get a room at conference rates is to call 1-216-524-0700 and ask for "in house reservations." Alternatively, Bob Clyne has put together a list of nearby alternatives. See: <http://tinyurl.com/3q5cna7>.

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**Get a Free Education
Online
By Ira Wilsker**

It is no secret to my regular readers that I have been teaching college for well over the past three decades. Traditionally, both K-12 and higher education consisted of face-to-face classes in a classroom, possibly supplemented by some form of laboratory experience. Several years ago online coursework started to become the rage with almost all traditional colleges and universities now offering some online classes, with several now offering entire online degrees. Personally, I have taught at least one online course each semester for about 10 years, and some of my fellow faculty are teaching entire course loads online. Some major universities are now offering selected courses and lectures online free of tuition, but generally for no credit. Some of the universities offering free courses and lectures online include the University of California at Berkeley, MIT, Tufts, Stanford, Yale, Notre Dame, Carnegie Mellon, Johns Hopkins, NYU, University of Pennsylvania, University of California at Irvine, and Vanderbilt.

The number and variety of free courses and lectures offered are staggering and varied. MIT, for example, offers over 2000 free online courses, with a comprehensive online listing at <http://ocw.mit.edu>. According to its website, over 100 million people have taken advantage of MIT's free offerings during the last 10 years (source: <http://ocw.mit.edu/about/next-decade>). The Open University in the UK claims to be that nation's largest academic institution and its Open Learning website

<http://openlearn.open.ac.uk> gives everyone free access to undergraduate and graduate course materials from the University. Courses offered are representative of any large university and include the arts, humanities, business, computers, engineering, health, language, education, math, psychology, and the sciences. Each of the colleges at Tufts University offers free courses using the Open CourseWare (OCW) concept, with the directories to be found online at <http://ocw.tufts.edu>. Tufts open courses are offered by its medical and dental colleges, nutrition college, veterinarian school, arts and sciences college, and its renowned Fletcher School, one of the top graduate schools in international relations. The Utah State University offers free online access to hundreds of its courses on a non-credit basis at <http://ocw.usu.edu>. Some of the courses offered by Utah State include Anthropology, Biology, Engineering, Economics, Education, Engineering, English, Family and Consumer Sciences, History, Languages, Philosophy, Math, Physics, Psychology, and a host of other classes.

For those interested in possibly opening and operating a business, the Small Business Development Center (SBDC) at the Kutztown University of Pennsylvania <http://www.kutztownsbdc.org/course_listing.asp> claims to offer the nation's largest selection of free online classes in the field of entrepreneurship, with over 90 such courses available. Kutztown's free courses with an emphasis on small business include the areas of Accounting, Business Operations and Management, Business Planning (including how to write a business plan), Government Marketing, International

Marketing, Finance, Legal (business law), Management Development, Marketing, Sales, Taxation, and Starting and Growing a Business. In addition to those courses, another 24 small business courses are available in Spanish.

The University of Southern Queensland in Australia <http://ocw.usq.edu.au> is a member of the Open CourseWork consortium (OCW), and offers a selection of free, online, non-credit courses from five of its colleges. People interested in learning computer programming may find helpful the USQ course "Object Oriented Programming in C++." Other courses offered include Teaching Students with Special Needs; Technology and Society; Creating Interactive Multimedia; Introduction to Tourism; Studying to Succeed: Planning your career; and General Science.

The University of California - Irvine <http://ocw.uci.edu> offers several dozen free online courses in the Arts, Business and Management, Education, Engineering, Health Sciences, Humanities, Information and Computer Sciences, Law, Physical Sciences, Social Ecology (criminology and public policy), and Social Sciences. I found several of the Business and Management courses especially intriguing, including courses in personal finance, business analysis, and human resources. As an undergraduate, some of my favorite courses were in the physical sciences, and the University of California - Irvine offers free online classes in physics, astronomy, chemistry, and math. Outside of academia, I have special interests and training in criminology, and UCI has some courses under the heading Social Ecology that I found most interesting, including a course in hate crimes, and another in 'White-Collar and Corporate Crime." While not offering the most comprehensive assortment of free online courses, I did find several of the most interesting at UCI.

While not a formal educational institution, one of the largest collections of free courses and academic lectures available is from the Kahn Academy, <http://www.khanacademy.org>. According to its website, the Kahn Academy has as its motto, "A free world-class education for anyone anywhere." The mission of the Kahn Academy is, "The Khan Academy is an organization on a mission. We're a not-for-profit with the goal of changing education for the better by providing a free world-class education to anyone anywhere. All of the site's resources are available to anyone. It doesn't matter if you are a student, teacher, home-schooler, principal, adult returning to the classroom after 20 years, or a friendly alien just trying to get a leg up in earthly biology. The Khan Academy's materials and resources are available to you completely free of charge." To meet this mission, Kahn Academy is currently offering over 2100 courses and lectures geared for grades K–12, as well as college and profession content. These courses are presented by online video, and are predominantly in the areas of math, science, humanities, history, finance, and economics. For those who are planning on taking any one or more of the many standardized academic tests, there is even a section with videos on test preparation. In order to access all of the Kahn Academy features, it is necessary to login with either a (free) Google or Facebook login; if the user does not have a Google or Facebook account, links are provided to register for those services.

The Kahn Academy math videos cover all levels of math from basic arithmetic, to pre-algebra, algebra, geometry, trigonometry, probability, statistics, pre-calculus, calculus, differential equations, and linear algebra. In addition to the lecture videos, there are also hundreds of "Worked Examples," with 180 such examples for Algebra I alone. For those who may need a refresher, there are videos in developmental math. I found the videos with brain teasers a lot of fun to work.

Many students entering college lack some of the basic academic skills, with math weaknesses often being one of the most prevalent shortcomings of new college students. The Kahn Academy has an extensive collection of Developmental Math resources that may better prepare students for the basic academic math courses. Developmental Math 1 is listed as, "Worked developmental math examples from the Monterey Institute. These start pretty basic and would prepare a student for the Algebra I worked examples." Approximately 200 videos are available which explain each of the basic math properties and functions at a level appropriate for the developmental student. The Developmental Math 2 section consists of about 50 videos and lessons which are described as " Worked developmental math examples from the Monterey Institute (part 2). These start at Algebra I and would prepare a student for basic college mathematics." It may be very worthwhile for prospective college students to review these videos prior to taking the in-house placement tests given by many colleges.

The biology section of the Kahn Academy says in its heading that it is for high school and first year college biology students, but the huge selection of biology videos available may also be useful for anatomy, nursing, medical, veterinary, and other health science students. Specialized topics in the biology section that have strong medical and health implications include several educational videos on diabetes (A1C, Glucose and Insulin, Blood Sugar), heart disease, strokes, nephrology (kidney diseases), oncology, blood disorders, and other medical topics.

With the recent disaster and radiological crisis in Japan, the Chemistry, Physics and Cosmology and Astronomy videos available at the Kahn Academy may be of interest. In the Cosmology and Astronomy section are a series of classes on plate tectonics, Pangaea, and seismic waves that may explain how earthquakes occur. The Chemistry and Physics sections have several classes on radioactivity.

I teach economics (micro and macro) every semester, and will be integrating the free economics videos available from the Kahn Academy in my courses, both my live and online classes. Economics is covered in several sections, including the "Current Economics' section, where the contemporary issues of unemployment, inflation, and the national debt are explained. Money and Banking has its own section, which explains how banks function, and how money is created. Other economics related categories include the "Credit Crisis," "Currency," "Paulson Bailouts," and "Geithner Plan." For those who may desire to understand what is going on in our economy, this may be an excellent resource.

Many students dread the various college entrance exams, and the Kahn Academy has a substantial library of standardized exam preparation videos. Kahn offers preparation for the SAT - Math exam at <http://www.khanacademy.org/sat>, where over 100 videos are available which show how to successfully work all of the math problems in the 10 SAT-Math practice tests. Other standardized exams for which Kahn Academy offers free video reviews include the GMAT exam (over 100 videos at <http://www.khanacademy.org/gmat>, the CAHSEE (California High School Exit Exam), and the IIT JEE (The Indian Institute of Technology Joint Entrance Examination), the annual college entrance examination in India.

With the abundance of free online courses and materials available that cover almost every academic pursuit from K-12 through graduate and professional school, there is an opportunity for anyone, regardless of academic level or achievement, to learn whatever personally interests them. Since the courses are all free, there is no financial risk involved with learning something new, but there is a lot to gain. Knowledge is power.

WEBSITES:

<http://www.khanacademy.org>.
<http://education-portal.com/articles/Colleges_and_Universities_that_Offer_Free_Courses_Online.html>.
<http://education-portal.com/articles/Universities_with_the_Best_Free_Online_Courses.html>.
<http://ocw.mit.edu>.
<http://openlearn.open.ac.uk>.
<http://ocw.tufts.edu>.
<http://ocw.usu.edu>.
<http://www.kutztownsbdc.org/course_listing.asp>.
<http://ocw.usq.edu.au>.
<http://ocw.uci.edu>.
<http://www.khanacademy.org/sat>.

Ira Wilsker is a Columnist, The Examiner, Beaumont TX; Program Director of Management Development at the Lamar Institute of Technology, Beaumont TX; and a radio and TV show host. Contact him at <iwilsker@sbcglobal.net>.

Easy and Fast Way to Update or Install Free Software By Ira Wilsker

A regular reader of this column suggested that I write about a free service that can automatically install and update the most popular freeware programs available. She recommended Ninite, but I was also familiar with a competitive service from AllMyApps. While both have comprehensive listings of free software, AllMyApps also includes links to some commercial software applications, so I would have to give the edge to Ninite when it comes to the mass installation of free software.

San Francisco based Ninite <ninite.com> offers about 85 of the most widely used free Windows programs which can be selectively installed without any intervention by the user once the programs have been selected from the Ninite list. To implement the Ninite service, the user simply checks the software titles desired, and downloads the small installer that automates the install process. The automated installer installs all of the selected programs without any intervention; there is no "next" to click, and questionable

optional items, such as toolbars, are automatically refused during the installation process. The freeware files downloaded and installed by Ninite are always up-to-date with the latest versions available. What is especially helpful and useful is that the single installer which is downloaded remembers which programs were selected, and rerunning the installer which was originally downloaded will automatically check for the latest versions and updates, and install them; there is no need to re-download a new installer unless additional programs are selected, or previously selected programs are no longer desired. The Ninite installer can identify the operating system of the computer, and intelligently install 32- or 64-bit versions as appropriate. Since most of the freeware programs are multi-lingual, the programs offer a selection of languages during the install process; Ninite will identify the chosen language on the computer, and install the software with the correct language option.

It is not necessary to create an account on the Ninite website, and no signup is required to make full use of the services. For business and other commercial users with a large number of computers to maintain, Ninite offers a "Pro" version for a mere 20 cents per computer per month, which will transparently maintain the free programs on the covered computers, but the Pro version is not necessary for home users who use the free installer.

The Ninite website at <http://ninite.com> is very intuitive and easy to use; the page is divided up into categories of free software, and all the user needs to do is check the box adjacent to the selected programs, and then download the customized installer at the bottom of the page. The downloaded installer does all of the work with no intervention required of the user. The categories of free software available on the Ninite website are Web Browsers, Messaging, Media, Runtimes, Imaging, Documents, Security, File Sharing, Other, Utilities, Compression and Developer Tools; each category contains from two to fifteen programs, all selectable by check box.

For those who would like to try or use multiple Internet browsers, Ninite offers Google's Chrome, Firefox, Apple's Safari and Opera. As with all Ninite categories, any one, any combination, or all can be automatically downloaded and installed with the Ninite installer. As stated earlier, that same installer can be rerun to automate the update process, insuring that the user is getting the latest updates and versions available. Similar Ninite service is available for all of the other categories listed. Many people use a variety of messaging, and Ninite can selectively install any or all of several messaging products including Skype (Internet Telephone), Windows Live Messenger, Pidgin (supports multiple instant messaging clients), Digsby (supports multiple instant messaging clients), Google Talk, Thunderbird E-mail Reader, AIM (AOL Instant Messenger) and the Yahoo! IM Client. The media category includes 15 media utilities, including iTunes, Hulu (Internet TV), VLC (most widely used video and audio player which plays almost all known formats), Winamp, and QuickTime.

Ninite can help to keep the popular "runtimes" (programs used to run other programs) up-to-date on the users' computer, and include such runtimes as Java, Flash, Silverlight, and .Net.

Anyone who may need to view or edit digital images in a variety of formats can select Microsoft's Paint.NET, Google's Picasa, GIMP, IrfanView (my personal favorite that can also play all video and audio files with the "AllPlugIns" option) and a variety of other image editors and viewers. People often find that they need a multiplicity of document utilities in order to open, view or edit a variety of documents, and Ninite obliges by offering a wide assortment of document software. Among the selection are a trial version of Microsoft Office 2007, OpenOffice (reads and writes almost all office documents, including Microsoft office), LibreOffice (my choice that can read and write almost all office documents, including Microsoft office), and several PDF writers that can create PDF documents from almost any program that can print files.

Readers of this column may be aware that I am tenacious about security, and have layered security on all of my computers. The selection of free security software included on Ninite are among the most popular available, and includes Microsoft Security essentials, Avast, AVG, MalwareBytes (on every computer that I use), Ad-Aware, Spybot Search and Destroy, and SuperAntispyware (my favorite and on every computer that I use). Users who are engaged in file sharing (a possibly dangerous online activity) may find that uTorrent and eMule will serve them well. The "Other" category on Ninite includes several miscellaneous but useful free utilities including Dropbox (online backup and file sync utility), Evernote (online notes), Google Earth, password managers, file search utilities, and the Mozy online backup service. Ninite offers 16 assorted utilities,

including the very popular CCleaner (disk cleaner with additional utilities), Defraggler (hard drive defragmenting), Recuva (file undelete and recovery), Revo Uninstaller, Glary System Utilities (comprehensive computer maintenance tools) ninite.com/linux and several other useful utilities.

While recent versions of Windows can handle the common "zip" compressed file format, there are many other compression formats in wide use that Windows cannot natively process. Ninite offers 7-Zip (a popular free compression/decompression utility that can handle almost all compression formats), and a trial version of the commercial WinZip. Other useful free utilities available in the Ninite "Developer Tools" category are programming tools, FileZilla (FTP client), Notepad++ (text editor that can open and edit many file formats), and some other utilities.

Ninite is not just for Windows, as it has a similar listing of 17 free programs for those using the Linux operating system, at <http://ninite.com/linux>. Just like the Windows version, checking the boxes and downloading the installer simplifies and automates the software installation process for Linux users.

With a fine, free, service like Ninite, it is easy for any PC or Linux user to have the most popular free software programs on his computer, and keep them updated. Thanks Ninite!

WEBSITES:
<http://ninite.com>.
<http://ninite.com/linux>.
<http://allmyapps.com>.
<http://www.techsupportalert.com/content/quick-way-install-dozens-free-apps.htm>.

Ira Wilsker is a Columnist, The Examiner, Beaumont TX; Program Director of Management Development at the Lamar Institute of Technology, Beaumont TX; and a radio and TV show host. Contact him at <iwilsker@ sbcglobal.net>.

**Tips & Tricks—
Disk Maintenance
By Les Townsing**

Cleaning up your hard drive can restore your PC's Performance

There are three important utilities provided in Windows that help to improve a PC's performance:
• Disk Clean Up
• Error Checking (previously known as Check Disk or Scan Disk)
• Disk Defragmenter

Disk Clean Up
Over time, unnecessary data and "leftover files" gradually collect in all PCs as you use them. As this garbage collects it slowly clogs up your system, taking up space and making performance slower and slower. The Disk Cleanup tool helps you free up space on your hard disk by searching for files that you can safely delete.

There are a number of ways to start Disk Clean Up. My preference is:
1.   Open 'Windows Explorer' and right click on the required drive
2.   Select 'Properties,' click the 'General' tab, and then click 'Disk Cleanup'
3.   Disk Clean Up will then scan the drive and provide you with a list of possible actions and an estimate of the space that can be saved

Depending on your system, a number of different file types are analyzed when the initial disk scan is conducted. After the analysis completes you can choose what to do with them. The analyzed files include:
• Downloaded program files
• Temporary Internet files
• Recycle Bin
• Temporary Remote Desktop files
• Setup Log files
• Backup files for a previous operating system
• Offline files
• Compressed old files

In addition to the Disk Cleanup tab, the More Options tab offers further opportunities for freeing up hard drive space. There is nothing on this tab that isn't available elsewhere within Windows in standalone fashion and some will be dealt with below.

There may be other categories that appear in your Disk Cleanup window, but in all cases, highlighting the item will display an explanation of the category in the Description area.

Error Checking
Previously called Scan Disk or Check Disk, this utility is known as Error Checking within the Windows XP / Vista / 7 system.

Error Checking will check the hard disk for defects in its platters. It will also check file systems. If errors are found it will attempt to fix them.

These errors are found inside your hard drive may be caused for a number of reasons. These include:
• system crashes
• applications that have been improperly closed
• the existence of harmful programs such as viruses

It is important to know that Error Checking is not a data recovery tool. Its job is to maintain the file system, and if

your directories or files get in the way of this objective, they will be sacrificed!

Before checking volumes or drives for errors, make sure that all other programs are closed, and disable your screen saver.

To run Error Checking:

1.   Open 'Windows Explorer' and right click on the required drive

2.   Select 'Properties,' click the 'Tools' tab, and then click 'Check Now'

3.   You will be given the options of automatically fixing file system errors and recovering bad sectors

Note: Vista and Windows 7 will not allow Error Checking to run while the system is operating. It must be scheduled to run at boot time.

Disk Defragmentation

When files are created, deleted or modified it's almost a certainty they will become fragmented. Fragmented means the file is not stored in one place in its entirety and different parts of the file are scattered across the hard disk.

Fragmentation causes the drive heads to search for all the pieces of a file in different locations. The more fragmented files there are on a drive, the more performance and reliability suffer.

The Disk Defragmenter Utility is designed to reorganize fragmented files and optimize their placement on the hard drive for increased reliability and performance.

To run Disk Defragmenter:

1.   Open 'Windows Explorer' and right click on the required drive

2.   Select 'Properties,' click the 'Tools' tab, and then click 'Defragment Now'

When Disk Defragmenter first opens you'll see a list of the hard drives

displayed at the top of the screen. Clicking on the 'Analyze' button will display a graphical representation of the amount of defragmentation on the selected drive.

When the Defragment button is clicked, a graphical representation of the defragmentation during and after defragmentation is progressively shown. This graphical representation does not appear in Vista or Windows 7. You can schedule the Disk Defragmentation Utility to automatically run at a predetermined time in both Vista and Windows 7.

For the technically minded, you are also given the opportunity to view a defragmentation report after the drive is analyzed and when it has been defragmented.

For the majority of users, the Disk Defragmentation Utility included with Windows is sufficient to keep the hard drives in relatively good condition. If you are the type that wants to extract the best possible performance from a system, consider upgrading to one of the premium defragmenter products.
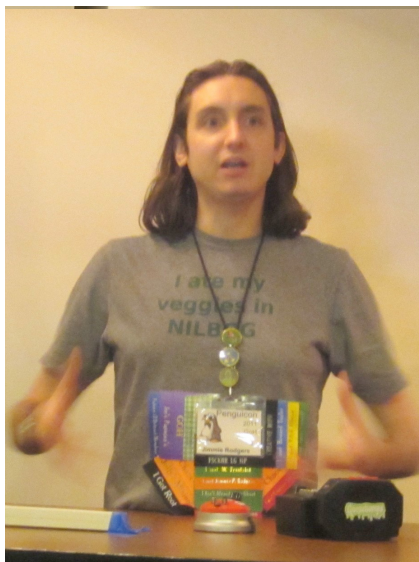
Les Townsing is a member of the Melbourne PCUG, Australia. Article is from the April 2011 issue, PC UPDATE. Web: <http://www.melbpc. org.au>. E-mail: <editor (at) melbpc. org.au>.

Penguicon 2011—April 29–May 1—Marriott, Troy MI. (Above): Costumed figures. (Below) Left: Jimmie P. Rogers talks about "Circuit Bending." Right: The "Chaos Machine."

SEMCO Volunteer Party

The SEMCO Volunteer Party was held at the home of Beth Fordyce on May 15, 2011.

(Above): Mike Rudas talks about fundamental programs and settings for Windows-7. (Below) Tom Callow reviews important selected topics for Windows-7.

SEMCO Meeting Pictures

Members take a break and get refreshments.

Board Members Present

Vice President Richard Jackson, Treasurer Bette Gay, Secretary Carol Sanzi, SIG-Advanced Chairman Franz Breidenich, Publications Committee Chairman Warner Mach, and Member at Large Bob Clyne. Arriving late were SIG-Linux Co-Chairman Michael Rudas, his wife, and SIG-IBM Chairman Tom Callow. The board meeting was called to order at 12:10 p.m.

Old Business

Bette Gay reported that the current treasury amount equaled a total of $9,739.34 with $4,991.62 in the checking account and $4,747.72 invested in three Certificates of Deposit. The membership currently is 76. It is time for Ronald Green, Harold Langberg D.D.S., and Michael Rudas to renew their memberships.

Bette Gay reported that the South Oakland Shelter in Royal Oak would like to create a computer lab. Ryan Hertz would like help in the planning and set-up of the lab. Bob Clyne suggested Bette contact Mike Bader about our helping with the project.

New Business

Publication Committee Chairman, Warner Mach reported that the membership expiration date and/or address on some of the mailing labels of the May DATA BUS might be incorrect. This error is in the process of being corrected.

The on-line focus group GITCA, Global IT Community Association, is looking for members to participate in a discussion group that will be held May 15 through May 20. Anyone wishing to take part may sign up for the event at <http://www.gitca.org>.

An APCUG Conference <http://cleveland.apcug.org/> will be held in Independence, Ohio on July 15 through July 17. You may register on-line for $50 and see their tentative schedule.

Bob Clyne moved to adjourn at 12:34. Carol Sanzi seconded the motion and it was carried.

Inserting Tomorrow's Date
By Sharon Parq Associates

Inserting Tomorrow's Date (Excel)

You may want to insert tomorrow's date into a cell in your worksheet. This is easily done by simply creating a formula that includes the function for today's date, as in the following:

=TODAY() + 1

This formula first determines today's date and then adds 1 to it, resulting in tomorrow's date. You can then use Excel's formatting features to display the resulting date in any manner desired.

Besides displaying tomorrow's date, you can modify the formula to display a date at any time in the future. Simply change the formula so the desired number of days are being added to today's date. For instance, if you wanted to determine a date two weeks in the future, you could use the following:

=TODAY() + 14

SPECIAL INTEREST GROUPS (SIGS)

SIG-IBM
Tom Callow

June 12: 1:45 p.m. WEB Design: Doug Willett, President of Luna Tech Designs, will talk about the company's "3D web design solutions." Luna Tech solutions puts a 3D front-end on web sites and is integrated with Google Earth to allow clients to find and visit a business or even to visit a city in simulated 3D.

SIG-IBM
INTERMEDIATE
Warner Mach

June 12: 3:45 p.m. Digitizing your slides and negatives: SIG-IBM Chairman Tom Callow will discuss the benefits of scanning in your film negatives and demonstrate how to scan negatives and slides into your computer using a dedicated film scanner or a conventional scanner supporting transparency scans.

SIG-ADVANCED
Franz Breidenich

June 21 (Tues): 5:30 p.m.: At the Madison Heights Library located at 240 West 13 Mile Rd. one block West of John R. The parking lot entrance is off Brush St. The lot and entrance to the library is located in the back of the library. Topic: General discussion.

SIG-LINUX
Michael Rudas
Mike Bader

June 28 (Tues): 6:45 p.m.: At Motor City Free Geek, 1511 Jarvis St. Suite #10, Ferndale, MI 48220. The building is on the Northwest corner of Wanda and Jarvis - The first traffic light south of 9 Mile, on Wanda. Topic: TBA.

July 2011 DATA BUS DEADLINE (7th day after 2nd Sunday in month)
SEMCO Input and Members' Ads—Deadline: Sun., June 18, 11:59 p.m.
Members' personal ads are free. To mail, use Editor address on Page 2; e-mail address: <warnermach@gmail.com>. PLEASE send to arrive sooner than deadline.
Business Ads - Deadline: Second Friday monthly. Contact Editor (address Page 2).

Warner Mach
warnermach@gmail.com
(to post monthly computer group info)

**CALENDAR-OF-EVENTS
OTHER GROUPS**

COMP (Computer Operators of Marysville & Port Huron
July 6, 7 p.m., (1st Wednesday) Jane Wheatly 810-982-1187 or Pam Raisanen E-mail info: <compinfo@greatlakes.net>. Web: <http://www.bwcomp.org>. Topic: TBA.

Focus: Hope IT User Group
1400 Oakman, Detroit, MI. 48238. Web info <http://www.fhitug.org/>. See web site for details. Pre-registration required.

HUG (Holly User Group)
(Date?) Groveland Twp. Fire Hall, 3085 Grange Hall Rd. & Dixie Hwy., Holly, MI. 48442.

MacGroup-Detroit
June 26, 3:00 p.m., Birmingham Temple, 28611 West 12 Mile Rd., Farmington Hills. Info: Terry White, <terry@macgroup.org> or 248-569-4933. <http://www. macgroup.org>. Topic: Digital Photography. SIGs: 2:00 PM.

MacTechnics, (MAC User Group)
June 18, (3rd Saturday); See web site for meeting time and location. <http:// www.mactechnics.org>). JoAnn Olson at 248-478-4300. Topic: "Let's Make a Video."

MDLUG (Metro Detroit Linux User Group)
June 11, 12:30–2:30 p.m., (2nd Saturday); MDLUG meetings will be at The Gaudior Academy located at 27100 Avondale Avenue in Inkster. Web: <http://www.mdlug.org>. Topic: TBA.

Motor City Free Geek
Every Saturday 1 p.m. to 5 p.m. 1511 Jarvis St. Suite #10, Ferndale, MI 48220. <http://www.motorcityfreegeek.net>. E-mail: <MotorCityFreeGeek@gmail. com>. Recycling & Open Source.

MUG (Michigan User Group)
June 14, 6:00 p.m., (2nd Tuesday): Engineering Society of Detroit. 20700 Civic Center Drive, Suite 450, Southfield, MI 48076 . <http://www.mug.org>. Topic: "PPA's—Personal Package Archives" & "Ubuntu 11.04"

Oak Park Computer Club
Every Fri., 10:15 a.m. at Oak Park Library, Oak Park Blvd. west of Coolidge.

Royal Oak Computer Club
Every Wed., 12:30 to 2:30 PM at Mahany/Meininger Senior Community Center, 3500 Marais Ave., Royal Oak, 48073. Near Crooks & 13 Mile. Guest speakers & regular monthly speakers. <http://tinyurl.com/royaloakcc>.

SHCC (Sterling Heights Computer Club)
June 7, 7:30 p.m.(1st Tues); Macomb Community College South Campus, Bldg. K, 14500 E. 12 Mile Rd. Don VanSyckel <Don@VanSyckel.net>, 586-731-9232; Web: <http://www.SterlingHeightsComputerClub.org>. Topic: "Internet Safety: The New Threat Landscape and What YOU Should Know" Presented by Douglas Rivers from Macomb County Sheriff's Office.

MAY REFRESHMENTS

Coordinator: Richard Jackson
Donors:
Warner Mach
Ken Phillips
Carol Sanzi

COMPUTER RESOURCE PEOPLE

This is a list of members willing to be resources for other members to call when they have hardware or software questions.
Are you willing to help members learn?
Which software programs are you familiar enough with?
It is not necessary to be an expert, but just have some familiarity with the program and be willing to help someone starting to learn it. Please give this some thought and volunteer at the next group meeting.

Almost Anything: Vander-Schrier	**MS Office for Windows:** Callow
AutoCAD: Comptois	**MS Word:** Clyne
Genealogy: Cook	**Networking:** Callow
IBM PC Hardware Issues: Clyne, Yuhasz	**Novell Netware:** Yuhasz
Operating Systems: Callow, Clyne, Yuhasz	**Quicken:** Clyne
MAC Hardware and OS Issues: Yuhasz	**Geocaching:** Cook
Security: Bader	**Relational Database Programming**: Lis

Bader, Mike—586-573-7330, 9am–8pm.................. mdbader@flash.net
Callow, Tom—248-642-5770, 9am–5pm................. tcallow@monaghanpc.com
Clyne, Bob—810-387-3101, 9am–10pm .... clyne@mich.com
Comptois, Jerry—248-651-2504, anytime
Cook, Stephen—313-272-7594, eves....................... scook48227@ameritech.net
Lis, Bernie—248-669-0101, 10am-8pm .... BerlLis@comcast.net
Vander-Schrier, Jack—586-739-7720,12–8pm .... jvanders@comcast.net
Yuhasz, Steve... Help@yuhasz.org

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SEMCO CALENDAR

Engineering Society of Detroit
20700 Civic Center Dr., Suite 450, 4th Floor
Southfield, MI. 48076
42°29'7" N by 83°14'29" W

June 12–SUNDAY (Meet 2nd Sunday)

SEMCO Board Meeting at 12:00 noon. For Officers and SIG Chairpersons. Other members are invited to attend.

SEMCO General Meeting at 1:30 p.m.

Special Interest Groups (SIGs)

SIG-IBM, 1:45 p.m., 1:45 p.m. WEB Design: Doug Willett, President of Luna Tech Designs, will talk about the company's "3D web design solutions." Luna Tech solutions puts a 3D front-end on web sites and is integrated with Google Earth to allow clients to find and visit a business or even to visit a city in simulated 3D.

SOCIAL PERIOD 3:15 p.m., Refreshments! (Reminder: We must continue to maintain a neat environment.)

SIG-IBM Intermediate, 3:45 p.m., Digitizing your slides and negatives: SIG-IBM Chairman Tom Callow will discuss the benefits of scanning in your film negatives and demonstrate how to scan negatives and slides into your computer using a dedicated film scanner or a conventional scanner supporting transparency scans.

SIG-ADVANCED, June 21 (Tues): 5:30 p.m.: At the Madison Heights Library located at 240 West 13 Mile Rd. one block West of John R. The parking lot entrance is off Brush St. The lot and entrance to the library is located in the back of the library. Topic: General discussion.

SIG-LINUX , June 28 (Tues): 6:45 p.m.: At Motor City Free Geek, 1511 Jarvis St. Suite #10, Ferndale, MI 48220. The building is on the Northwest corner of Wanda and Jarvis. Topic: TBA.
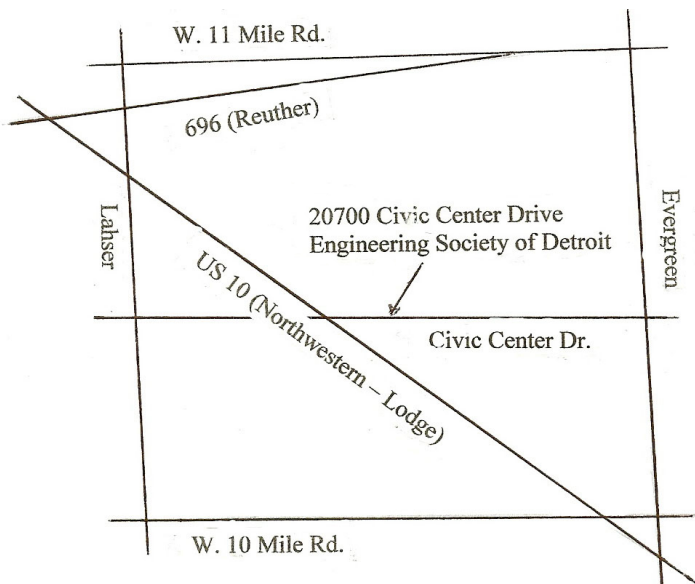
July 10–SEMCO Sunday

http://www.semco.org

PUBLIC INVITED

(Please copy this and the next page to post on your bulletin board)

SEMCO Meetings at [Engineering Society of Detroit](#)
20700 Civic Center Drive, Suite 450, 4th Floor
Southfield MI 48076.
42°29'7" N by 83°14'29" W

From I-696 exit at Evergreen. Take Evergreen south to Civic Center Drive. Civic Center Drive is about halfway between I-696/Eleven Mile Rd. and 10 Mile Rd. Turn west, right if you are coming from the north, onto Civic Center Drive. Follow Civic Center Drive, watching the number signs on the right. When you get to the 20700 sign turn right, north, and follow the drive until you arrive at the southwest corner of the brown building with the Engineering Society of Detroit sign near the top. Turn right, east, and go past the front of the building. When you reach the end of the building, turn left, north and go to the back of the building and turn left, west, again. The parking lot will be on your right. The entrance is in the center of the building. Park in back of building. Enter the rear door. The ESD office is on the fourth floor.

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SouthEastern Michigan
Computer Organization, Inc.
P.O. Box 707
Bloomfield Hills, MI 48303-0707

SEMCO (future meetings)
June 12
July 10

SEMCO: A Community Organization
Helping People for the 21st Century