DATA BUS

Proposed Revised Bylaws enclosed.

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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.

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NOTICE OF NOMINATIONS

Please take notice that under the Bylaws of the SouthEastern Michigan Computer Organization, Inc., nominations for officers will be taken at the general meeting to be held Sunday, December 11, 2011 at 1:30 p.m., with the election of officers to be held at the January general meeting.
The following offices will be open for nominations:
1) President
2) Vice President
3) Secretary
4) Treasurer
5) Two Members-at-Large of the Board of Directors

NOTICE OF ANNUAL MEETING AND ELECTION

The annual meeting of the members of the SouthEastern Michigan Computer Organization, Inc., will be held Sunday, January 8, 2012 at 1:30 pm at Engineering Society of Detroit, 20700 Civic Center Drive, Suite 450, Southfield, Michigan., The election of Officers and Members-at-Large of the Board of Directors of the Corporation will take place at the annual meeting. Also a vote on revised bylaws.

Online Backup Services Offer Free and Paid Services
By Ira Wilsker

Recently, the president of a local non-profit community service organization asked me to review a proposal she had received from one of the prominent, heavily advertised, online backup services. The quote to provide automated backup services for all of the computers in the organization (about 10 computers) for a year was nearly $500. I informed her that while the price received was appropriate for the level of and quality of service offered, there were better prices available from competitive services. I also showed her that there were some services that offered online backup services to both individuals and organizations for free.

I have been asked before to explain online backup services, and the process is relatively simple. Using a broadband Internet connection and a backup utility (usually provided by the online backup service), the computer automatically and transparently sends the data over the Internet on a secure encrypted connection, to the online backup service, which then stores the data. When needed, the data can be accessed over the Internet either by using any Internet browser, or with the restore

function in the backup software. The process is simple, generally reliable, and often requires no human intervention in order to create and maintain a secured copy of critical data files. Many people prefer this remote online backup service over onsite backup, where an external hard drive or some other form of network attached storage (NAS) contains the backed up data.

There are advantages and disadvantages to both remote and onsite (home) backup. While both can be accomplished transparently, reliably, and without additional intervention once the backup system is setup, there are some differences in speed, security, cost, and availability. At home, I use a commercial automated backup utility (NTI Shadow) which automatically creates and maintains the backups of the selected data folders on my hard drive, by instantly copying any new data files to a 1T (one terabyte) external USB hard drive. Since I am somewhat paranoid about having a current backup, I actually use two 1T external USB hard drives, periodically rotating between them, making sure that each has a complete data backup. I also use the external drives to store an image of my hard drive, which is also periodically updated, such that in the event of a catastrophic computer failure, I can easily restore all of my programs and files. I never have more than one external drive attached at a time, and store the other one in a locking, fire resistant box. When we evacuated for Hurricanes Rita, Gustaf, and Ike, the first item I packed was the external drive with my most recent data and image backup. Onsite backing up via USB, FireWire, or network, is fast, relatively inexpensive (I purchased my newest 1T USB drive for under $60),

and very portable. The risk of onsite backup is the destruction or loss of the external drives due to fire, theft, flood, or other disaster.

Living in a region that sometimes appears to be a magnet for hurricanes, floods, wildfires, and other physical threats, there may be some strong advantages of remote online backup services. The companies that offer the remote online backup services typically are outside of our local area, and thus not subject to the same threats that could put locally stored data at risk. Most remote storage companies have redundant, multiple, geographically diverse locations where the data is securely stored, making it unlikely that these locations can be incapacitated at the same time, making the stored data always available. Data backed up on the remote servers can be accessed from anywhere there is a web connection, using an Internet browser, username, and password. Alternatively, data can also be accessed directly utilizing the backup software provided by the online service. Remote online backup service is readily available for prices ranging from free, to a few dollars a month, to several hundred dollars per year.

The most common problem that many users face while using an online storage service is speed, or more likely the lack of speed. The controlling factor that determines the speed of creating and restoring online backups is the effective speed of the Internet access used to connect to the remote server. Many users are well aware of the advertised download speed of their Internet service, which may be used to restore data, but are often unaware that their upload speed, used to create the backups, is much slower, typically

only being one-third or one-fourth the speed of the download side. I personally know individuals who use a popular broadband Internet service provider (ISP), and had a lot of data to backup (videos, music, and other large data files) that they wanted to backup online. Each user subscribed to a major online backup service, and it took several full days (24/7) of constant uploading in order to send their data to the online backup service. In terms of time and speed, a similar backup to an external hard drive would likely have been completed in terms of minutes, or even a few hours, but certainly not days. While this massive upload was taking place, their other, more routine Internet services (e-mail, web browsing, downloading music, etc.) were seriously degraded (slowed) because the upload was consuming much of their available bandwidth (capacity). One user received a substantial surcharge on his monthly Internet bill for exceeding his allowed monthly usage. Another user, who has "unlimited" Internet access, had seriously slowed Internet service, as his ISP is one (of many) that slows the service (decreases bandwidth) once an arbitrary data limit is exceeded during the month.

Once the original backup is created, the upload volume only includes any new or modified data files, which reduces the bandwidth requirements. In order to help mitigate the speed problems, most of the software provided by the remote backup companies can compress (and securely encrypt) the data being transmitted, reducing the volume of data that needs to be sent. Power users and businesses that have large amounts of data may want to check with their ISPs to determine the real upload speed and any volume or bandwidth restrictions on their Internet access.

There are several services that offer online backup. Many users may not be aware that their current ISP often offers free online storage, often in the 2GB to 10GB range. Locally, AT&T DSL offers, "… virtually unlimited e-mail storage; virtually unlimited photo storage; a master account, 10 sub accounts, each with 2GB of storage space" (source: <http://www.attdslonline.com/index.html>). RoadRunner (safestorage.rr.com) offers 500MB of free storage along with automated backup, encryption, online access, and fast recovery; additional storage is available for a monthly fee of $1.89 for 1 GB and $7.99 for 5 GB. While possibly not enough to store a large collection of videos, this amount of storage can hold many thousands of music files, word processing documents, spreadsheet files, photos, and other data files.

For those who enjoy the services of Microsoft, its SkyDrive storage service offers up to 25GB of storage "in the cloud," with a limit on individual files of 100MB <http://explore.live.com/skydrive>. According to Microsoft, "SkyDrive is your password-protected hard drive in the sky. That means you can use it to store thousands and thousands of files. Then you can get to them anytime you're online." Using compatible Microsoft software, including recent versions of Internet Explorer, Office, Hotmail, Bing, Silverlight, and others, SkyDrive offers the user the ease of multiple simultaneous uploads and downloads, drag and drop file selection, and other features. While SkyDrive is free, it does require the use of an

existing Microsoft account for access, or the user can register for free access.

There are many other remote online backup services including Carbonite, Mozy, Ocster, and Backify. Backify (http://backify.com), headquartered in British Columbia, Canada, is interesting in that it offers a huge amount of free backup space, as well as inexpensive commercial backup services. For users with a single computer, Backify offers a titanic 512GB of storage for free, with automated backup, remote access, the ability to stream music and videos to mobile devices or other Internet connected computers, and strong encryption. According to Backify, "Your backups are private and secure in the cloud. Backify uses military grade encryption, and your files reside in our state-of-the-art data centers. Backify is SSL secured, and only you can access your data. Even the employees of Backify cannot access your data." Backify can store up to 30 versions of each file, making it easy to restore earlier versions, and the proprietary automated backup software is available for both PCs and MACs. Backify also offers an optional "Briefcase" which can automatically synchronize files on multiple computers, ensuring that similar files are on all designated computers (paid subscription required). For those who desire to share files, photos, videos, and other data with friends and family, or even made public, this service allows for one-click file sharing. For those who may need more storage, and have multiple computers, Backify offers unlimited storage for up to five computers for only $3 per month (paid annually), and $5 a month (paid annually) gets unlimited storage and a 512GB briefcase (larger briefcase

storage is available for an additional fee). [*Editors Note: Backify is no longer in service.*]

Other well known backup services are offered by Carbonite <http://carbonite.com>, Mozy <http://mozy.com> and Ocster <http://.ocster.com/ocster-secure-storage/en>. Carbonite, with redundant data centers in Boston and Somerville, MA, offers two basic levels of service; the Home & Home Office service offers unlimited backup for one and two person homes and offices, for $59 per computer per year; businesses with three or more computers can get unlimited remote backup service starting at $229 per year. Mozy, headquartered in Seattle, with offices in the US, England, Ireland, and China, offers its MozyHome service for one computer with 50GB storage for $5.99 per month, and three computers with 125GB storage for $9.99 per month. Additional computers are $2 per month per computer, and each additional 20GB of storage is $2 per month, with discounts available for one and two year plans. MozyHome supports Windows 7, 2000, XP, and Vista (32 & 64-bit), and Mac OS X 10.4 and later. Ocster offers a combination software backup package that also includes online storage. The Ocster Backup Pro software retails for $39.90 and is a full featured backup product, that can perform almost all types of backups, and store the data on almost every type of storage media. If the user chooses to use the online backup service, 10GB of secure online storage is $4.99 per month, and 20GB is $9.99 per month, with discounts available for annual purchases. Additional storage, up to 100GB can be purchased for $49.90 per month, or $499 per year.

My personal choices for home use are to use my external USB drives as

my primary backup media, with the free 512GB Backify online service being my alternative choice. While all of the above commercial (paid) online backup services are secure and reliable, if I were to recommend one of the paid commercial backup services to the non-profit organization that asked my opinion, it would again be Backify, due to the large amount of storage, as well as the lowest price.

WEBSITES:

<https://www.backify.com>,
<http://www.carbonite.com/en>.
<https://mozy.com>.
<https://www.techsupportalert.com/content/best-free-online-backup-sites.htm>.
<https://www.techsupportalert.com/content/roundup-free-online-backup-services.htm>.
<http://www.ocster.com/ocster-secure-storage/en>.
<http://explore.live.com/skydrive>.
<https://secure.wikimedia.org/wikipedia/en/wiki/Comparison_of_file_hosting_services>.

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Free Full Length Movies on You Tube
By Ira Wilsker

I recently found out that Google's infinitely popular YouTube video service now offers over a thousand full length movies for free. Many other full length movies are also available on YouTube for a fee, typically about $3, but I found enough of a selection of free movies to keep me well entertained for many hours.

The easiest way to locate the free, full length movies on YouTube is to simply go to <http://www.youtube.com/movies>, click on the "All Categories" button, and then select "Free Movies." Once there, the movies are divided into genre's, with some duplication if a movie falls into more than one genre'; for example "GhostBusters 2" is listed under both the "Comedy" and "Family" headings. The genre's listed are Comedy, Nigerian Cinema, Horror, Documentary, Action & Adventure, Drama, Animation & Cartoons, Mystery & Suspense, Crime, Classics, Family, Romance, and Science Fiction. Clicking on the genre' title will display the first 63 of the free movies in that category, with a button on the bottom of the page to move to the next page of the category. Moving the cursor over the movie poster for each movie displays a summary of the movie, its date, the stars of the movie, and a color coded rating system.

My personal favorite category of full length movies is the Documentary group, since I am a fan of non-fiction. YouTube has 246 full length non-fiction documentaries, including the Oscar winning "Why We Fight" series of

World War II movies that were produced by the Army Signal Corps, narrated by some of Hollywood's biggest stars, and produced by some of Hollywood's greatest producers. Dozens of other military history documentaries are available including the original Memphis Belle (filmed in color about the B-17's 25 missions over Europe), The Battle of Britain, and The Fighting Lady (1945 Oscar Winner for Best Documentary, filmed in Technicolor about an aircraft carrier in the Pacific). Also in the Documentary group are dozens of biographies including Nanook of the North, Mohammed Ali, Charles Manson, Marilyn Monroe, the Dalai Lama, Jackie Robinson, Evel Knievel, Lou Gehrig, and James Dean. Other documentaries cover environmental issues, political controversies, travelogues, historical events, technological history, international affairs, and a variety of other non-fiction topics.

I sent the link for Animations & Cartoons to my daughters to have a source of entertainment for my grandchildren, as there are 41 free movies available. These movies, obviously primarily intended for children, include animated bible stories, Gulliver's Travel (two different versions), Casper and Wendy's Ghostly Adventures (Casper, the friendly ghost, first appeared in movie theaters in the 1930's and on TV in the 1950's), Peter Pan, Popeye, Superman, Rudolph the Red Nosed Reindeer, Hansel and Gretel, Swiss Family Robinson, and Tom Sawyer are but a few of the well known animated movies freely available on YouTube.

For those who might like comedies, YouTube offers 335 free comedy movies, ranging from classics like Charlie Chaplin, to contemporary stand-up comedy shows. Since I prefer the classical comedy movies to many of the more modern comedies, I have found the free movies featuring W. C. Fields, Buster Keaton, Amos & Andy, Charlie Chaplin, Abbott and Costello, Danny Kaye, Laurel & Hardy, and Will Rogers often displayed more comedic skill and talent than most of today's popular comics. For those who disagree and prefer the newer comic styles, there are over 200 of those to choose from in this category.

Sometimes it is nice as a family to sit in the living room and watch movies suitable for the entire family, and the Family category offers 94 such titles. While a few are duplicated from the Animations & Cartoons and Comedy categories, there is still enough of a unique selection of family movies to entertain a family for several months. Some of the better known family movies available for free include several of the Shirley Temple series, Heidi, GhostBusters 2, Rescue from Gilligan's island (with the original TV cast), several religious movies, the original Miracle on 34th Street, musicals, several classic Christmas movies, Hemmingway classics, and other movies suitable for family viewing.

Drama enthusiasts may find some interesting dramas among the 639 free movies available, while horror aficionados may appreciate some the 468 horror movies available. Sometimes it is enjoyable for us adults to snuggle on the couch and watch a good Mystery & Suspense movie; the 226 free movies in that genre' could account for a lot of couch time. While many of the Mystery & Suspense movies are relatively recent productions, again I find that some of the older classics are among the most

suspenseful, such as the several of the Boris Karloff, Bela Lugosi, Agatha Christie, Sherlock Holmes, and John Barrymore features.

I am cognizant that many people enjoy crime movies, and the 238 free crime movies available should satisfy most crime fans. The movies available range from one of the first movies ever made, Edison's 1903 "The Great Train Robbery" (also listed under the Classic category), to crime movies released over the past few years.

Science Fiction has always been among the most successful movies in theaters, and YouTube offers 138 free titles. Among the most popular Sci-Fi movies listed are "The Lost World — Story of Atlantis," Boris Karloff in the Snake People, Teenage Zombies, Southland Tales, Alien Uprising, Planet of the Dinosaurs, and enough other Sci-Fi titles to amuse fans of the genre' for many hours.

As I have already stated, I am a fan of the classics, and YouTube obliges with 252 classical movies, many of which are redundantly included in other genre's. Among the most interesting are old westerns of the 30's, 40's and 50's starring Gene Autry, Johnny Mack Brown, John Wayne, Clark Gable, and Buster Crabbe. The first of the Tarzan movies, from the 1930's, are also available, and have a panache' missing on the later Tarzan movies. Also quite interesting is the 1915 version of Alice in Wonderland, a grainy black and white silent production, with the story told by a sequential combination of short moving images, followed by a few lines of on-screen narration; despite its primitive nature, the production quality is quite entertaining, considering the technology of a century ago.

Romantics may appreciate the 147 free movies in the Romance category. These range from classical romantic movies such as the 1938 "Tarzan's Revenge" and films starring heart throbs Gina Lollobrigida, Susan Hayward, Elizabeth Taylor, Carole Lombard, Spencer Tracy, Jimmy Stewart, William Powell, and Myrna Loy. Some of the more modern romance movies incorporate more "adult" content and themes than the classics, but may still meet the needs of many contemporary romantics.

With over a thousand free feature length movies available on YouTube, many in DVD quality, this broad selection of movies should delight anyone, at a price that cannot be beat.

WEBSITES:

Free Movies: <https://www.youtube.com/movies?fl=f&pt=fm>.

All Movies: <https://www.youtube.com/movies>

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Pictures: Recent SEMCO Meetings: <http://www.tinyurl.com/y8cm99e>

Video: Recent SEMCO Meeting: <http://www.tinyurl.com/363vnbd>

Podcasts: Podcasts of SEMCO meetings can be found at: <http://www.semco.org/podcasts.htm>.

**Tweak Windows 7 and
Vista with Free
GIGATweaker
By Ira Wilsker**

Most users of Windows 7 and Vista simply use the Microsoft default settings for almost everything on their computers. In my experience, most users are blissfully unaware that there are a myriad of customizable settings in Windows that can be used to improve performance, enhance security, change appearance, speed the boot process, and otherwise control just about anything that Windows can do. Some of these settings choices are built into Windows, but are often hard for the non-geek to find and modify; many other settings and customizations are available, but require a third party utility in order to access and change. Many of the system utilities available have some capacity to alter some of the system settings, but now there is a free utility, GIGATweaker, that claims to be able to alter more Windows settings than any other utility available.

GIGATweaker, is a free download from the author's website at <http://7room.net/gigatweaker>. The latest version available is 3.1.3.460, and is explicitly designated on the website for Windows 7, both 32- and 64-bit builds. According to the readme file available after the program is installed, this software will also work well on Windows Vista 32- and 64-bit builds. According to the author, Pavel Mikhaylov, "GIGATweaker is completely portable and lightweight tool with built-in Startup Manager and Uninstall Manager. All changes made by GIGATweaker in the system are transparent through informative console." Once downloaded, the software can be installed on a computer's hard drive or installed on a flash drive and used as a fully functional portable utility. GIGATweaker has been awarded a 5-star, or other top rating, by many of the popular download websites, as shown at its awards page at <http://7room.net/gigatweaker/awards>.

I downloaded the installer file from the website by clicking on "Download version with installer" the right side of the webpage. The installer file, g3_setup.exe, is a 1.95mb file which downloaded quickly, and installed in a matter of seconds with only minimal user intervention. Immediately after the install, the user has the option to view the readme file, and to start the program. When starting the program for the first time, before the program itself actually loads, the software displays a screen "Welcome to GIGATweaker 3.1" and asks if the user would like to create a restore point (recommended). I strongly agree with this recommendation that the user should create a restore point, just in case a change is made to the system settings that the user is not satisfied with, and cannot easily determine how to undo any selected changes. The user can always restore the computer from an earlier restore point, often without the loss of any data files, by going to Start – All Programs – Accessories – System Tools – System Restore and selecting "Restore System Files and Settings."

As soon as I created a restore point, the GIGATweaker console appeared with the main menu appearing on the left side of the window, with the different sections available by utilizing the slider. The console, which is the "front end" interface, is easy to follow and understand, as it is logically divided

into sections, Administration, Display, Customization, Communication, Maintenance, and GIGATweaker.

The Administration section offers tweaks that cover the system, security, files and drives, restrictions, and system information. Clicking on a selection opens a series of context sensitive tabs on the right half of the window, with a brief explanation of each of the choices. The user needs to be aware of the ramifications of some of the potential tweaks that are available. For example, under Administration – Security is a tab marked "User Account Control" (UAC) which allows the user to disable the UAC if desired. Above the checkbox used to disable the UAC is the statement "User Account Control (UAC) is a Windows function which prevents unauthorized changes to your computer." Microsoft generally recommends that the UAC remain enabled, as it displays a warning in the center of the window whenever a program loads that may make changes to the computer, a process that many types of malware try to do. Many users find that the UAC popping up frequently asking if a program is legitimate, is an irritating distraction, as many times more legitimate programs are interrupted from loading, and that most malware would be stopped prior to this point by the security software. Many technically competent users knowingly accept the risks, and choose to disable the UAC.

There are also security concerns about flash drives and CDs being the vector used to spread malware to a computer when the "AutoPlay" feature built into Windows allows the flash drive or CD to automatically load software or play when inserted. AutoPlay can be selectively disabled under the Administration – Files and Drives – AutoPlay tab.

The Display section included options for Windows Explorer (the file manager) and Visual Effects. Under the Explorer tab, by my personal choice, I have the file system show hidden files and folders, show protected operating system files, and show extensions for known file types. By default, Windows disables these selections to make it more difficult for users to delete or otherwise manipulate critical system files, but I find it useful to see everything, including file extensions.

Under Customization, the user can select from a variety of tweaks that can improve system stability, optimize the system and startup process, control the context of menus, and improve memory management. For computers with less than optimal memory, a tweak that I perform on most computers is under Customization – System – System tab – Force DLL unload from memory. This tweak can improve performance by forcing Windows to unload unused DLL's (Dynamic Link Libraries) from memory, which may increase the amount of memory that is available for applications.

The Communication section includes network performance and security features, as well as tweaks to modify the functions of the Internet Explorer web browser. As with the previous categories of tweaks, GIGATweaker explains what the networking tweaks will do if selected.

One way that many users can improve performance and speed the boot process is to control which programs load when the computer is booted; too many programs loading slows the boot process and consumes

valuable resources, which may degrade performance. From the Maintenance category, the Startup manager tab can be selected, which displays the programs loaded at boot. By unchecking the box adjacent to the program, the selected program will not load at boot, speeding the process and freeing up system resources. If the program is later desired to load at boot, the box can be re-checked. Information may also be displayed about each startup item, and unwanted entries can be permanently deleted, if desired. Also available under the Maintenance menu is an Uninstall Manager, which performs similar to Windows integral Add/Remove programs function. The Windows Utilities selection in the Maintenance category used a tabbed display to implement dozens of Windows built-in utilities, including system utilities, Windows tools, network functions, Windows enhancements, and some interesting advanced Windows functions such as creating a "Windows master Control Panel" where all of the Windows control panel and system settings can appear in a single menu on the desktop or start menu.

Under the GIGATweaker menu are tabs for customizing GIGATweaker, and displaying information about the program. Among the settings available are the choice to create a log file, something that may be useful in troubleshooting any problems that may arise from the use of the program.

As a free program, GIGATweaker is an excellent utility to customize Windows 7 and Vista in order to increase performance, functionality, security, and appearance. As long as the user creates a restore point before each use of GIGATweaker (the selection

"Restore Point" is prominent on the bottom of the console), the user may find that GIGATweaker is capable of making Windows work the way you want it to work.

WEBSITE:
<http://7room.net/gigatweaker>.
<http://7room.net/gigatweaker/awards/>.

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Of Interest Links (OIL)
By Fred Acerri

Mind-goggling
<http://www.economist.com/node/21534748>.

A Rest, a Meal, Then Death for 5,000-Year-Old Glacier Mummy: Scientists Consolidate Results of Research Into Ötzi's State of Health and His Death
<http://www.sciencedaily.com/releases/2011/10/111025091533.htm>.

Nonterrestrial artifacts hard to pin down
<http://www.eurekalert.org/pub_releases/2011-11/ps-nah110711.php>.

Hospital tests reveal the secrets of an Egyptian mummy
<http://www.eurekalert.org/pub_releases/2011-11/uoia-htr102011.php>.

Recipe for the Moon's Magnetic Field: Spin and Stir
<http://www.nytimes.com/2011/11/15/science/recipe-for-the-moons-long-ago-magnetic-field-spin-and-stir.html?ref=science>.

**Bluetooth - Not a dental diagnosis or
a rare tooth problem.**
Bluetooth is the name given to a technology that uses short-range radio links, and is intended to replace the cable(s) connecting portable and/or fixed electronic devices. The vision is that it will allow for the replacement of the many propriety cables that connect one device to another with one universal radio link. It boasts such key features as robustness, low complexity, low power and low cost, and it was designed to be operated in noisy frequency environments.

Bluetooth is a communications standard for interconnecting electronic devices and is defined by the Bluetooth specification. Bluetooth uses a form of data packet switching, a technology that is used to transmit digital data via a wireless communications link. Bluetooth operates in the unlicensed ISM (Industrial, Scientific and Medical) 2.4GHz frequency band, and avoids interference from other signals by hopping to a new frequency after transmitting or receiving each packet. Here is a little history, for you tech history buffs, to show how long Bluetooth has been around. Work on Bluetooth was started in 1994 by two Ericsson Corporation engineers, and the Bluetooth 1.0 specification was released May 1998. Version 1.0, with a data rate less than 1 Mb/s, had many problems, and manufacturers had difficulty making their products interoperable. Bluetooth 2.0 was released November 2004 with a faster data transfer rate (approx.

2.1Mb/s). And finally, Bluetooth 3.0 was released April 2009 with a data rate of up to 24Mb/s with improvements and new features and is the current standard.

Bluetooth uses a radio technology called frequency-hopping spread spectrum which chops up the data being sent and transmits chunks of it on up to 79 different frequencies. Bluetooth provides a way to connect and exchange information between devices such as Smartphones, laptops, personal computers, printers, Global Positioning System (GPS) receivers, digital cameras, video games, and others.

Bluetooth is an open, wireless protocol for exchanging data over short distances between devices, creating a personal area network (PAN). It was originally conceived as a wireless alternative to the old serial RS-232 data cables. Bluetooth is a network and thus can connect many devices, unlike RS-232 which was strictly serial point-to-point. Bluetooth is primarily designed for low power consumption, with a short range. Three ranges are defined in the standard, 100 meters (Class 1), 10 meters (Class 2), and 1 meter (Class 3). Because Bluetooth devices use radio (broadcast) communications, they do not have to be in line of sight of each other. Bluetooth makes it possible for these devices to communicate with each other and transfer information as long as they are in range.

Both Bluetooth and Wi-Fi are examples of wireless technology that use the unlicensed 2.4GHz frequency spectrum. Both have many applications in today's offices and homes such as: setting up networks, printing, connecting cooperating devices, and transferring data files among computers

and smart devices. Wi-Fi is intended as a replacement for cabling for general local area network access in work areas. Bluetooth is intended as a replacement for cabling among equipment in close proximity. Wi-Fi is intended for use in equipment as a wireless local area network (WLAN). Bluetooth is intended for use as a smaller, personal area network (PAN).

A PC uses a Bluetooth adapter in order to communicate with other Bluetooth devices. While some desktop computers and most recent laptops come with a built-in Bluetooth adapter, others require an external adapter, usually in the form of a Bluetooth Dongle. Bluetooth allows multiple devices to communicate with a computer over a single adapter. For Microsoft Windows platforms, Windows XP Service Pack 2, Vista, and Windows 7 all have native support for Bluetooth. (Previous versions required users to install their Bluetooth adapter's own drivers, which were not directly supported by Microsoft.)

Some of the more common applications of Bluetooth are:

§ Wireless control of and communications between a mobile phone and a hands-free headset. This was one of the earliest applications.

§ Wireless communications with PC input and Output devices, the most common being the mouse, keyboard and printer.

§ Replacement of traditional wired serial communications used in: test equipment, GPS receivers, Medical equipment, bar code scanners, and traffic control devices.

§ Between game consoles such as Nintendo's Wii, and Sony's Playstation and their respective controllers.

§ Between video camera and remote monitor in Baby Monitor Systems.

§ Between Garage Door Opener Motor and Remote Garage Door Opener Controller.

As you can see from this list, there are many reasons for computer devices to communicate with each other. Here is a quick computer communications concept tutorial. When any two devices need to communicate, they have to agree on a number of things before the communication can begin. The first point of agreement is physical: Will they talk over wires, or through some form of wireless signals? If they use wires, how many are required; one, two, eight, 25? Once the physical attributes are decided, additional questions arise, such as how much data will be sent at a time? For instance, serial ports send data 1 bit at a time, while parallel ports send several bits at once. And, how will they speak to each other? All of the devices in an electronic network need to know what the bits mean and whether the message they receive is the same message that was sent (i.e. checksums at the end of a message).

This means developing a set of commands and responses commonly known as a Protocol. Bluetooth is essentially a networking standard that defines these two levels, physical and protocol. Bluetooth protocols simplify the discovery and setup of services between devices. Before any communications can take place between two Bluetooth devices, they have to be paired. In order to pair two Bluetooth wireless devices, a password (or PassKey) has to be exchanged between the two devices. A Passkey is a code shared by both Bluetooth devices, which

proves that both users have agreed to pair with each other.

A very brief description of Bluetooth pairing is as follows: Bluetooth Device A looks for other Bluetooth devices in the area. Bluetooth Device A finds Bluetooth Device B. Bluetooth Device A prompts you, the user, to enter a password (or PassKey). Bluetooth Device A sends the Passkey to Bluetooth Device B. Bluetooth Device B sends the Passkey back to Bluetooth Device A. At this point, Bluetooth Devices A and B are paired and able to exchange data. Data between the devices will be accomplished wirelessly, over-the-air, a great boon to those who dislike the "rats nest" of wires typically found behind electronic devices.

So, although dentists probably cringe when they hear the term, with all the computer devices you may have or are thinking of getting, there's probably a Bluetooth in your future.

Phil Sorrentino is President of Sarasota PCUG, Florida. From the October 2011 issue of the Sarasota PC Monitor. Web: <www.spcug.org>. E-mail <president (at) spcug.org>.

**Dick's Clicks
By Dick Ramette**

Just imagine where we'd be if the Apple that fell on Sir Isaac Newton's head had been an iPad 2. Instead of merely discovering gravity, he would have gone on to invent the App Store and the Internet.

A few months ago I was astonished to have an iPad 2 fall into my life as a surprise birthday gift from my Chicago son's family, and I've been discovering good stuff ever since. My first challenge was to resist addiction to games such as Angry Birds, Scramble and Solitaire.

Gradually I've come to spend more time with my iPad than with my PCs. It's far from a complete replacement, but this tablet sure is a comfortable convenience. It's a huge improvement over my beloved iPod Touch, which remains my choice for music while walking. The first thing I do each morning is to move my iPad from its charger to the sofa so that it's available as an adjunct to the Arizona Daily Star, using my WiFi connection and the Safari browser.

My most-used Apps are the NYTimes, HuffPost, Weather Channel, What'sOn for the TV schedule, Flixster for what's playing at Desert Sky, CCGV of course, Merriam-Webster dictionary which understands my voice, and HiCalc calculator. I also view my favorite comic strips, political cartoons and check my e-mail, which remains on the server for later viewing on my PC.

There's a neat App called HSW HD, for How Stuff Works, which is like that proverbial box of chocolates where you never know what you're gonna get. It's fun to browse HSW with finger swipes, and I spotted an essay by Jonathan Strickland titled "How will computers evolve over the next 100 years?" You can also find this on the Web at <http://www.howstuffworks.com /computer-evolution.htm>.

Another box of candy is Science360, an inexhaustible collection of pictorial goodies from the National Science Foundation. And when my 2003 Buick has aged a couple more years, I'll surely use CarZen to browse auto models with complete price and specs information.

SEMCO Meeting Pictures

(Above) Richard Tapaninen, He-Who-Watches, and Bob Clyne. Mr. Tapanen, of "Micro Center" talked about holiday tech gifts. (Below) Tom Callow discussed emergency data recovery.

SIG-Programming (Prov)

10-29-2011 Meeting of provisional SIG-Programing. Now studying "Just BASIC.".

BOARD MEETING
11/13/2011
By Chuck Moery

Board Members Present

President Mike Bader, Vice President Richard Jackson, Treasurer Bette Gay, SIG-Computing Chairman Tom Callow, SIG-Advice Chairman Franz Breidenich, Publications Committee Chairman Warner Mach, and Member-at-Large Bob Clyne. Also attending were Sikander Rashid, and Chuck Moery. The board meeting was called to order at 12:05 p.m.

Old Business

Bette Gay reported that the current treasury amount equaled a total of $9,532.24 with $4,780.73 in the checking account and $4,751.51 invested in three Certificates of Deposit. The membership currently is 80.

Bob Clyne moved to authorize two Board Member-at-Large positions for 2012. Tom Callow seconded the motion and it was carried.

After some discussion, it was decided that the planning session will be at noon on February 4, 2012 with a fallback date of February 18, 2012 in case of bad weather on the fourth. The location is to be determined.

The proposed Bylaws revision will be published in the December 2011 issue of the DATA BUS.

New Business

Richard Jackson moved that SIG-Programming be provisionally recognized as a SIG. Tom Callow seconded the motion and it was carried.

Richard Jackson will contact Pamella Tabak of Computer Tutor Inc. to set up

a virtual meeting. The details are to be determined.

Bob Clyne moved to adjourn at 1:48 p.m. Tom Callow seconded the motion and it was carried.

ShowOfHands lets me see user opinions on numerous personal and political questions, displayed in pie charts for all states and for the nation as a whole.

So far I haven't read a book on my tablet, but I could. I've streamed movies from Netflix, looked at my photo collection and played my iTunes music. Really, there's no going back. My iPad, my recliner chair and I are at one with each other!

Quote of the Month: "…there may be no meaningful difference between computers and humans within 100 years. In that world, we'll be transformed into a new species that can improve upon itself at a pace unimaginable to us in our current forms. Whatever the future may hold, it's a safe bet to assume the machines we rely upon will be very different from today's computers."—Jonathan Strickland

Dick Ramette is President of the Computer Club of Green Valley, AZ. Article from the October 2011 issue, Green Bytes. Web: <http://www.ccgv. apcug.org>. E-mail: <Rwramette (at) mindspring.com>.

SPECIAL INTEREST GROUPS (SIGS)

SIG-COMPUTING
Tom Callow

Dec. 11: 1:45 p.m. The Best Free Software for Windows: How and where to find it: SIG-Computing Chairman Tom Callow will talk about how to find the best free Windows programs for your computer and identify some of the free programs you might want to put at the top of your list.

SIG-PROGRAMING
A Provisional SIG
Richard Jackson

Date TBD: At the home of Richard Jackson. Contact Mr. Jackson for full details: (248)-546-3694. **Topic: TBD.**

SIG-TECHNIQUES
Warner Mach

Dec. 11. 13: 3:45 p.m. : Just BASIC: Warner Mach, Richard Jackson, and Bill Landrum, of "Provisional SIG-Programming" will discuss the motivation for starting the group and the current exploration of (free) "Just BASIC" as the language that allows users to reclaim their computer.

SIG-ADVICE
Franz Breidenich

Dec. 20 (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

Dec. 27 (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: TBD.**

Jan. 2012 DATA BUS DEADLINE (7th day after 2nd Sunday in month)
SEMCO Input and Members' Ads—Deadline: Sun., Dec. 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

Dec. 7, 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: General Meeting and Christmas Party.

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)

Dec. 10, 9 a.m.-noon (2nd Saturday) Groveland Twp. Fire Hall, 3085 Grange Hall Rd. & Dixie Hwy., Holly, MI. 48442. Ron McCauley 810-629-9683. Topic: TBA.

MacGroup-Detroit

Dec. 18, 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: "Photoshop Elements 10 and Music with David Syme." SIGs: 2:00 PM.

MacTechnics, (MAC User Group)

Dec. 17, (3rd Saturday); See web site for meeting time and location. <http://www.mactechnics.org>). JoAnn Olson at 248-478-4300. Topic: "Holiday Party."

MDLUG (Metro Detroit Linux User Group)

Dec. 10, 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: Hardware detection.

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)

Dec. 13, 6:00 p.m., (2nd Tuesday): Farmington Community Library-Main Branch, 32737 W. 12 Mile Rd., Farmington Hills, MI. 48334. <http://www.mug.org>. Topic: TBA.
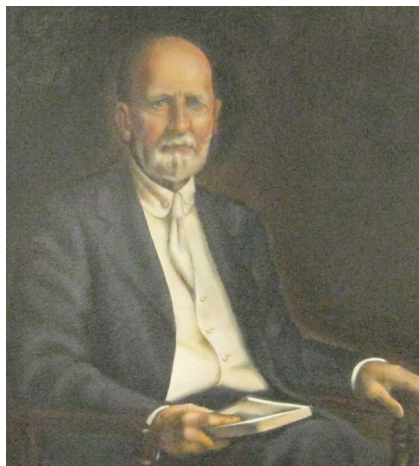
Oak Park Computer Club

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)

Dec. 6, 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: "Windows8 - A First Look; by Michael Bader of Lan Solutions."

He Who Watches.

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
AutoCAD: Comptois
Genealogy: Cook
IBM PC Hardware Issues: Clyne, Yuhasz
Operating Systems: Callow, Clyne, Yuhasz
MAC Hardware and OS Issues: Yuhasz
Security: Bader

MS Office for Windows: Callow
MS Word: Clyne
Networking: Callow
Novell Netware: Yuhasz
Quicken: Clyne
Geocaching: Cook
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

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

Dec. 11—SUNDAY (Meet 2nd Sunday)

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

SEMCO <u>General</u> Meeting at 1:30 p.m.

<u>S</u>pecial <u>I</u>nterest <u>G</u>roups (SIGs)

SIG-COMPUTING, 1:45 p.m., The Best Free Software for Windows: How and where to find it: SIG-Computing Chairman Tom Callow will talk about how to find the best free Windows programs for your computer and identify some of the free programs you might want to put at the top of your list.

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

SIG-TECHNIQUES, 3:45 p.m. Just BASIC: Warner Mach, Richard Jackson, and Bill Landrum, of "Provisional SIG-Programming" will discuss the motivation for starting the group and the current exploration of (free) "Just BASIC" as the language that allows users to reclaim their computer.

SIG-Programming, Date TBD: At the home of Richard Jackson. Contact Mr. Jackson for full details: (248)-546-3694.

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SIG-LINUX, Dec. 27 (Tues): 6:45 p.m.: At Motor City Free Geek, 1511 Jarvis St. Suite #10, Ferndale, MI 48220. **Topic: TBD.**
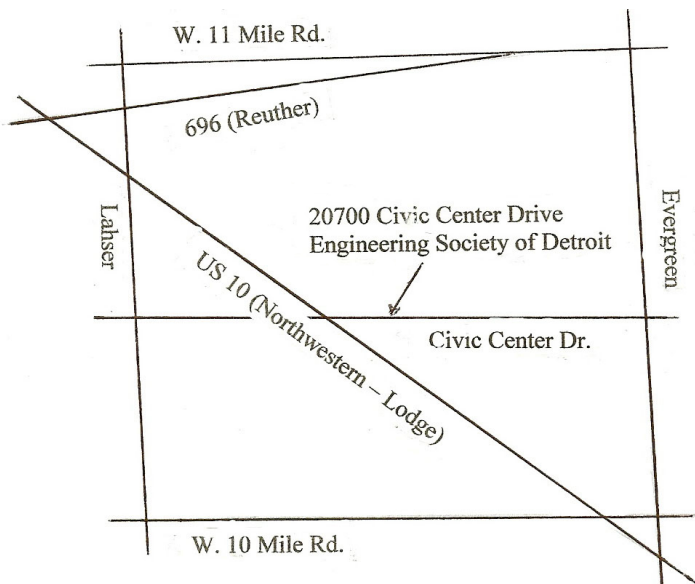
<u>Jan. 8–SEMCO Sunday</u>

http://www.semco.org
PUBLIC INVITED

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

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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.