SEMCO

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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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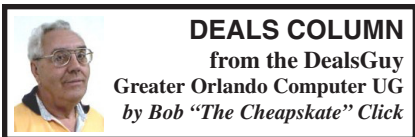
DEALS COLUMN
from the DealsGuy
Greater Orlando Computer UG
by Bob "The Cheapskate" Click

I read about a Florida company (CellAntenna) that makes some interesting products. One of them is called the CJAM 100 Portable Personal Cellular Jammer that is capable of blocking cellular communications in a relatively small area. I understand it's against the law to jam cellular signals, but this product is only sold to government agencies. Wouldn't it be nice to have such a device activated when you are sitting in a restaurant with people around you talking on their cell phones as though the other party can't hear well? You've probably been there, but maybe I am more unlucky than most in that regard. I can think of a few other situations where that product might be handy. Embedded in the highways might be nice so drivers could concentrate more on their driving than talking with their friends. On the other hand, it wouldn't keep drivers from all the other bad habits we've all seen such as eating, drinking, applying makeup, reading (I've seen that), and many other things while driving down the road. Check the article in Information Week magazine. <http://www.informationweek.com/showArticle.jhtml;jsessionid=RL5XSD3YKDHTKQSNDLRSKHSCJUNN2JVN?articleID=191901845&queryText=IT+Confidential> [*Personally, I find people carping about other people using cell phones much more annoying than anyone using a cell phone.* –Ed.]

Something else I read about is "LifeShirt," which was created by VivoMetrics a few years ago and has been tested and researched by various

companies for different purposes. It is capable of measuring some 30 biometric readings for people who might be severely ill. It keeps the data on a flash card for whatever use is needed so that vital data for a patient can be tracked. However, I didn't see anything about measuring hormones, but I guess, if you were critically ill, that might not register. I think my wife should get me one for our anniversary so she will know my moods. However, at this point in my life, it is doubtful much of anything will affect my heart rate unless the doctor says I will probably stick around for another three months. (until my next appointment) <http://www.vivometrics.com/>.

Out With The Old, In With The New (And Better)

You all know Dave Whittle. He has presented products at your meetings and entertained you in the process. He has a new and different deal for us and is offering me the first opportunity to spread the word about the special offer on new laptops. I have noticed a trend for some people to even use them for their desktop so perhaps that way you only have to invest in one computer, but a versatile one. Since you all know him, I asked him to tell it in his own words below:

"Good news for those of you in the market for laptops. I've arranged for DealsGuy readers and user group members everywhere to get a 6% discount on genuine ThinkPads! Most of us remember them as IBM ThinkPads but IBM sold that division to Lenovo, so now they're called Lenovo ThinkPads, but the engineering, quality, and service are still the same. People prefer ThinkPads because they have great human factors (such as elegant design, lightweight, battery life, and durability) and offer such nice features as spill-resistant keyboards, a built-in keyboard light, choice of a TrackPoint or Touchpad for controlling a mouse, the Active Protection System (which prevents hard disk damage from shock or dropping), dual antenna for better wireless reception, and a variety of great system software to make life easier, which IBM calls 'ThinkVantage Technologies.'

"Also, be sure to get the integrated fingerprint reader as well, if you care about keeping your laptop data secure. ThinkPads are more reasonable than you might think for the quality you get (prices start at under $680), especially considering you can get 6% off the Web site prices (see below). What's more, the Gartner Group estimates that ThinkPads save you 20% to 30% compared to other brands on the total cost of ownership over the life of the laptop, due to factors such as better testing and easier maintenance, durability, and usability. Here's how to get this special 6% discount on the ThinkPad configuration of your choice. Simply call Lenovo's user group inside sales rep, Isaac Williams, directly for help in configuring your system, or to get answers to your questions. Call 1-877-338-4465, Option 1, Extension 6322. Just tell him the name of your user group and give him the discount code for user groups, which is 42390. Alternatively, for fastest response, you can just go to <www.lenovo.com/products/us/en> and click on 'ThinkPad notebooks,' and then on the Series you'd like to configure. After you choose all of the options you want, click Add to Cart, and then click on E-mail this Page. E-mail it to <dave.whittle@usa.net>, and he will quickly forward it on to Isaac, who will contact you to confirm the order, answer questions, and get your payment information. That's all you need to do to save between $40 and $210 on your new laptop, while ensuring that you get the very best laptop available, customized just for you, and as quickly as possible."

I asked Dave about them being Vista compatible, and they are, except for perhaps the low priced ones. Ask! He gave no deadline for the deal, but I wouldn't wait too long for this great saving.

Are You Into Mapping?

ArmCode has released Arm Map Explorer, which recreates all the functionalities of Google Maps while

adding new ones like viewing a map with a coordinate grid on it, getting precise coordinates of any location on a map, moving to a needed location based on specified coordinates, and more. This software brings Google Maps to your desktop and lets you find any location on the planet, like cities, borders, roads, and other cartographic objects, and view them as dynamic interactive maps. You can drag such maps so you won't have to click and wait for graphics to reload each time you want to view adjacent parts of a map. Basically, Arm Map Explorer 1.0 allows you to work with interactive maps in much the same way as you would with a regular street map.

However, Arm Map Explorer 1.0 goes beyond the feature set offered by Google Maps. You can move to a needed location on a map based on the coordinates you specify. Using the object tree, you can easily locate and view capitals of states, large cities, world landmarks, monuments, international airports, and other interesting buildings and locations. You can also save a map as a file, or print a map to take it with you on a trip, and use it as a regular paper map. It can, for example, help you study geography, both physical and economic. The program will display a satellite view for any locations such as hydroelectric stations, cities, and other large objects. You can zoom the view in and out and pan in any direction.

Arm Map Explorer 1.0 runs under Windows 98/NT/XP/2000/2003, and you can get it without any payment or registration. Additional information on Map Explorer, as well as its installation distributive is available from <http://www.armcode.com>. ArmCode is a software developer that specializes in cartographic software. Along with XMAP, the company is the author of Alien IP and ZIP Pointer. Alien IP locates a computer on a map based on a specified IP address. ZIP Pointer locates a city in North America on a map based on a specified ZIP or postal code. For more information, visit the ArmCode Web site.

Product page: <http://www.armcode.com/map-explorer/index.htm>.

Direct download link: <http://www.armcode.com/downloads/map-explorer.exe>.

Postal address:
Pacific Business Centre, Att: ArmCode, #101 - 1001 W. Broadway, Suite 381, Vancouver, BC V6H 4E4, Canada Tel: +1 (206) 338-6423.

That's it for this month. Be aware that I have recently posted some new announcements, recently received, on the New Product Announcements Page on my Web site. Meet me here again next month if your editor permits. This column is written to make user group members aware of special offers or freebies I have found or arranged, and my comments should not be interpreted to encourage, or discourage, the purchase of any products, no matter how enthused I might sound. Bob (The Cheapskate) Click <bobclick@mindspring.com>. Visit my Web site at <http://www.dealsguy.com>.

Digital Resolution Made Confusing
By Dave Chrestenson

There seems to be a plethora of articles on the number of pixels required to create your photos to their full glory. Many of the articles disagree with each other and some are mystifying (to say the least); occasionally a few are

wrong. So here I will approach it from a different point of view. I'll give you the knowledge and let you decide what you need. Ready? Here we go!

Let's start with some facts. (I'll reconsider these later, but we have to start somewhere.) First, the average eye, relaxed, focuses at a distance of about fifteen inches. So, that's about the distance people view their prints.

Second, the angle of comfortable vision (not acute) is generally agreed to be about fifty to fifty-five degrees. Beyond that is peripheral vision. Now, fifty degrees at fifteen inches subtends a distance of about thirteen inches, just covering the diagonal of an 8 x 10. Is it any wonder that size is so popular?

And third, the typical eye has a resolution of about one minute of angle. This works out, at fifteen inches, to about .004 inches, or approximately 229 dots in an inch. (For purposes of clarity, I will use the term pixels when referring to the camera sensor and dots when referring to the print. But in this discussion, they can be considered equivalent. (Don't compare this with the resolution (normally also referred to as dots) of printers. They are completely different animals.) (Subject for another article?)

For convenience and to assure a tolerance, for now let's round that up to 300 dpi. This means that we need 300 dpi (at 15 inches) on the paper to assure that we won't see individual dots. Now, it's easy enough to work backwards from there. Assume that we wish to print an 8 x 10. Ten inches across at 300 dpi is 3000 dots. Eight inches down at 300 dpi is 2400 dots. So, we need a camera of 3000 x 2400 pixels, or 7.2 meg. (This is assuming a camera with square pixels, not all have that.

The Fuji S3 for example has hexagonal pixels, two sizes, no less.) (Subject for still another article?) Simple huh? Maybe.

But let's try another example first. Assume you just want to print a picture half that size; 4 x 5 is more common. Then 4 times 300 equals 1200 and 5 times 300 equals 1500, so our camera need only be 1.8 meg. That's not so bad, is it? But before you dash right out to buy a 2 meg camera on sale, let's take a look at some of those original figures.

I said that the average eye views an image at 15 inches. That's an "average" eye. It can vary from that... a lot. Depending on age, it can go from 3 inches (a youngster) to more than 6 feet (an old timer). And that's for an eye that's working well. Near-sighted? You'll hold the picture closer (assuming you don't wear corrective lenses, of course). Far-sighted? Further away. Have astigmatism? A mess! So, if you hold your picture at 7.5 inches, you will need twice the number of pixels, or 600, per inch. An 8 x 10 would require a 28.8 meg camera. Good grief! Thirty inches viewing distance is a lot easier; a 1.8 meg one will do the job. Also, some eyes can see significantly better than one minute of angle; some can reach ½ minute. That's even worse; you need 600 dpi at 15 inches, which means we're back to a 28.8 meg camera for an 8 x 10, and a 7.2 meg one for a 4 x 5. But you can do the math. And do you really need to have the dots as small as theory suggests? Well, to make it more confusing, there are other considerations that affect that. Bright lighting needs higher resolution; dim lighting needs less. Glossy paper? Higher resolution. Matt paper, less. High contrast image, more; low contrast, less. Ad infinitum.

Finally, what if you have taken the definitive photo of Yosemite, the one to equal Ansel Adams, and you want to have it printed at, say, 16 x 20 and frame it. Do you still need 300 dpi? Probably not. After all, people don't normally hold a 16 x 20 in their hands and look at it from 15 inches. Remember the 50-degree vision. So, you'll probably be hanging it on the wall, where they will view it from a distance. Experience shows that people will move backward or forward when viewing a picture until it subtends that 50-degree angle. So you might well get away with 150 dpi.

But, getting back to the more normal usage, handheld prints, do you need 300 dpi there? Again, maybe. In many cases, you may get away with less. But if you go below 150 dpi you are almost certain to get obvious visual pixilation at that distance. Of course, Photoshop to the rescue, you can re-sample upwards and increase the number of pixels to what works. You're not adding detail, but at least you're getting rid of those annoying "jaggies."

Clear? I didn't think so. Remember, I said "Made Confusing." But at least you are now confused on a much higher plane! Good luck.

Fox Valley PC Association Editor's comments: *Dave has presented several programs over the years that have gone into great detail on various aspects of digital photography. From cameras and lenses and from basic photo software to the flagship of the genre: Adobe Photoshop. His knowledge has always impressed me and we always enjoy his point of view on this topic. He presented a program last month: "Pursuing the Path From Pixels to Pictures," which could have easily gone late into the* *afternoon. All present enjoyed his program. Thanks Dave!*

Jon Jackman

Dave Chrestenson is a Member of the Fox Valley PC Association, Illinois and a Digital Photographer/Hobbyist.

There is no restriction against any non-profit group using this article as long as it is kept in context with proper credit given the author. The Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organization of which this group is a member, brings this article to you.

Adobe InDesign CS2
(Software Review)
By Bob Clyne
Associate Editor

InDesign is a desktop publishing application. It is the successor to Adobe's venerable PageMaker. InDesign has gone through several revisions since it first came out, with CS2 being the current designation. Desktop publishing applications let the user do the layout of the publication, position stories and graphics, even out the columns and let you fit the material to the space available.

There is a lot to like in InDesign. The biggest improvement over PageMaker is the unlimited levels of "Undo." PageMaker had only one level of "Undo," and even that did not work in many instances. You no longer have to specify a "Compose to printer" as you did in PageMaker. This is a welcome change if you have to print the document on more than one printer or use the document on more than one computer. The tracking can be changed in thousandths of an inch instead of the

limited choices available in PageMaker. For those of you not familiar with the term, tracking involves the spacing between letters and words, and it is nice to be able to do fine adjustments to it, to, among other things, eliminate those too short lines at the end of a paragraph or those single lines of a paragraph at the beginning or end of a column of text. There are other ways to handle those problems, but tracking is a nice tool to have available.

Another very nice feature of InDesign is the ability to specify character styles. This can be handy, for example, if you change all of the hyperlinks to black with no underline for the print version of your publication and then set them to blue with an underline for an online PDF version of the publication with live hyperlinks. We do that with the DATA BUS because blue gets grayscaled and is less clear in print, and the underline can mask underscores in the URLs. With character styles, it should be much easier to switch them back and forth.

InDesign will open PageMaker files, but will not save or export a publication in PageMaker format. One somewhat strange behavior though was that there was a lot of text reflow in the PageMaker publications when they were opened in InDesign. All of the articles became shorter. The fonts used in the publications were all Adobe Type 1 fonts. The problem may have been due to the "Compose to printer" setting in PageMaker, since I have seen this in PageMaker when changing the "Compose to printer" setting.

If you have been using PageMaker and are considering switching to InDesign, expect a learning curve. Most of the same things are there, and many of them are easier to get to, but

some of them will probably take you a while to find. InDesign does have an option to display a PageMaker toolbar, which helps a lot, but there are still some things buried where you might not expect them.

InDesign has a spell checker and a Find/Change facility. I still recommend doing most of the editing of your stories in a word processor, but InDesign has good tools to handle the ones you miss in the word processor.

Leading and vertical positioning are handled differently in InDesign than they were in PageMaker. InDesign uses only baseline leading, whereas PageMaker defaulted to proportional leading. InDesign does provide various settings for the first line baseline, but they can be a challenge to find. The leading itself can still be adjusted.

Gone is the ability to have text blocks outside of frames. I always liked text blocks because the top and bottom of the block jumped to the top and bottom of the text. If the top and bottom of the text block lined up with the guides, you knew that the column was the right length. With frames, the top and bottom bear little relationship to where the text starts and ends. Adobe does give you the tools mentioned in the previous paragraph to help position the text, and they also provide a setting to justify the text vertically to the frame, but this can result in the lines in side-by-side columns not matching. This is not an issue with columns that are solid text from top to bottom with no font size changes, but can be tricky if there are multiple frames in one column or graphics in a column. The tools are there to cope with it, but it is more complicated. I think frames are more appropriate when the layout is decided

in advance of placing the story and a fixed amount of space is allocated to the story rather than where the story is allowed to end where it naturally ends.

The "Display hidden characters" works in InDesign. I could never get it to work in PageMaker.

Inserting special characters, white space, and breaks is much easier in InDesign. Most of the special characters (like Em and En dashes, non-breaking hyphens, and ellipsis), white space characters and breaks are on a flyout off the Type menu. Some, like the inch and foot marks, are missing though. For those, you have to go to the Glyphs palette, which is slightly more complicated. I wish they would give the character name in the little window that appears when you hover the cursor over a character though, the way it works in Windows Character Map. Most of the characters are obvious, but a few are rather obscure. In PageMaker, I always used to have to go to the Special Characters in the Help and get the keystroke combinations for the special characters.

An area that I think could stand improvement is nested lists. Either bullet or numbered lists by themselves are fairly straightforward, but nested lists are a nightmare. I may be spoiled by the easy way that Microsoft Word handles these, but InDesign's approach is a pain. If you want to create a numbered list with one or more nested lists, you have to create a new outer list and specify the starting number any time you want to have a new numbered item. I think you should be able to select lines within the numbered list and just click on bullet list button to have a bulleted list within the numbered list and the following items renumbered in

sequence with the preceding numbers. You shouldn't have to go through what InDesign makes you do.

You have to agree to the End User License Agreement (EULA) when you install the program, but I could not find a way to display the EULA after the program was installed. I would think that the vendors would want to make it easy for the user to review the EULA after the program was installed, in the hopes that the user would then be less likely to violate the license. Adobe is not alone in making the EULA difficult to find after installation. The EULA is available in PDF format from the Adobe Web site, but I think the user should not have to hunt for it.

Each page or spread in InDesign has its own pasteboard. The pasteboard is the area outside the publication. This is fine much of the time, but I wish there was a setting to make all of the material on these pasteboards available on all the pages. Sometimes, it is handy to have all of those things available where you can see them and drag the one you want onto the page, rather than having to locate the page and do a cut or copy and paste.

I encountered a rather disconcerting anomaly when inserting this article into this publication. The article was originally written in MS Word 2000. When I performed the Place operation, InDesign created the text frame, but there was no visible text in it, just a blank looking text frame. I tried it several times with the same result. I rechecked the file in MS Word, and it looked fine. I tried Placing it in PageMaker 7—no problem. I selected the frame and clicked Edit | Edit in Story Editor, and it was all there, but when I exited the Story Editor there was still no text visible in the frame. The solution

turned out to be to apply a style to a section of the story in InDesign. When I did that it all became visible. I consider this very strange behavior on the part of InDesign, and it cost me several hours of wasted time. I only experienced this problem with this article.

InDesign requires activation to use for more than a few days. I do not know if it "phones home" periodically after that. I hate products that require activation. InDesign is licensed for a single computer, but there is a provision in the license to also allow installing it on a portable or home computer.

Due to Adobe's new user group review process, this review was done on a trial copy of the software rather than the retail version. The trial version would not update past version 4.0, even though there appears to be an update to version 4.0.4 on the Adobe Web site. I downloaded the update, but it would not install. The trial version is only good for thirty days, so I was limited to that much time to learn the product and write this review.

InDesign is an excellent desktop publishing application, if you can live with the activation requirement, the learning curve, and the cost. InDesign has a lot of power and a lot of tools to help you "get it right," but you have to learn to use the tools in order to produce a polished publication. You can produce good publications while you are learning, but if you want to produce an excellent publication, you need to learn how to use the tools.

The list price for the full version of InDesign CS2 for the PC is $699.

The street price for the same version seems to be from about $420 up.

Adobe Systems, Inc.
<http://www.adobe.com>

Utilize Windows XP Components to Improve Performance By Ira Wilsker

Many of us are plagued by what appears to be a sluggish computer with an overstuffed hard drive. Others are frustrated, alleging that their computers crashed because it appears not to boot. Fortunately for the users of Windows XP, there are several integral utilities built into XP that can be used to improve the performance of the computer, and recover from apparent crashes.

Since earlier versions of Windows, Microsoft has included a utility with the operating system that can check the hard drive for most errors, and actually repair many of the errors found. In these earlier versions of Windows, the utility was referred to as "Scandisk" or "Check Disk," but in XP the utility has the more generic moniker "Error Checking." The hard drive Error Checking utility can be accessed by clicking on the "My Computer" icon and right-clicking on the "C:" drive or other installed hard drive. This will open a window with many options; scroll to the bottom of the window and left-click on "Properties," and then left-click on the tab "Tools." Two options will be displayed, "Error Checking" and "Defragmentation." The "Error Checking" choice states that, "This option will check the volume for errors." Clicking on the "Check Now" button will start the utility. When opened, two more options are displayed under the heading "Check disk," which are "Automatically fix file system errors" and "Scan for and attempt recovery of bad sectors." The "fix file system error" selection will check the hard drive file system for

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defects, and attempt to repair any errors that are found. The "bad sectors" choice will digitally check the surfaces of the platters (discs) in the hard drive itself looking for defective sectors. If any bad sectors are found, the software will attempt to relocate any data found in those sectors, and block those sectors from future use. It should be noted that it is common for some bad sectors to be found occasionally, and that is not in itself an indication of pending hard drive failure unless the number of bad sectors is excessive.

The other utility shown under the "Tools" tab, which has been referred to as "defrag" will reorganize the data on the hard drive in an orderly fashion. This reorganization of the data will allow the hard drive to work more efficiently. By simply clicking on the "Defragment Now" button the program will execute. Defragmentation is one of the simplest tasks that the user can easily perform that will improve apparent performance, because, when defragmented, the hard drive can read and write data much more quickly. If the user had previously installed a third-party defragmenting utility, such as Executive Software's Diskeeper, that utility may load by default rather than Microsoft's integral utility. Many users who do a lot of work on their computers may find that a weekly defragmentation can promote improved performance.

Sometimes we may think that our system has crashed, because it does not boot properly. Sometimes we do things on our computers, like tweak the registry or install new software, only to find that we regret the action because now our computer is not working properly. We may say to ourselves, "Wouldn't it be nice if I could undo what I did?" Fortunately, Microsoft reinstated a feature previously available in Windows ME that allows us to go back to an earlier state on our computer. That service is called "System Restore." System Restore replaces the current registry and key system files with earlier versions that had been automatically or manually saved by the program. If the computer boots, System restore can be found by clicking on START—ALL PROGRAMS—ACCESSORIES—SYSTEM TOOLS—SYSTEM RESTORE. There are three choices in the System restore Window; "System Restore Settings" (left center of the window), "Restore my computer to an earlier time," and "Create a restore point."

Microsoft somewhat arbitrarily decided that 12% of our total hard drive capacity should be reserved for the system backups created by System Restore. On older computers with small hard drives, this amount may be reasonable, but on newer computers, with gargantuan hard drives, this is a crass waste of storage space. By clicking on the "System Restore Settings," the hard drive can be selected, and "Settings" will open a small window with a slider. The maximum setting is 12% of the hard drive, but any lesser amount may be selected. Some pundits recommend that about 4 to 6 gigabytes is a reasonable amount of space to dedicate for restore data.

The selection "Restore my computer to an earlier time" will open a calendar showing previous restore points, the available dates being in a bold font. By rule of thumb, XP makes a restore point after about every 10 hours of use, and before any major software products or Windows updates are installed. Clicking

on the latest date in bold, when the computer last functioned well, should restore the computer to its earlier state. Several provisos should be noted here. First, system restore only replaces the registry and key system files, but does not harm any or delete any data files, which are typically unaltered by the process. Second, is that if there were any viruses, worms, Trojans, or other malware previously infecting system files, restoring to that date will likely re-infect the computer.

If the computer fails to fully boot, it may be possible to boot the computer in "Safe Mode," which will display a user selectable choice when thus booted, giving the user the option of running System Restore. To boot into safe mode (on most PCs), tap the F8 key several times immediately after turning on the computer. This should open a screen giving the user the choice to boot normally, in safe mode, and other options; select safe mode. Upon loading a minimal operating system and drivers, a window will appear offering to continue into safe mode or allowing the system restore utility to be run. Running System Restore will restore the computer to a user selectable earlier date, often allowing the computer to boot and function normally, but without whatever caused it to crash initially.

If the user is considering making some software changes to the computer, such as installing new software or cleaning the registry, it would be a wise choice to select "Create a restore point" from the System Restore window. This will do as it says, create a restore point, which will allow the user to undo any changes made if desired.

These are but a few of the useful tools integral with XP. Future columns will cover additional tools in XP as well as the utilities included with Vista, the upcoming replacement for XP.

Ira Wilsker is an APCUG Director; Columnist, The Examiner, Beaumont TX; and a radio & TV show host. Contact him at <iwilsker@apcug. net>.

Should Your System Be RAIDed?
By Vinny La Bash

You may have heard fellow computer enthusiasts brag about their new fast RAID system as if it were a high performance sports car. If you wondered what they were talking about, you are not alone.

Just what does RAID stand for? The source of the RAID acronym can be credited to three University of California Berkeley professors named Patterson, Gibson, and Katz. In 1987 they published a paper named "A Case for Redundant Arrays of Inexpensive Disks (RAID)." The fundamental concept of RAID was to combine multiple small disks into an arrangement yielding greater performance than a Single Large Expensive Drive (SLED). If you can see the potential to combine the acronyms to make bad jokes, again you are not alone.

The main objection to RAID was that two or more disk drives are inherently less reliable than a single disk drive. The professors overcame the objection by showing that disk arrays can be made more reliable by storing data redundantly in various ways across multiple disk drives.

The paper defined five types of RAID arrangements, each offering

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different trade-offs in features and performance. Over time, more RAID configurations were added to the mix. The corporate world gradually adopted RAID, but it never took the PC world by storm because until relatively recently, disk drives were not "inexpensive."

At the core of RAID is a process called "striping." With several hard drives connected to a controller card installed in a motherboard slot, you can juice up read and write speeds by breaking the data into blocks (stripes) and storing these blocks across multiple disk drives. This allows data to be either recorded or accessed in multiple blocks simultaneously across multiple drives in parallel. Without going into technical detail, the parallel operation provides the increase in performance. Of the many RAID configurations developed since 1987 only two are likely to be incorporated into a PC, and one of those isn't really RAID at all because it has no redundancy. The other is true RAID, but does not use striping.

We'll start out with RAID 1, also known as Disk Mirroring. The title gives it away. In a two disk array you mirror the contents of one disk onto the other. With 100% redundancy, there is no need to do any kind of data restoration if one of the disks should fail for any reason. A few simple instructions allow you to use the mirrored disk until you can install a replacement for the failed drive. Reactivate your array, and you're back in business with no down time. The trade-off is that a second disk doesn't give you any additional disk space, nor does it appreciably affect performance one way or the other. If reliability and preservation of data are all important to you, then a RAID 1 array can make good sense. RAID 1 is relatively cheap, easy

to use, and costs about the same as most conventional backup solutions. Turn to RAID 1 when data integrity is more important than performance. To set up a RAID for your internal drives, you will need support on your motherboard or add-in card. Finally, you must still keep current drive backups to protect against user errors, viruses, and other problems that affect both drives.

Hard core gamers and other performance obsessed nut cases are almost always referring to RAID 0 when they brag about their PC speed demons. Most of them either don't know or care that RAID 0 is not true RAID, as it has no redundancy. Data is spread out among all the drives in the array, which means that if any one of your drives fail, all your data is lost. This is not important if you use your system solely for game playing, but how many of us do that? If you have important data stored on your system, RAID 0 can be a dangerous implementation that may ultimately trash every byte of information on your system.

A better way than RAID 0 is to install a hard drive with a disk cache of at least 8 Megabytes of RAM. Because computers can access data from RAM much faster than directly from a disk, caching can significantly increase performance, though it won't match RAID 0. Many cache systems also attempt to predict what data will be requested next so they can place that data in the cache ahead of time. [*The benefit of disk cache is dependent on the requested data already being in the cache. It is of most benefit when relatively small consecutive chunks of data are being requested by the system. Cache is of negligible benefit if the data being requested by the system is*

not consecutive or if a very large data stream, like a video, is being requested. —Ed.] This will never stop performance crazy freaks from using RAID 0. They all backup their systems regularly, don't they?

RAID 0 is for those enamored of performance where loss of data is of little concern. As an alternative, you can approach RAID 0 performance by installing drives with at least 8 megabytes of disk cache.

While it does not obviate the need for backup, a RAID 1 array can provide additional protection for those whose main consideration is preservation of data.

There are many different types of RAID configurations that we have not discussed. We have confined our dialog to RAID 0 and 1 because they are the most common arrangements on home computers. Most technical details have been left out for simplification.

[*There are RAID configurations that include both striping and mirroring. —Ed.]*

For a complete description of RAID, including animated diagrams of how data is actually stored, go to <http:// www.acnc.com/04_01_00.html>

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There is no restriction against any non-profit group using this article as long as it is kept in context with proper credit given the author. The Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organization of which this group is a member, brings this article to you.

Distinguishing Forests from Trees in Search Engine Results
By Gabe Goldberg

Some people cherish details without grasping the big picture. They can't see the forest for the trees, always miss the landscape's glory. Searching the Web can feel like this. Search engines cheerfully deliver millions of search result hits without revealing patterns or gaps in the data. Even worse, hardly anyone looks beyond the first screen of search results. Researchers are investigating how organizing search results provides contextual and visual cues that make searches more powerful.

We all know people who cherish tiny details but never quite grasp the big picture. They're figuratively unable to see the forest for the trees, missing the landscape's glory while obsessing over whatever grows in front of their nose.

Sometimes searching the Web feels like this. Google or any favorite search engine can cheerfully deliver a thousand—or two million—search result hits yet not reveal patterns, groupings, or gaps in what it quickly but mindlessly displays. Making things worse, hardly anyone looks at search results beyond the first screen or two; we either settle for one of the first few links, or add search words to prune our results. But this runs two risks.

First, we may miss a key Web site that for some reason isn't highly ranked by our search engine. Not everyone knows that search engines rank results using proprietary criteria; even worse,

ranking methods often change without notice, so identical searches days or weeks apart may yield very different results. Second, there's no clue or cue about search result patterns. And the human mind can't grasp a thousand – let alone two million—links to see what they might collectively reveal.

Enter Bill Kules and Ben Shneiderman, respectively Graduate Research Assistant and Computer Science Professor at the University of Maryland. They're investigating how organizing the display of search results provides contextual and visual cues that make searches more powerful.

Their technology, partially supported by an AOL Fellowship in Human-Computer Interaction, is ideal when searchers are unsure of the target or goal. This is a variation on the famous Supreme Court quote: searchers may not know what they're looking for, but they recognize it when they see it.

Results, arranged in meaningful and stable categories using structures created by Kules' SERVICE program (as opposed to the ad hoc clustering used by some commercial search engines), are shown in a compact listing in the left side navigation bar. Important text (title, snippet, URL) is arranged for efficient scanning and skimming. SERVICE retains benefits of the traditional ranked results list, while adding an overview.

The list allows efficiently scanning and skimming title/snippet/URL—which remains a critical task. The categorized overview adds another perspective on results, showing their distribution across categories. The overview also lets users explore results, narrowing them to a single category or subcategory.

Categorizing results is proving to change peoples' search style. For some searchers, the categorized overview simplified formulating queries. They issued a somewhat broad query and then browsed the appropriate category. Others used the overview to organize exploration of results, first perusing results in the Business category, then Science, Health, etc. Other users only used categories when frustrated by normal searching.

An interesting surprise is that empty categories—which might have been expected to include results—are in fact meaningful in some searches. For more information, visit <http://www.cs.umd.edu/hcil/categorizedsearch>.

The Part of Backup Nobody Mentions
By Vinny La Bash

There are dozens if not hundreds of ways to backup your data, but we're not going to talk about that. We're going to discuss the most important part of doing a backup, the part that is hardly ever mentioned. Do you believe that your backup is a sound copy of your data? Would you be at ease if all your files suddenly disappeared from your computer, and all you had was your backup to restore them?

If your confidence fizzled to zero, what's the problem?

You may have developed the most sophisticated and comprehensive backup scheme the computer world has ever seen, but you won't ever know if it's any good unless you test it. Without a valid method of testing, you can have no confidence in your backups. There are many things that can go wrong with a backup, some beyond your control, some not.

- Perhaps one day you were in too much of a hurry, and you made a backup of one folder instead of your entire system as you planned. Hmm, no wonder that backup completed so fast.
- Your backup disk got exposed to a magnetic field and scrambled all your data.
- The CD containing your data was left in the car, and excessive heat warped the media, making it unreadable.
- You encrypted your backup and lost the password to restore it.
- You upgraded your backup software, and now it can't read your old backups.
- Your new upgraded backup software program becomes corrupted, and you can't make a new backup or restore an old one.
- Your new backup program has a great innovative file compression scheme. However, it turns out that it compresses better than anyone expected.
- You upgrade your Windows Operating System and your backup software no longer works. (Rare, but it happens).

Let's stop here before you get too depressed to make another backup. What's important is to understand that a great many things can go wrong even with the best backup methods.

The only true test of your backup is to do a restore and see if it works. Does this mean you have to erase all your files, and then run a restore from your backup media? No. Fortunately, there are less chancy ways of verifying your backup data.

One thing you can do is install a second hard drive and restore your data files to the second disk. If your original disk has enough capacity, you can partition it into at least two sections, and restore into one of the new partitions. Hard drives have become almost dirt cheap, so this is not particularly expensive.

Another thing you can do is make at least three backups and store them in three different locations for safety. Keep one copy at home, but in a different room than your computer. Store a second copy at your office or a friend's house, and do the same for him or her. The third copy could be in a safe deposit box or similar secure location.

If you feel that such measures are not necessary, ask yourself if you are

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A Letter From Former Editor Bill Agnew

Hi Everybody!

SUNRISE IN CORRALES

For some weird unknown reason I have been wondering how one determines the time of sunrise. This is of particular interest because I live just west of Sandia Mountain, and on September 25 the sun peeked over the mountain 25 minutes after the newspaper and TV said it should rise (6:56 a.m.).

Google has some really complicated discussions of solar movements relative to the earth and algorithms for calculating the time of sunrise (did you know the earth speeds up and slows down during one revolution?). I couldn't understand all these calculations, but I did glean enough to see the following:

At noon at your location the sun has an azimuth of 90°; that is a line through your location from the center of the earth to the sun. A flat plane that is perpendicular to that azimuth line at your location has an azimuth of 0°, and defines the normal horizon. When the sun rises above that plane, it is "sunrise." Except that 0.8333 degree is subtracted from the horizon's azimuth to account for atmospheric refraction and the radius of the sun's disk (sunrise is when the sun peeks over the horizon). I didn't see any correction for the curvature of the earth; there shouldn't be, if your eye is next to the earth. If there is a mountain in the way, you simply tilt your horizon plane up from your location to the top of the mountain and recalculate the time of sunrise. If you are standing on top of a mountain, tilt your horizon plane down.

Now let's do a little math. Scaled from the map, the Sandia Mountain Crest is 9.7 miles from me, and the sun came up directly behind the crest on September 25. Also from the map, the mountain peak is at 10,678 feet altitude, and my village of Corrales, NM is at an altitude of 5015 feet. I figure my bedroom is about 30 feet higher than the Corrales center, so let's say my altitude is 5045, and the mountain peak is 5633 feet higher than me, i.e., 1.06 miles. If the mountain peak is 1.06 mile higher than me and 9.7 miles away, the tangent of the angle the horizon plane makes with horizontal is 0.109, and the angle is 6.23°. The 0.83° to account for refraction and the sun's radius need not be subtracted because we are only looking for the difference in azimuth between the sun peeking over the normal horizon and over the mountain crest. On the day I made my observation, the TV said both sunrise and sunset were at 6:56 o'clock, so 180° of sun travel (horizon to horizon) was 12 hours. And 6.23/180 times 12 hours is 24.9 minutes. That's close enough to my observed 25 minutes for an engineering estimate.

Now isn't that all something you needed to know?

<div align="right">Bill</div>

BOARD MEETING
10/08/2006
Carol Sanzi

BOARD MEMBERS PRESENT

President Gary DeNise, Vice-President Richard Jackson, Treasurer Bette Gay, Secretary Carol Sanzi, SIG-Advanced Chairman Franz Breidenich, SIG-IBM Co-Chairmen Tom Callow and Warner Mach, SIG-IBM Intermediate Chairman Carl Massie, Jr., and Members-at-Large Bob Clyne and Chester Blechinger. Also present were Chuck Moery, Bill Landrum and Internet Committee Chairman Mike Bader. The meeting was called to order at 12:03 p.m.

OLD BUSINESS

Bette Gay reported that there is $7,309.43 in the treasury. The membership stands at 81. It is time for Jack and Claire Baum, Richard W. Dzick, and Zalmen H. Wexler to renew their memberships.

Tom Callow moved to reimburse Warner Mach $7.39 for refreshments. Bob Clyne seconded the motion, and it was carried.

Bette Gay agreed to check on some options for monies held in SEMCO's treasury. There are some savings accounts or money market accounts that would yield a better rate of interest.

NEW BUSINESS

Samuel Cheek was this month's winner of a complimentary SEMCO membership on WJR's "Internet Advisor" radio show. When contacted by Richard Jackson, he decided to decline the membership.

Richard Jackson would like to have a letter sent to WJR's Steve Stewart thanking him for supporting SEMCO. Carol Sanzi will compose the letter encouraging his continued support.

Mike Bader reported that the online SEMCO User Group is becoming active, with 19 members. Tom Callow moved to make the SEMCO database available to Mike Bader for use with the online User Group. Franz Breidenich seconded the motion, and it was carried.

Bob Clyne announced that he plans to review Adobe InDesign. The evaluation will help decide if that program would be better than PageMaker to use to create the DATA BUS.

SEMCO is still in need of a DATA BUS editor. A discussion took place on a personal approach to enlist volunteers. Richard Jackson moved that a letter should be sent to all members requesting a volunteer to fill the vacant editor's position. Chester Blechinger seconded the motion, and it was approved with one opposed.

Bob Clyne mentioned that our agreement with ArvinMeritor is for SEMCO to vacate the building by 6:00 p.m. Gary DeNise emphasized that the rooms should be left clean and with chairs pushed in with the microphones turned off. Members are to comply with ArvinMeritor's rules.

Tom Callow moved to adjourn. Franz Breidenich seconded the motion, and it was carried. The meeting adjourned at 12:40 p.m.

ready to perform the ultimate test. Would you feel totally at ease erasing your hard disk today and restoring it from your backups? If not, then think again.

Vinny La Bash is a Member of the Sarasota Personal Computer Users Group, Inc., in Florida
   <vlabash(at)comcast.net>
   <http://www.spcug.org>

SIG-IBM
Tom Callow
Warner Mach

November 12: Microsoft Windows Vista revisited: SIG-IBM Co-Chairman Tom Callow will demonstrate the newest beta of Microsoft's latest version of Windows, which is expected to hit retail stores early next year.

SIG-ADVANCED
Franz Breidenich

December 4, 2006: (First Monday), 6:45 p.m, at the Oak Park Library. The library is located at 14200 Oak Park Blvd., Oak Park, MI. Phone: (248) 691-7480. **Topic: Wide ranging discussion of computers and computing.**

NOVICE-IBM GROUP
Rotating Volunteer Hosts

November 12: Help Q & A:
Discussion directed by the audience. No question is too simple!

SIG-IBM INTERMEDIATE
Carl Massie, Jr.

November 12: SIG-IBM Intermediate Chairman Carl Massie, Jr., presents:
1. Tech shopping
   - Return periods and restocking fees
   - Vista compatible vs. Vista factory
   - Routers—technology or marketing
2. Internet Explorer (IE)
   - IE7 Arrives
   - Download now or update later
   - New interface and features
3. Safely let holiday visitors browse
   - Limited User Account (LUA)
   - Torpark—anonymous USB browser
4. Understanding what's permitted
   - One account and many groups
   - whoami, gpresult, logonsessions
   - Attributes, Either, fIle, fOlder
   - AGULP is the only right way—Accounts, Global, Universal, Local, Permissions

December 2006 DATA BUS DEADLINE (7th day after meeting)
SEMCO Input and Members' Ads — Deadline: Sun., November 19, 11:59 p.m.
Members' personal ads are free. To mail, use Editor address on Page 2; e-mail address: <clyne@lodden.com>. PLEASE send to arrive sooner than deadline.
Business Ads - Deadline: Second Friday monthly. Contact the Editor (address Page 2).

Bob Clyne
clyne@lodden.com
(to post monthly computer group info)

**CALENDAR-OF-EVENTS
OTHER GROUPS**

COMP (Computer Operators of Marysville & Port Huron)
December 6, 7 p.m., (1st Wednesday); St. Clair County RESA, 499 Range Rd., Marysville, Admin. Building. Jane Wheatly 810-982-1187 <http://www.bwcomp.org>. Christmas party; call for information.

DCOM Computer Club
November 10, 6:30–8:30 p.m., (2nd Friday); Henry Ford C.C., Patterson Tech Bldg, Ford Rd/Evergreen, Rm T143, Parking Lot C. Info: Doug Piazza 313-582-2602.

FACE (Flint Area Computer Enthusiasts)
November 14, 6:30 p.m., (2nd Tuesday); Kettering Univ. Academic Bldg. Rm I-817 (enter Security Door, back of bldg by parking lot). <http://www.gfn.org/FACE/>.

MacGroup- Detroit
November 19, 2:15 p.m.–5 p.m., (3rd Sunday): Birmingham Temple, 28611 W. 12 Mile Rd., Farmington Hills. Info: Terry White, <terry@macgroup.org> or 313-571-9817. <http://www.macgroup.org>.Topic: James Lee from Tropical Software, showing TopXNotes

MacTechnics, (MAC User Group)
November 18, 11:00 a.m., (3rd Saturday); (SIGs at 9:30); Ann Arbor Open School, 920 Miller Ave., Ann Arbor. <http://www.mactechnics.org>). Cassie at <cassiemac@yahoo.com> or 313-971-8743.

MDLUG (Metro Detroit Linux User Group)
November 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>. Info: Raymond McLaughlin 248-960-1864.

Michigan Apple Computer User Group
November 9, 7:30 p.m., (2nd Thur.); General meeting; Fraternal Order of Eagles Hall in Clawson, 174 Bowers St. (one block North of 14-Mile and one block East of Main). Avi Drissman 248-232-7865. Web: <http://www.themichiganapple.com>.

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

SHCC (Sterling Heights Computer Club)
November 7, 7:30 p.m., (1st Tuesday); 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: What's New for the Holidays.

Wayne State University Mac User Group
November 11, 10:00 a.m.–Noon, (2nd Saturday); at Mich.com, 21042 Laurelwood, Farmington. Information: Lorn/JoAnn Olsen 248/478-4300 or Denny MeLampy 248-477-0190.

Needed—Newsletter Editor

Tom McNorton has resigned as DATA BUS Editor, and we are in desperate need of a replacement. The DATA BUS is done in Adobe PageMaker, but we are seriously considering switching to Adobe InDesign, and if you become Editor you will have input in that decision. SEMCO will furnish the software.

You can expect to spend 18–24 hours a month on the DATA BUS once you learn the process, and I will help you with that.

There is no restriction against any non-profit group using this article as long as it is kept in context with proper credit given the author. The Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organization of which this group is a member, brings this article to you.

If you are willing to be Editor, contact me or any of the other Board members.

Bob Clyne
Associate Editor

October
REFRESHMENT DONORS
Warner Mach, Coordinator
Al Bochenek
Jerry Comptois
Gary DeNise
Betty MacKenzie
Roland Maki
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
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

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@lodden.com
Comptois, Jerry—248-651-2504, anytime................jerrycandotoo@juno.com
Cook, Stephen—313-272-7594, eves........................scook48227@ameritech.net
Vander-Schrier, Jack—586-739-7720,12–8pm..........jvanders@myself.com
Yuhasz, Steve..Help@yuhasz.org
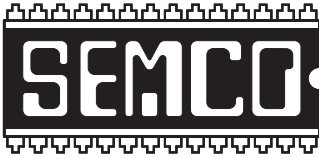
SOUTHEASTERN MICHIGAN COMPUTER ORGANIZATION, INC.

SEMCO CALENDAR—November/December
ArvinMeritor Building
2135 West Maple Road
Troy, Michigan

November 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. **Program: Microsoft Windows Vista revisited:** SIG-IBM Co-Chairman Tom Callow will demonstrate the newest beta of Microsoft's latest version of Windows, which is expected to hit retail stores early next year.

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

NOVICE-IBM GROUP 3:45 p.m. **Program: Help From An Expert With Discussion Directed By The Audience.**

SIG-IBM Intermediate 3:45 p.m. **Program: Tech Shopping, Internet Explorer (IE), Safely Let Holiday Visitors Browse, Understanding What's Permitted.** SIG-Intermediate Chairman, Carl Massie Jr., will discuss these topics.

SIG-ADVANCED , **December 4, 2006–MONDAY,** 6:45 p.m., (First Monday), Oak Park Public Library, 14200 Oak Park Blvd.,Oak Park, MI. Phone: (248) 691-7480. Directions: Oak Park Blvd. is 9 1/2 mile Road; library is west of Coolidge. Info: Franz Breidenich 248-398-3359. **TOPIC: Wide-Ranging Discussion Of Computers & Computing.**
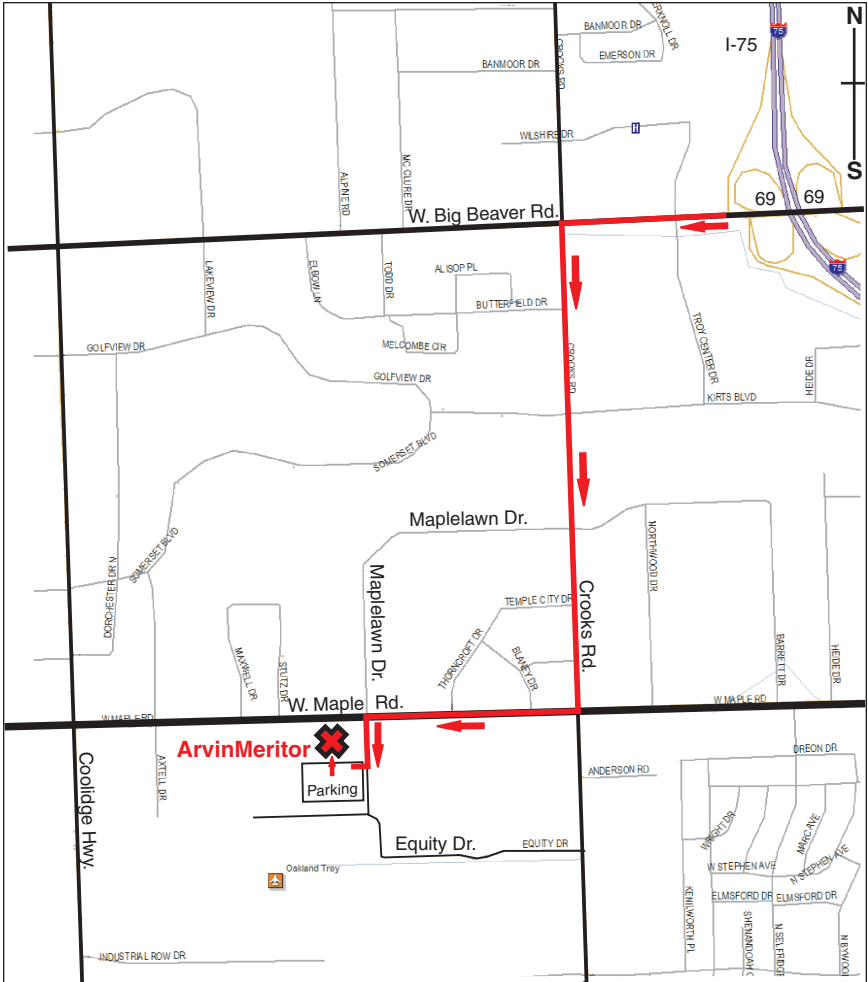
December 10–SEMCO SUNDAY

http://www.semco.org
PUBLIC INVITED

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

SEMCO Meetings at ArvinMeritor
2135 West Maple Road, Troy, MI 48084

DIRECTIONS

From I-75, take Exit 69 to westbound Big Beaver Rd. (16 Mile). Turn left (South) on Crooks Rd. Turn right (West) on Maple Rd. (15 Mile). Turn left (South) on Maplelawn Dr. Turn right into the parking lot at the rear of the ArvinMeritor building. The building is shaped like an X. Enter the building thru the South entrance at the center of the rear of the building. Follow the SEMCO signs.

SEMCO thanks the ArvinMeritor Corporation for their hospitality in providing their facility for our meetings.

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

SEMCO (future meetings)
November 12
December 10

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