The Rochester Computer Society, Inc.
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MONITOR

Vol. 32, No. 10 October 2015

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Tuesday, October 13

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Drive for Change – Installing a Laptop Hybrid Drive

by Greg Skalka
Under the Computer Hood UG, CA

Like people, computers have a lifecycle. That lifecycle typically takes them from a youth of peak capabilities, through a middle age marked by a slowing down and perhaps reduced desirability to twilight years of diminished capacities, failing parts and obsolescence in the workforce. If your laptop is in the midst of a mid-life crisis, there are things you can do to turn back the clock and return a bit of that youthful capability and desirability.

I have a couple of laptops that are now three years old and don't seem as quick and capable as when I bought them. I buy on a value budget, so both the Fujitsu Lifebook LH531 for me and Lifebook AH531 for my wife were mid-priced computers bought on sale. Both had decent

processors, Windows 7, adequate but not expansive RAM and hard drives and the typical interfaces of the 2011 computer era. They now seem a bit slower, are running out of storage space and don't have some of the new, faster interfaces to match my new accessories (like USB3). Should I continue to use them as they continue to slowly degrade, buy updated new replacements or upgrade them to add increased life and utility?

Fortunately, improvements in technology have led to falling prices in RAM and mass storage since I bought these laptops. I recently changed their RAM, doubling the amount in them from the original 2 GB, for a lot less than I probably would have paid for more memory three years ago. Now I'm looking at changing the 500 GB hard drives they came with to larger and/or faster mass storage.

It seems to me that these are constants in the computer user experience:

- You can always use more storage space
- The computer can always be faster

As luck would have it, available sizes for hard drives have been steadily increasing over the years as the-per unit cost of storage has been falling. In addition to magnetic spinning platter drives, solid-state drives (SSDs) are now available; these have much faster access times and can greatly decrease boot times and improve the performance of storage-intensive computer activities. Like hard drives, SSDs have also increased in size and dropped in price over the years. Unfortunately, the price drops have been proportional, so as SSD costs have come down to make them more attractive, so too have hard drive prices, so the choice for me has not been an easy one. Increasing my storage to a 1 TB hard drive in these laptops would now cost only about $60 each, but a 1 TB SSD is currently around $300. I could speed things up with a 240 GB SSD for around $100, but would then have less than half the storage space I have now. It does not look like SSD prices are going to drop dramatically compared to magnetic hard drives and put them out of business anytime soon.

A new class of mass storage promises to provide the best of both worlds – large storage at a low cost, with much faster access times. It is called the hybrid drive or solid-state hard drive (SSHD), and it combines a magnetic platter hard drive and solid-state Flash memory in one device. With the addition of 8 GB of NAND Flash to the hard drive's controller card, the most often accessed data is stored in the solid-state memory, reducing access times for a lot of critical disk operations. Now two of the three hard drive manufacturers, Toshiba and Seagate, offer these hybrid drives (so far Western Digital does not). Seagate claims their SSHD can boot in 22 seconds, when compared to an HDD (hard disk drive) boot of 37 seconds and an SSD boot of 21 seconds. A 1 TB hybrid or SSHD is currently available for around $80, which is not much more than an HDD, but a lot less than an SSD of the same size.

For my wife's laptop, I recently installed a Toshiba MQ01ABD100H 1 TB hybrid drive. It doubled the storage space, while reducing the boot time from 90 seconds to 33 seconds on average. For my LH531 laptop, I'm choosing a Seagate ST1000LM014 1 TB hybrid drive. The process I used to change drives was:

1: Clean up the old drive. There is no sense in copying temp files, out of date applications or malware to the new drive. After running my anti-virus and anti-malware software and updating my operating system and important applications, I also defragmented the old hard drive.
2: Back up the old drive. There are several ways to copy the data from the old drive to the new drive, including connecting the new bare drive to the computer through an adapter and running drive cloning software. I chose to instead make an image backup of my old drive to an external USB hard drive, and then later restore to the new drive after swapping them.

3: Remove the old drive and replace with the new bare drive. This is fairly easy on most laptops, though you do need to take care to avoid damaging the drive and computer from a static discharge.
4: Restore the image backup to the new hard drive. With no operating system on the new drive initially, your backup program must be able to be booted from an external drive (a CD, USB or network drive).
5: Adjust the restored partition(s) on the new drive to take advantage of the additional space, if necessary.

The nice thing about this transfer method is that it is low risk – the original hard drive can always be installed back in the laptop should something go wrong in the transfer process.

I use Acronis True Image backup software, and so used it to make my image backup files for the transfers. Though True Image may be installed on the hard drive, it may also be run from the program CD, as the CD is bootable.

I always run True Image from the bootable CD as I want to be familiar with the way I would need to run it if I ever had a hard drive failure. Though I buy the new version of True Image each year (the latest is True Image 2015), I typically continue to use the older versions on my old computers, as I'm more familiar with the user interface. I found I had to move up to True Image 2014 when restoring to the hybrid drive in my wife' laptop, as the 2011 version I used to make the backup image did not recognize the hybrid drive.

Note that I tried unsuccessfully to use True Image 2015 for the restore; I found this latest version did not recognize the external USB drive containing my backup file. True Image has had extensive and useful support for external and network drives in their previous versions; it appears Acronis may have traded that for cloud storage capabilities in their latest version.

While True Image can back up and restore individual files and folders, its main advantage over other backup programs is in making image backups of drive partitions (the partition data plus the partition formatting). I had True Image create a single backup file containing all the partitions on the old hard drive to make restoring to the blank drive easier.

Once the backup of the original hard drive was created, I flipped my laptop over and opened the small door over the hard drive. To remove the hard drive, I had to lift one end slightly and gently rock that end of the drive while pulling away from the connector, in order to disengage the drive from the laptop connector. The old drive was mounted in a metal carrier, which had to be removed and installed on the new hybrid drive. The procedure was reversed to install the new drive. The only tool needed was a small Phillips screwdriver.

Booting from the True Image 2014 CD, I restored the full disk image I had made from the original drive to the new drive. True Image proportionally increased the sizes of most of the partitions in my image file, so that all the new hard drive's space was allocated among them. I then used another Acronis program, Disk Director 12, to resize some of the partitions to suit my needs.

Before I'd removed the old hard drive, I'd started the laptop repeatedly to measure the boot time. I repeated this with the new hybrid drive, and found that the boot time went from around 90 seconds to around 35 seconds.

LH531 Restoring Image to New Drive

The new hybrid drive has much more space and seems to provide a big speed improvement. Only one question remains - should this hybrid drive be defragmented? In a magnetic hard drive, the normal file write and erase operations result over time in files that are not stored in contiguous tracks on the disk, but have portions spread over many parts of the disk (the file is fragmented). In a spinning platter drive, this increases the time required to read the file (the read head must move more and often wait for the data to rotate under the head), so the drive

should be defragmented periodically for optimum performance. The same fragmentation occurs in an SSD, but since the read speed is the same for every memory location, the access time is not increased, making defragmentation unnecessary. In fact, an SSD drive should never be defragmented, as this reduces the drive's lifetime unneces-sarily (each SSD location supports a fixed number of writes). I'll need to consult with Seagate and Toshiba to determine if SSHDs should be defragmented.

I Have a Website—Now What?

Review of a Monterey Bay UG – PC Meeting
by Joe Asling
MBUG-PC

Emmanuel Rico Horca, adjunct professor at CSUMB School of Business and Small Business Development Center consultant, came to MBUG to discuss improving your business's visibility online. Rico had five tips to tune up and improve your website's effectiveness.

1. Get Visible

Website optimization is the process of designing your website to show up high in search engines; if possible, you want to be on the first page of search results. Be specific rather than using generalities. Instead of "Betty's Yummy Bakery" use "Vegan Cupcake Company." Search engine bots look for keywords, so be on target with your keywords and include as many as you can, particularly on your website's first page.

2. Get Your Website Listed

You can submit your website on **DMOZ** to have it listed on **Google**. **DMOZ.org** is a free open directory of website listings. You get listed according to the keywords on your website. "Have your copy say the keywords for you."

3. Get Found

If you have a location-based service, make sure it shows up in local searches and **Google Maps**. You can claim an address in Google Maps (just Google how to do it). Post multiple images of your business, both exterior and interior, so people driving by will recognize your location, and make sure that your phone number and hours of business and a link to your web address are visible. These should also be on the front page of your website so people will see them. Your website needs to be intuitive, and your primary tabs need to match your business (e.g., menus for a restaurant). You need "about us" and "feedback" icons where they are easily seen. Consider carefully what your defined service area is; for example, "Greater Monterey Bay Area" will get you more hits than "Del Rey Canyon."

4. Get Reviewed

Ask your satisfied customers to review your business online. **Yelp** and **Angie's List** are websites devoted to evaluating businesses. There are websites dedicated to reviewing everything from beer to mountain bikes. Check **ConsumerReview.com** and **ePinions.com.** You can include a link to a review website on your webpage to make it easy for readers to find your evaluations or compose their evaluations of your product.

5. Get Seen

It's easy to create and upload **YouTube** videos. There's a YouTube video demonstrating how to do just about anything! Your YouTube video can be used to inform, instruct, and influence and to help people make a decision about a purchase. The more people who watch your YouTube videos, the higher your visibility is. **Bacon Bytes** is a game-oriented blog; kids do YouTube walkthroughs of video games for us old folks to follow.

Advanced Topics

Another thing your website needs is analytics. "In the business world, if it's not being measured, it doesn't exist." **SEO** (*www.analyticsseo.com*) and **Web Analytics** (*www.open webanalytics.com*) will help you record number of hits and how visitors explore your webpage.

YP.com (Internet Yellow Pages) has business listing and review services. Small Business Development Centers, run by **SBA** (*www.SBA.gov*), provide a variety of free consulting and training services.

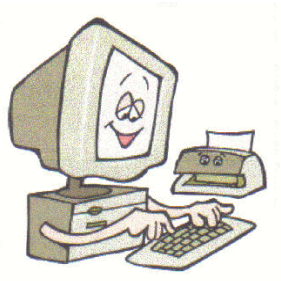
Websites are accessed by devices ranging from desktop computers to portables to tablets to mobile cellphones. Your pages need multiple formats to make them look right on a variety of devices. **Mobify** (*www.Mobify. com*) can help you format your website for several types of mobile devices (iPhone, Android, Blackberry, etc.). Your website detects the accessing device and feeds it a correctly formatted webpage.

Hosting

Free vs. paid: "You get what you pay for." You want a Content Management System—this allows the webmaster to design and manage a site. Your host should also provide templates, design help, service, security, and analytics. **WordPress** (MBUG's host) is a good, reliable system. **Intuit** has inexpensive quality hosting also.

Membership Websites

- Invite the membership to participate and notify them of updates to the website.
- To find out who is visiting your website, you can give visitors free content, which you make contingent on their signing in.
- Think of it as "Push and Pull"; push content to users and/or pull users in.
- Send invitations with the Friend Finder tool.
- Add a Members App for those with smartphones.
- Blogs and forums invite visitors to share their experiences.
- Go viral with social networking. Your organization can have a **Facebook** page and a **Twitter** account.



Perform Easy Screen Captures

Q. How do I capture or save what appears on screen?

A. Depending on the version of Windows being used, press the Windows Logo Key and the Print Screen key, which is sometimes displayed as the PrntScrn or PrtSc key. Pressing the Print Screen key copies what appears on screen to the Windows Clipboard. You can then paste it into another document or email message.

If you want to capture only the active window – the window in which you are currently working – and not any other window that might be lurking in the background, hold down the ALT key first, then press the Print Screen key.

When I create a screen shot of a window or an error message or some other dialog box, I paste it into Windows' integrated graphics program called Paint, which can be found under Programs > Accessories or just go to Start > Search and type in ?Paint.? You can use any other graphics program as your pasting destination, then save the resulting file via File > Save, if you wish.

Q. When sending a message using Gmail, I needed to include a link to a Web site. When I typed it, there was no color and no line underneath it telling me that it was an active, clickable link. I had to go down to the bottom of the email toolbar, highlight the address, then click the link button so it showed up as working. Is there an easier way to do this?

A. You really don't have to do anything to the URL or Web address. When you are typing a link in your Gmail message, it will not show up as an active link. However, as soon as you send it (or preview it), it will appear as a living, breathing, colorful clickable link to your recipients.

Q. I'm using Windows 7. How can I change my account name? The computer was given to me by my daughter and it shows her name. Thanks, Mr. M.

A. You can change the name that appears on screen when you log in quite easily. To change the name displayed, click Start and type "account" (without the quotes). From the search results, click User Accounts followed by Change Your Account Name. Type in a new name, then click Change Name. Presto, change-o!

You can also delete any user account and create a new user account in its place, if you wish.

Q. Lately, when I view photographs, there are no red colors or reddish tones in the pictures displayed on screen. If I print them, they're fine. Is there some kind of adjustment I can make to fix this problem?

A. Possibly. Most monitors have adjustment capabilities that can fine-tune the hue, among other things. Feel around the top, bottom and sides of your computer for any such buttons or touch-sensitive surfaces. If you are using an older monitor, you may find a little hinged door that opens and contains several buttons or dials, similar to older television adjustments.

The easiest way to determine if your monitor is the culprit is to hook the monitor up to another computer. If the problem persists, you will know it's time to replace your monitor. If the problem disappears, then it's most likely a problem with your system's video card and any reputable computer repair shop should be able to check that out and replace it, if necessary.

Get Relaxed

Soothing sounds to help you feel more relaxed and less stressed. Choose from mellifluous melodies such as "Eternal Hope," "Midsummer Sky," or "Clear Water." Music is accompanied by a photo slide show, which I thought moved too quickly to be relaxing, but maybe that's just me. Better still, forget the slide show, minimize the window and let it play in the background. Ahhhhh.....
www.getrelaxed.com

10x10

A fascinating site that takes an hourly photographic pulse of the world. When you open 10x10, you will see a grid of the top 100 world images for that hour, ranked in order of importance, reading left to right, top to bottom. Along the right edge of the screen are listed the corresponding top 100 words, one for each image. Move your mouse around the images and you will see which words match which images. Click any word or image to zoom in and see the news headlines behind the word.
www.tenbyten.org/now.html

The Same Game

Invented by Kuniaki Moribe (as if you didn't know) in 1985, the board is filled with different colored bubbles. Clicking two or more adjoining bubbles of the same color will make them disappear. Bubbles no longer supported by removed bubbles will fall down, and empty columns will be trimmed away by the remaining bubbles sliding to the left. By removing a number of bubbles you will be rewarded with points. Therefore, the more bubbles you remove at one time, the higher your score will be. The object of the game is to clear the board completely, with the highest score possible.
www.mah-jongg.ch/samegame

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Google's New Spam-Fighting Tools

by Bob Rankin
Ask Bob Rankin

Google estimates that nearly 60 percent of all email it processes is spam. But like most Gmail users, I rarely see any spam in my inbox. Google claims that Gmail now blocks 99.9 percent of all spam. Read on to learn how you can get near-perfect spam filtering, even if you don't use Gmail...

Machine learning, an application of artificial intelligence, has been part of Gmail's spam filter program since Gmail's inception. On July 9, Google announced three new improvements to Gmail's spam filter.

Every time a user clicks the "Report Spam" or "Not Spam" button on a message, Gmail learns something that helps it filter spam better. But now, Gmail is attempting to learn on its own, without the user's clicks.

The spam filter now uses the same artificial neural network that Google Now and Google Search use to detect and block the "especially sneaky" spam that sometimes slips past users' radar.

Gmail Spam Filter

What's an "artificial neural network," you ask? The oversimplified answer is, a lot of computers connected to each other in an attempt to simulate the interconnections of human brain cells. It's expensive to build an artificial neural network; most are tiny, with 1 to 10 million connections.

Google has built an ANN with over one billion connections using the processors in its vast and far-flung empire of data centers. That sounds awesome, until you learn that the human brain contains several trillion connections! None the less, Google's ANN is capable of rudimentary human-like self-learning. That means you don't have to teach it what spam is.

In one experiment, Google's ANN was fed millions of still images of cats culled from YouTube videos. The images were not labeled as "cats"and programmers did not tell the ANN what a "cat" is. The ANN figured it out for itself, learning to recognize cats in virtually any image. If it can do that, it can recognize spam with greater accuracy than most humans can.

You don't have to do anything to use Gmail's spam filtering – it's automatic. But you can add your own filters to funnel messages into folders, forward to another address, and other actions. See my article *Tame Your Email With Filters* for help adding filters to Gmail, Yahoo, Outlook.com, iCloud Mail, or AOL webmail.
http://askbobrankin.com/tame_your_email_with_filters.html

But the ANN is still not perfect. Just as humans see UFOs in pictures of streetlights, Google's ANN sometimes sees spam in legitimate messages and mistakenly consigns them to the spam folder. Google claims that only about 0.01 percent (1 in 10,000) of legitimate emails are falsely labeled as spam these days. As the ANN learns more about email, that figure should fall even further.

Take a look in your Gmail spam folder, and see how it's working. If you do find certain messages are being incorrectly flagged as spam, you can create a Gmail filter for them, with a "Never send to Spam" action, so they'll be delivered to your inbox.

How does Gmail's spam filter compare to other free Webmail services, such as Microsoft's Hotmail/Outlook.com and Yahoo? I haven't been able to find any independent, rigorous studies of this question. I'll just note that Microsoft seems to think it's acceptable if less than 3 percent of the messages that reach your inbox are spam.

Another new spam-fighting technique that Gmail is introducing doesn't really tackle spam, in my opinion. Gmail now attempts to learn individual users' reading preferences and filter out even legitimate mail that goes unread. The company gives the example of email newsletters. One user reads them assiduously while another just lets them pile up unread, or deletes them without reading. Why people don't just unsubscribe from newsletters is one of life's mysteries. Hopefully, Gmail can distinguish between legit opt-in email newsletters and the ones that just arrive without your consent. https://www.microsoft.com/en-us/outlook-com/compare/

Finally, Gmail is providing help for legitimate, large-volume email publishers whose communications are sometimes wrongly condemned as spam. The Gmail Postmaster Tools will help airlines, banks, credit card companies, and other well-known firms analyze the fate of their emails and improve their delivery and reading rates.
https://gmail.com/postmaster/

Even if you don't use or like Gmail, you can still use it to filter spam. Here's one technique that some people use to "pre-filter" their incoming emails. Instead of providing your actual email address when asked, give out a Gmail address that you've created. Configure that Gmail account to simply forward everything to your actual address. Gmail does spam-filtering BEFORE forwarding, so the messages that do get forwarded are virtually spam-free.

Gmail's spam filter is so reliable and accurate that I hardly ever check my spam filter for false positives anymore. I get hundreds of emails daily, and in 2015, I estimate I've clicked on the "Report Spam" or "Not Spam" button less than a dozen times. The spam filter just works.

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How "Silent Calls" Lead To Identity Theft
The Dark Side of Robocalling

by Bob Rankin
Ask Bob Rankin

We've all had the experience of answering a phone call only to hear nothing. Typically, we just hang up and shrug. But those "silent calls" are the first step in well-organized campaigns to steal identities and bank account balances. Here is how these scams work, and what you should do to protect yourself....

"Hello? Hello? Anybody there?" That first, silent call is just a probe to see if a phone number is in active use. Automatic dialing machines place tens of thousands of silent calls per day using free or dirt-cheap Voice-over-IP technology.

Software "listening" on the caller's end can tell the difference between a "not in service" recording and your puzzled "Hello?" or even a human cough. Phone numbers identified as active are passed to another robocalling system for follow up calls that usually come days later.

The next robocall will feature a recorded voice saying something like this: "This is an important message regarding your debit card. If you are the cardholder, press 1 and stay on the line. Otherwise, please have the cardholder call us at 1-800...."

In case you're thinking about ignoring these demands, the recording warns, "A temporary hold may have been placed on your account. It will be removed after you have verified account activity."

If you follow orders, you'll be guided through the process of providing your account number, PIN, birth date, the card's expiration date, and even your Social Security Number to a machine. There is no "live agent" to argue with; just provide the required information and don't hang up, or "your access to funds may be delayed."

Why Do People Fall For This Scam?

Are you getting tired of those annoying telemarketer and robocalls? There are some steps you can take to stop unwanted phone calls. See my articles Stop Unwanted Phone Calls and FCC Cracks Down on Robocalls for some tips.
http://askbobrankin.com/stop_unwanted_phone_calls.html
http://askbobrankin.com/fcc_cracks_down_on_robocalls.html

Reading about it here, this process seems obviously bogus, a trick that no reasonably cautious person would fall for. But in real life, it works often enough to be worthwhile for the scammers. Many banks use robocalls to authenticate unusual activity on customers' accounts. Paypal does it. These legitimate robocalls lend credibility to the phishing calls. So phone-phishing is big business.

Illegal automated calls are the number one source of complaints filed with the Federal Trade Commission. The agency receives an average of 170,000 complaints about robocalls every month!

Once the robocalling machines have pried enough information from a victim, it is turned over to human fraudsters. Experts at social engineering call financial institutions pretending to be cardholders. A simple question like, "What is my available balance?" identifies the big fish. Then the fraudster cons a customer service rep into changing the account's mailing address, and the theft is complete.

Banks and credit card companies are fighting back with the help of companies like Pindrop Security, an Atlanta-based firm that specializes in phone fraud detection and advanced caller-authentication systems.

Ordinary caller-ID and Automatic Number Identification (ANI) technologies are virtually worthless for authenticating callers. Fraudsters long ago figured out how to spoof caller-ID and ANI data so that they can appear to be calling from any number, including a prospective fraud victim's. I've noticed in the past few months that most of the robocalls I've received are coming from numbers that appear to be local.

What's a Phoneprint?

Catching spoofed calls is job number one. So Pindrop has developed a Fraud Detection System (FDS) that analyzes an incoming call to generate a fraud risk score based on the caller's location, device type, and 150 other subtle characteristics. If this Phoneprint™ profile doesn't match up well with the caller-ID and ANI information, the call is flagged as a "potential spoof."

Suspicious Phoneprints™ are compared to Pindrop's large database of Phoneprints™ known to be associated with criminal enterprises. The company updates this database by luring fraudsters to its "honeypot" of over 250,000 inactive phone numbers and creating Phoneprints™ of the fraudsters' calls. Pindrop claims that its FDS is over 90% accurate in determining the location of a caller, the type of device used, and the network type for VoIP calls (Skype, Google Voice, etc.).

Recordings of flagged calls are brought to the attention of a financial institution's fraud alert team within minutes of their completion, before any transactions or changes to a customer's record can be finalized. The fraud team can put a hold on suspicious activity until it can be verified with the customer.

The best thing consumers can do to avoid the "silent call" pitfall is to simply hang up, according to the FTC. Don't press any buttons, even the one that's supposed to remove you from the caller's call list. That will only result in more robocalls. You might also want to try a free service called Nomorobo to filter out these annoyances.

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So You Want to Write a Book

by Dick Maybach
Brookdale Computer Users' Group, NJ

Perhaps you want to document your family's history or preserve a collection of recipes, or you may have idea you think you could sell to others. Not long ago, you would have few choices between a loose-leaf notebook and trying to interest a publisher. Today the large gap between these is filled by e-books, which you can distribute yourself to a few friends or to a wider audience through an on-line publisher. This article will cover only the easy part, converting your word-processor file to an e-book, and will ignore the much more difficult areas of writing and marketing. See the references at the end of this article for some ideas on these.

E-books have many advantages over print books, in addition to being much less expensive to reproduce and distribute.

- Since e-books are searchable, indexes are much less important than for print books, although both profit from a good table of contents.
- Material can be copied from an e-book (unless it's copy protected) and pasted into another document. The process is much more complex for a print book, as it requires a copier (and optical character recognition if the material must be edited).

- A hardware e-book reader, such as a Kindle, is about the same size and weight as a print book. You can store many e-books on a reader with about the same size and weight as a single print book.
- E-books allow the in-sertion of multiple, labeled bookmarks that mark particular points on a page. Print bookmarks mark just the page unless you write in the book.

The two most popular e-book file formats are pdf and epub, but azw3 (for Amazon's Kindle readers) is also common.

A pdf file is an image of a set of printed pages. You set every detail of the layout: the number of characters per line, their fonts, the number of lines per page, and the size and position of images. The only program you must deal with is your word processor as most can export to pdf files directly. Your prospective readers probably have an application to read pdf files; they don't have to acquire anything new. However, since you don't know what device the reader will use to display the book, in particular its screen size and resolution, the text may not be legible without excessive scrolling, especially for readers with aging eyes. You also can't be sure the table of contents will be easily accessible. The first screen-shot shows how a pdf reader displays a page of an e-book. (This pdf reader does make the table of contents easily available.)

Because the page format is fixed, the reader can enlarge the print only by enlarging the window or closing the sidebar that shows the table of contents. Once the page fills the screen, further enlargement will require horizontal scrolling to read each line. Also, not all pdf readers can display the table of contents in a sidebar.

By contrast e-book files are not images of a printed pages but collections of text and images with instructions on how they should appear. They are closely related to the HTML files that your browser displays when you access a Website. The user sets the font size he or she finds comfortable, and the reader program or device adjusts the number of characters per line and the number of lines to fit the screen. The table of contents typically appears in a sidebar that the user opens only when needed. This makes it easy to skip through a book, assuming of course that the entries in the table of contents are meaningful. In my experience, e-book files are about two-thirds the size of equivalent PDF images and half that of the word-processor source files.

However, because font sizes, line lengths, and the number of lines per screen is set by the reader, the author loses some control over the appearance of the document. Readers need either e-book software for their computers or hardware readers, such as Kindles. The author needs software to convert a word-processor file to an e-book one, and typically this is not from the same company that supplied your word processor, with the result that there can be errors in the conversion process. The next screen-shot shows an e-book reader displaying an e-book library.

The menu bar icons are the operations you can perform on the e-books, the right sidebar shows the selected book's cover and some information about it, and the left sidebar shows statistics on the library. The next two screen-shots show a page of an e-book as displayed by the reader, first with the table of contents sidebar open and then with it closed.

There are many programs available to create e-books; I use Calibre http://calibre-ebook.com/) because it's free and is available for Linux, OS X, and Windows. Regardless of what e-book software you prefer, the process will be similar. You first create the source material using the word processor of your choice. Here is where you'll correct the typos and establish consistent formatting. It is important to use styles for your formatting. For example, your word processor has defined several levels of headings, and you should use these as Calibre will generate a table of contents from them. A table of contents is irrelevant in a novel, but can be very important for other types of books.

The conversion process is iterative, especially so the first time you do it. You will surely find conversion artifacts that require correction using the word-processor. Expect to repeat this many, many times. If you use Calibre, your first conversion will be to an epub file. Do not generate a table of contents using your word processor, but let Calibre do it from your section headings. Calibre first converts the word-processor file to HTML, and you may get better results if you let your word processor make this preliminary conversion. You can fine tune the appearance of your e-book by editing the HTML. I didn't find this to be necessary, although I did have to make some adjustments in the table of contents. Calibre allows this fine-tuning only on epub files, which is why you create this form first. Carefully proof the result. I've found that most errors result from problems in the word-processor file. In particular, I've fixed many problems by deleting and re-entering headings. I've also found that the size (in pixels) of images is important. While a word processor will accept an image of almost any size and allow you to change its size on the page, the new size is often not preserved in the e-book file. Once you are satisfied with the epub file, you can convert it to another e-book format, but the conversion may introduce artifacts.

You will probably get the best results by using your word processor to create a pdf file, rather than going through an e-book program. I use LibreOffice, which creates a pdf file with a table of contents that appears in a sidebar in many pdf readers. However not all pdf readers have this feature. To be safe, you should have your word processor generate a table of contents, which will appear at the start of the document. This makes it less convenient than a sidebar, but far better than nothing.

To accommodate your readers, you should provide your e-book in both pdf and epub formats, which will let almost everybody read them. You could also include azw3, since Kindle readers are quite common. (If possible avoid the older Kindle format, Mobi, as it has many idiosyncrasies and often doesn't display properly.)

References

- Ali Luke - *Publishing E-Books for Dummies*, John Wiley & Sons, Inc., 2012
- http://www.wikihow.com/Write-Your-First-eBook

Interesting Internet Finds

by Steve Costello

Boca Raton Computer Society, FL

In the course of going through the more than 300 RSS feeds, I often run across things that I think might be of interest to other user group members.

How To Create An Animated GIF Using Your Own Pictures, With GIMP

http://www.7tutorials.com/how-create-animated-gif-using-your-own-pictures-gimp

Have you seen animated GIFs, and wondered how you could make your own? This 7tutorials post explains how to do it (provided you have at least two pictures, of course.), using the free GIMP application. It should be similar with any good image editing software.

USB Type-C Explained: What it is and What it Can Do

http://www.guidingtech.com/45984/usb-type-c-explained/

I keep hearing about this more lately, so if you want to know more about it too, check out this GuidingTech post.

If You Give a Kid Linux....

http://fossforce.com/2015/07/give-kid-linux/

I thought it was interesting that kids who had no prior experience with any other operating system just took to Linux.

Still Getting Spam? 4 Email Mistakes to Avoid Today

http://www.makeuseof.com/tag/still-getting-spam-4-email-mistakes-avoid-today/

I still hear people complaining about how much spam they get. Check out this post and see if you are making any of the mistakes shown.

What is Wi-Fi Sense and should you be using it?

http://www.ghacks.net/2015/07/28/what-is-wi-fi-sense-and-should-you-be-using-it/

Wi-Fi Sense will be enabled by default with Windows 10, so if you are jumping into the upgrade, you should check out this Ghacks post first. (Note: I am going to wait a while before upgrading any of my machines to Windows 10)

Make Your Passwords More Powerful: Lessons from a Locksmith

http://www.groovypost.com/unplugged/make-passwords-more-powerful/

Learn from a locksmith about some things to do to make sure you are as secure as possible online. He explains that securing yourself online is pretty much doing the same type of things you do to secure your home or other property, only you are doing it with software and passwords rather than locks and bolts.

Fun with Spreadsheets

by Jim Cerny
Sarasota TUG, FL

Most people do not associate the word "fun" with anything like what a spreadsheet program can do, but I hope by reading this you will decide to at least open a spreadsheet program just to see what it can do and if it is really "fun" for you to use. I use a spread-sheet program to keep track of my monthly expenses. It is really simple to use for this purpose and helps you organize anything with numbers. Let me introduce the basic use of spreadsheets.

What is a "spreadsheet" program anyway?

It is a program that allows you to organize numbers in a matrix array of boxes called "cells". You can put ANY number or words in a "cell." The beauty of a spreadsheet program is that it can do calculations and is easy to sort or change the contents of any cell. You have probably heard of Microsoft Excel (part of the Microsoft Office set of programs), but there are many other FREE spreadsheet programs that you can use as well, such as Google Drive (called "Sheets") and Open Office (Google these to find out more about them).

What can a spreadsheet program do for me?

I enjoy using a spreadsheet program to help me keep track of my personal home monthly expenses, my investments, and lists of club members. Although a spreadsheet program is intended for use with numbers, you certainly can use it to organize and sort a list of anything. Let me introduce you to a simple basic use of a spreadsheet by using one to track monthly expenses. I will use Excel 2013 in this example.

The basic elements of a spreadsheet.

All spreadsheet programs work the same way. Once you learn how to use one, it is not difficult to use another. The basic screen of a spreadsheet (see sample) is an array of cells with the cell columns labeled with letters (A, B, C, etc.) and the cell rows labeled with numbers (1, 2, 3, etc.). Thus every cell has a unique "address" such as B5 or D3 for example. Above this array of cells are the many menus, tools, and options that are available for you.

Use your mouse to click on a "cell" in the array. You will see the "address" of that cell displayed just above the top row in the far left of the menu area. This is how you know what cell you are working with. The box or area to the right of the address is the "function" bar and it shows the contents of the cell here. You can enter and edit the contents of a cell in this area

if you want, I find it most helpful.
For our example, I am going to put words in the first row and column cells. This serves to "label" or give a title to the numbers I am going to put into the other cells.

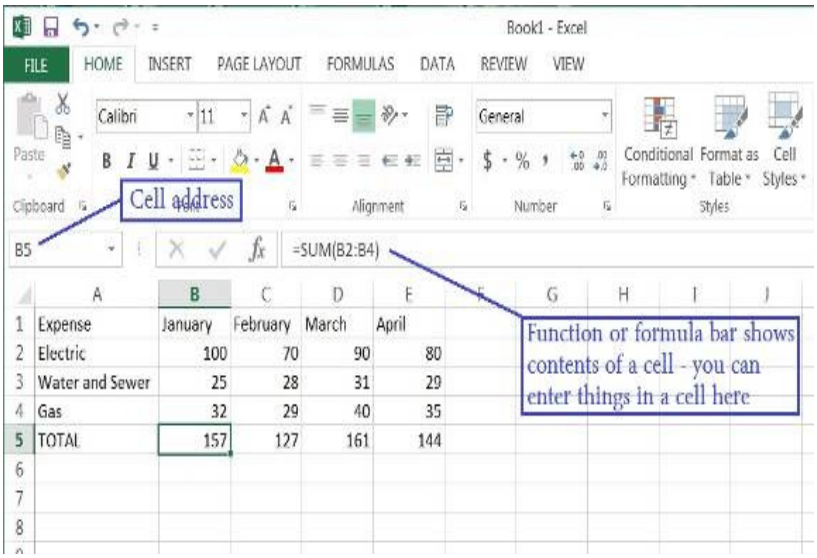
Click the mouse (the left mouse button) in cell A1 and then type in the work "Expense." In the following cells in row 1, click in each cell to enter in the name of the month. So in cell B1, type "January," in cell C1, "February," in cell D1 "March," etc. (see example).
In column A, in each row from 2 on down, enter the text of the expense (bill, service, or company) that you pay each month. So, for example, in cell A2 I will enter "Electric," in cell A3 I will enter "Water and Sewer," in cell A4 I will enter "Gas," etc. When I entered "Water and Sewer" the column was too narrow to hold all the words, so I had to widen the column. I did this by positioning my mouse on the vertical line between "A" and "B" (the mouse changes to a double arrow) and then I dragged the mouse to the right. I will end up with a list in column A of all my monthly expenses. All you are doing, really, is making a simple table with labels on the first row and column. This table will be filled with a number (your expense) in each cell.

Note that if you click on a cell to select it, the contents of the cell will appear above the array of cells in the "function" bar.

Enter numbers into the cells.

Just click your mouse (left mouse button) on any cell to enter something into that cell. You can enter what you want in that cell by using the function bar if you wish. If you make a mistake, you can delete what is in that cell by hitting the "delete" key on your keyboard or use text editing. I did not use the decimal (the period key on your keyboard) in this example, but you can pick the "two decimal point" option if you want, and the "$" option as well.

Adding up the total.



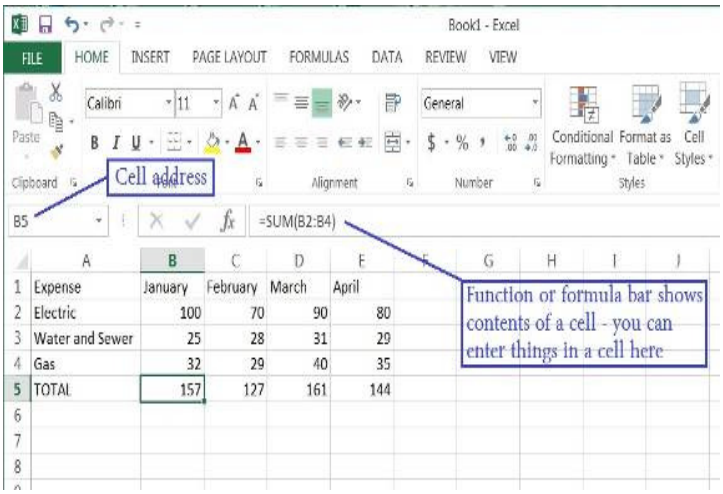
Now we come to the good part. You would like the spreadsheet to add or sum all the numbers in a column (or row). So, let's enter a new row label in column A as the last row in our spreadsheet and enter the text "TOTAL." In my example spreadsheet there are only three monthly expenses, so my "TOTAL" row will be row 5. You can have as many rows (and expenses) as you like. Now click on cell B5 which will contain my total of all the "January" expenses and I will enter the following FORMULA or FUNCTION into that cell: =SUM(B2:B4). You should enter this formula in the "function bar" at the top, above the spreadsheet, in the menu area. Note that the equal sign "=" indicates that this is NOT text or a number like we entered in our other cells, but a formula or function. We are telling it to ADD or SUM the numbers in all the cells from B2 to B4, and it will put the total in this cell, B6. In

my example, you can see the formula that is in cell B5 in the function bar above. I find it easier to always enter things into a cell by entering it in the formula or function bar.

Try doing this in the remaining total cells in row 5, totaling the numbers in each column above.

What's the Big Deal Anyway?

Well, the big deal is that you can organize and work with ANY array of numbers OR text. Not only can you total numbers, but you can average them or perform any mathematical calculation you want with them. It is easy to insert new rows or columns and the formulas will still do the calculations correctly. You can sort your spreadsheet by text (the "labels") or by numbers. Your spreadsheet can look (that is, can be "formatted") any way you want. You can color or highlight text, numbers, or cells; make the text larger, use any font, make the size of the cells any size you want, and much more.There are hundreds of formatting options and hundreds of "built-in" formulas and functions. Excel, for example, can even draw graphs and charts. Well, I will let the accountants use all the fancy stuff, I just want to track some of my basic expenses, and a spreadsheet is perfect for doing that. Why not give it a try? You can learn more about



the spreadsheet that you are using by using the "help" option or by asking Google. YouTube will have many video lessons as well. Hey, maybe this can be fun after all!

All articles courtesy of APCUG.

The Lighter Side

My grandfather has recently started a course called "Computers for the Terrified." He's nearly eighty and, although he used to be an engineer within the British Royal Airforce, is completely stuck when it comes to computers.

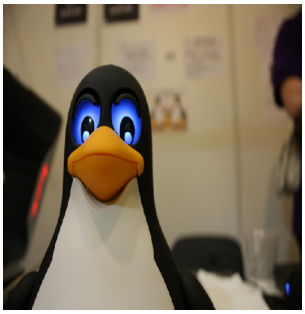
He came back from his first evening at this course. When asked how it had gone, he replied, "Yes, it was really good. I really enjoyed it, but I really couldn't get to grips with my mole."

I stopped for a second, completely puzzled, until I realised he was talking about the mouse.

Our last receptionist called me to complain that the keys on her new keyboard were hard to push. She asked me to install a program to "soften up her keyboard keys."

**"We can't replace your old computer.
That would be age discrimination."**

Linux SIG



The next workshop is the third Saturday in October, the 17th, at Interlock Rochester, 1115 E Main St. Enter through Door #7 on the end of the building near Goodman. Go up stairs to suite #200.

Come to get your questions about Linux answered. We have experts on hand to fix problems and answer questions about Linux and FOSS. Bring your system in so we can help you get the most out of it.

Enter through Door #7 near the Main Street end of building. Find Interlock on the intercom directory to get buzzed in.

Hope to see you there!

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Deadline for the November issue is October 13, 2015.

Planning Meeting

The meeting will be held on October 6th at 7 pm at Sally Springett's house. Everyone is welcome.

Standing Committees

Programs: . . . . . Tony Dellelo
Membership: . . . . . Steve Staub
Monitor: . . . . . Sally Springett
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Computer Recycling / Remanufacturing Center

420 Dewey Avenue Rochester, NY 14613, 2nd Floor Warehouse – behind the City Recreation Dept, Administration Building.
Hours of Operation: between 9 am and 4 pm M-F (call Helpdesk first, before visiting).
Helpdesk Phone Numbers:
585-232-9160 585-719-9992
http://acdcareers.com/ Community /PCRecycling.php

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