



*Midland Michigan*

# BITS AND BYTES

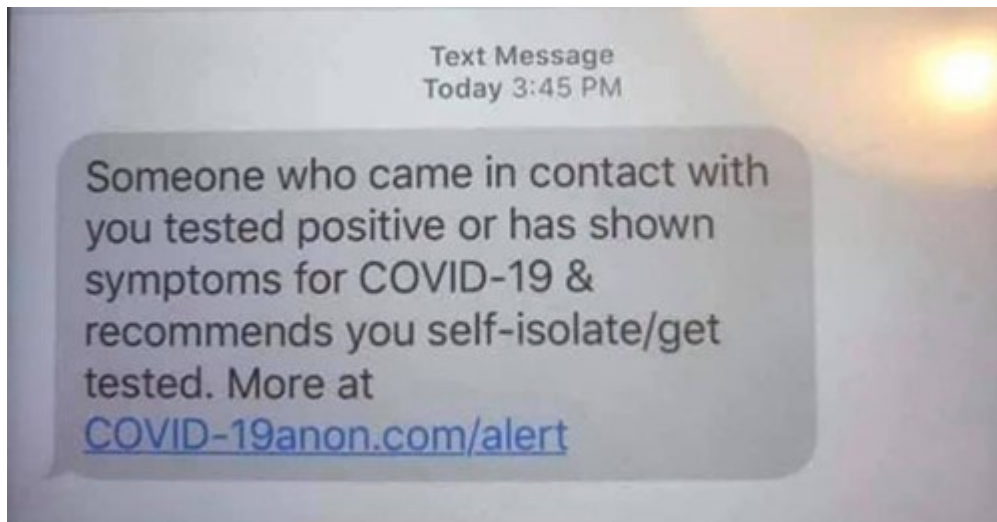
MAY 2020

<https://mcc.apcug.org/>

**MAY MEETING VIA ZOOM**  
**Wednesday, May 27, 2020 at 6:00 PM**

**Contact tracing** is part of the process of supporting patients and warning contacts of exposure in order to stop chains of transmission. If you receive a phone call from a contact tracer they will not ask for social security number or banking information. For information on what questions you might be asked: <https://www.cnbc.com/2020/04/20/what-to-expect-when-a-coronavirus-contact-tracer-calls-you.html>

If you get a text like this, don't click on link



There is a scam phone call going around — playing a recorded message and asking users to press "9". Hang up! Official contact tracers will not play recorded messages to you over the phone.

## **Stressful times - Be kind**

A good reminder for me to be sensitive as all our worries are so different. Be kind. WE ARE NOT ALL IN THE SAME BOAT ... I heard that we are all in the same boat, but it's not like that. We are in the same storm, but not in the same boat.

Your ship could be shipwrecked and mine might not be. Or vice versa.

For some, quarantine is optimal. A moment of reflection, of re-connection, easy in flip flops, with a cocktail or coffee. For others, this is a desperate financial & family crisis.

For some that live alone they're facing endless loneliness. While for others it is peace, rest & time with their mother, father, sons & daughters.

With the \$600 weekly increase in unemployment some are bringing in more money to their households than they were working. Others are working more hours for less money due to pay cuts or loss in sales. Some families of 4 just received \$3400 from the stimulus while other families of 4 saw \$0.

Some were concerned about getting a certain candy for Easter while others were concerned if there would be enough bread, milk and eggs for the weekend.

Some want to go back to work because they don't qualify for unemployment and are running out of money. Others want to kill those who break the quarantine.

Some are home spending 2-3 hours/day helping their child with online schooling while others are spending 2-3 hours/day to educate their children on top of a 10-12 hour workday.

Some have experienced the near death of the virus, some have already lost someone from it and some are not sure if their loved ones are going to make it. Others don't believe this is a big deal.

Some have faith in God and expect miracles during this 2020. Others say the worst is yet to come.

So, friends, we are not in the same boat. We are going through a time when our perceptions and needs are completely different.

Each of us will emerge, in our own way, from this storm. It is very important to see beyond what is seen at first glance. Not just looking, actually seeing. We are all on different ships during this storm experiencing a very different journey.

—Author Unknown

## Windows 10, version 2004 (2004 = April 2020)

The current version of Windows 10 is 1909 (1909 = September 2019) The next version of Windows 10 (v2004) is scheduled to be released the end of May. As with other version upgrades, your computer should automatically download v2004 and you may not receive it right away.

Microsoft continues to try to force users to log on with Microsoft account by making it more difficult to log on using a local/offline account. People who have early access to new versions for testing (Insider program) have reported that, after upgrading to v2004 on Windows 10 Home, they were only given option to log on with Microsoft account or phone number.

According to Paul Thurrott (<https://www.thurrott.com/>) if you normally log on using a local/offline account, you should enter phone number 555-555-5555. You will be notified that is an invalid phone number and will be able to find the option to log on using your local/offline account. I am not in the Insider program so don't know what the screen will look like so you will have to check carefully (including any fine print) to find the correct option.

## APCUG Workshops

The first session (What's new with Windows 10, the 2004 Spring feature update) of the four-part APCUG Workshop on Getting to Know Windows from An Insiders Point of View was streamed live on May 13, 2020. You can view the session here:

<https://youtu.be/J-p-uj19Sw>

Note: Sound doesn't start until approximately 30 seconds into the video.

Session Notes:: [Windows from an Insiders View-Week 1](#) - [Windows 10 2004 Workshop.pdf](#)

You can still sign up for future sessions of Getting to Know Windows from An Insiders Point of View or for the workshop on Home Automation for Seniors by [completing this form](#).

Workshop sessions are two hours each on the second Wednesday of the month starting at 12 noon (ET).

These are Zoom presentations. There were over 250 people registered and 157 actual attendees at the first session. Because of the large number of attendees, during the presentation you will be asked to mute your microphone and your video. During the presentation you can enter questions via the Chat box. At the end of the presentation there will be time available to unmute your microphone/video and join in the discussion.

## Geeks on Tour

The Spring APCUG VTC had several very good presentations. They aren't available on APCUG website yet but one presentation, Digitize old album photos into Google Photos and Chromecast to TV, is available on the presenters' website.

If you have photo albums or a box of photos, and want to digitize them, you can purchase a scanner or printer with scanner and manually scan the photos. This can be time consuming and, depending on how the pictures are secured to the album pages or the type of album, it can be very difficult to place the album on the scanner or remove the pictures from the album without damaging them.

Even if you don't plan to use Chromecast to display the pictures on your television, the process of using Google Photos to capture the pictures is much easier than a scanner. The quality may not be as good as using a dedicated scanner but you might find the quality suitable.

The presentation (Episode 189) is available at: [https://www.youtube.com/watch?v=zN5PcQ\\_X08E](https://www.youtube.com/watch?v=zN5PcQ_X08E)

GeeksOnTour website (<https://geeksontour.com/>) has a lot of helpful information and videos. Many can be viewed for free but you can also subscribe to a Premium Membership to access additional information.

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Put your computer to work when you are not using it, to show off your favorite photos automatically  
Author: John Krout, Member, Potomac Area Technology and Computer Society (PATACS)

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## Website Analytics

Author: Jeff Wilkinson, President

Sun City Summerlin Computer Club, NV

September 2019 issue, Gigabyte Gazette — [www.scsccl.com](http://www.scsccl.com) — [pres.scsccl \(at\) gmail.com](mailto:pres.scsccl@gmail.com)

Data gathered from website logs can provide a vast amount of data about how users interact with a website. Examples include the entry points of each user, which give an indication of how the website was found, to the exit pages, which give an indication of the effectiveness of your website. Using this valuable data allows optimization of a website to achieve its stated goal.

Google Analytics, which is part of any Gmail account, offers many insights into website visitor behavior. By inserting a small bit of code on a website, you can begin to gather basic data. The data can be further refined by setting various goals, such as subscribing to a newsletter or viewing an announcement page.

With Google Analytics you can view behavior patterns of your visitors and use the information to fine tune your website. While the expected progression or path through a website may be perfectly clear to the web designer, observing the data can reveal entirely different behavior. A website has a specific purpose when created and it just makes sense to be able to measure the progress towards that goal. An ecommerce website has specific goals and wants clear intuitive paths through the website to those goals. With analytic data, pages can be fine-tuned to help guide the user and make a purchase decision easier.

Analytics allow collection of data over time based on a myriad of parameters. For instance, you can tell which page visitors to a website entered the site and which page they exited, how long they stayed on each page and what page they went to next. If visitors landed on a page and immediately exited your website that could indicate an issue with that page, but if they landed on a page and immediately went to another page within your site to complete a call to action that would be important data to have. You could then experiment with different words and phrases and measure their effectiveness in guiding users to a desired web page.

If you have ever purchased items online, you have certainly noticed how some sites make it extremely simple to purchase while other are not so easy. Amazon.com is a good example of a finely tuned website that makes shopping and completing a purchase very easy. This is the result of constant attention to the feedback provided by analytic data and modifying pages to make a purchase as easy as possible.

I recently was researching a Samsung Blue Ray player I own and searched on the part number in both Google shopping and eBay. The next day I began receiving email marketing material for various products with portions of the part number I was searching for! How did they know? - analytics.

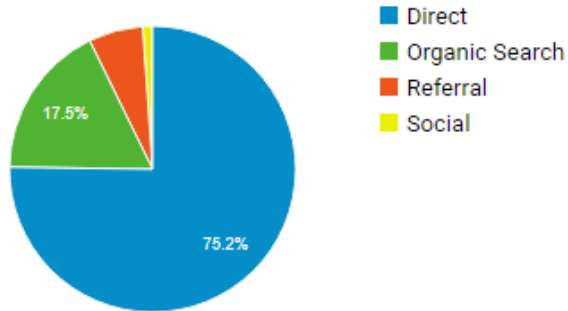
United Parcel Service has developed their own in-house analytical software to use the data gathered from multiple inputs to refine routing and delivery times. Analytic data is an important aspect of the parcel delivery business and a factor in profitable yet competitive pricing.

Gathering and interpreting analytic data can be a daunting task with overwhelming amounts of data that can easily be misunderstood, or it can be an extremely useful tool in examining the effectiveness of a website. Taken in small steps the insights revealed are very valuable.

Here are some examples of information that Google Analytics can capture and display.

Google Analytics Website Entry Report:

Top Channels



75.2% of site visitors used the URL to access the page directly, but 17.5% had to search to find your page!

Active Users right now

9

Page views per minute



This shows a snapshot in time where there were 9 users on the site. The graph below shows users over time



## Cable or Air? – What's your choice?

By Phil Sorrentino, Contributing Writer, The Computer Club

December 2019 — [www.sccccomputerclub.org](http://www.sccccomputerclub.org) — [Philsorr \(at\) yahoo.com](mailto:Philsorr(at)yahoo.com)

Most TVs default to Cable, so if you get your TV programming via a cable company like Spectrum or Frontier, you don't have to answer this question. But if you want to get "broadcast TV," you will have to select "air" when given the choice. (Your specific television may use the term "broadcast" or over the air (OTA) instead of "air".)

Way back in the 30's/40's when Television was being developed, the inventors had to establish the bandwidth for a broadcast television channel. Based on the video and audio information needed to be packed into the signal, the decision was made to allocate 6 MHz to a broadcast channel. So every television broadcast channel signal was designed to take up 6 MHz of bandwidth. Remember, that was in the prehistoric days of Analog television signals. We are now in the digital television age, as evidenced by the many nice slim, large screen TVs around us. If you'll remember, this transition took place way back in 2009, June 12, 2009, to be exact. That was the day our old Television sets could no longer bring us entertainment and information unless we acquired an analog to digital converter box.

The government even gave us the opportunity to purchase two of these devices for \$35 each, in advance of the transition, so we could make the transition and not miss a single television show. (I only had one TV at the time, so I only purchased one of these devices, and believe it or not, I still have it. I used it for a while until I stepped into the digital television age. Anybody still need a converter box?)

Now we have digital television, but we still have the 6 MHz television channel bandwidth. The bandwidth of a signal is related to the modulation scheme used to create the modulated signal. The modulated signal must fit within the bandwidth allocated, otherwise, the Federal Communications Commission (FCC) will be very unhappy. (First, just a quick technical explanation. Modulation is the process of putting a signal (video or audio) on a carrier frequency signal. The carrier frequency signal (think WCTQ is on 96.3 MHz) is the frequency used to carry the signal from the transmitting antenna to the receiving antenna. Then at the receiving television set, the modulated signal is demodulated to recover the original signal. End of explanation.)

So when the transition to digital was being explored, in the latter days of the last millennium and the early days of this millennium, the broadcast industry and the cable TV industry had to decide what type of modulation scheme to use with the new digital television signals. (By the way, here's a nearly useless piece of trivia, the analog television modulation scheme was called Vestigial Sideband modulation.) When TV was invented there was only one industry, that was the broadcast industry, but now there two ways of getting television signals to customers, over the air, and over the cable. Due to the differences in transmitting signals over the air and transmitting signals over a cable, the two industries decided on two different modulation schemes. Here are two other pieces of trivia. The Over the air signal is modulated using an Eight Level Vestigial Sideband (8VSB) modulation technique and the cable signal is modulated using a Quadrature Amplitude Modulation (QAM) technique.

The meaning of each of these is not germane to this discussion except for the fact that they are different. And it is that fact that forces the television manufacturer to include both types of demodulators on the television. So, all digital televisions are capable of using either signal. Most, if not all, are defaulted to use the cable signal, probably because nowadays most people receive their television from a cable TV provider rather than over the air. So, if you are a cord-cutter, you will have to go into the settings of your TV and find the location where "Air" or "Cable" is chosen. Once you have made the "Air" choice, you will have to let the TV scan for all of the channels in your area. Once scanned, your TV will be set up for your local, over the air, television channels. (A cord cutter is someone who has decided to stop receiving their television entertainment from their cable

provider, which means they no longer get cable channels. They receive over the air television channels using an antenna, and they stream entertainment from such providers as Netflix, Amazon Prime, and Hulu, over their internet connection. Streaming services require a subscription, and there are some streaming providers that include cable channels.)

Now we still have a 6 MHz broadcast channel but, because we have digital modulation schemes which are more efficient than the older analog modulation schemes, the television stations can now fit more channels into the 6 MHz bandwidth. That means that where we may have had one analog channel, say channel 8, we now have multiple digital sub-channels, maybe 8.1, 8.2, and 8.3. In fact, WEDU, the local educational channel has six sub-channels, 3.1, 3.2, 3.3, 3.4, 3.5, and 3.6, all transmitted within the basic 6 MHz bandwidth (isn't digital wonderful). Typically the base sub-channel, the .1 channel is a High Definition (HD) channel, and the other sub-channels are Standard Definition (SD) channels. (High or Standard Definition refers to the quality or resolution of the picture displayed on the television screen. HD is referred to as 1080p or sometimes 720p, while SD is referred to as 480p. (The number is the number of horizontal lines used to create the picture and the "p" indicates a progressive scan, as opposed to an interlaced scan that was used for analog TV.) SD is about the same quality as the old analog TV picture. HD channels will also typically provide 5.1 audio, but that's entirely another story.)

So it turns out that the original decision to allocate 6 MHz for a television channel seems to have been a pretty good design decision. Or, at least the designers of the digital television equipment have been very clever in using the allocated bandwidth to their and our advantage.

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## Desktop vs. Laptop

Author: Dan Douglas, President, Space Coast PCUG, Florida  
December 2019 issue, The Space Coast Journal — [www.spcug.org](http://www.spcug.org) — [datadan \(at\) msn.com](mailto:datadan@msn.com)

At a recent learning center meeting, the topic of what was better to get, in my opinion, a desktop or a laptop?

We agreed to include various other devices in the category of 'laptop' - tablets, Chromebooks, netbooks, notebooks, etc. Let's take a look at the various factors that should influence your decision.

**Performance** – This used to be the biggest differentiator between laptop versus desktop decisions, but this is not true any longer. The modern CPU (Central Processing Unit) chip designs have greatly reduced the heat generated and thereby eliminated one of the biggest problems with portable devices; the need to cool down the CPU effectively in a limited space within the case. The latest Intel and AMD CPUs are available in basically the same speeds and formats across both desktop and laptop motherboards.

However, the smaller size of laptops does command a premium price over that of desktops due to higher manufacturing costs for the same performance, as a general rule. SSDs (Solid State Disks) are available for both and their performance will be similar in either PC.

**Storage Capacity** – This is the other major area that has dramatically changed. Desktops typically have had larger capacity hard drives for storage – a 3.5" width hard drive case is still the standard in desktops while laptops standardized on a 2.5" width form. Large capacity drives (1TB+) are cheaper and were only available in the desktop size until the last 2 years or so when SSDs became available at a competitive cost to traditional hard drives. When fitted into a desktop case, newer cases have drive bays sized for the 2.5" SSD case, while cheap brackets are available for fitting them into any 3.5" case opening.

The latest developments are to move away from both 2.5" and 3.5" sizes to a "stick" SSD. There are several sizes in use today; one of the most common is called m2. These SSDs clip into a slot directly on the motherboard, similar to how a memory stick would. This saves significant space that would otherwise be used by the storage drive in either a desktop or a laptop case.



Currently, only traditional 3.5" drives have very large capacities available (4TB+), but as time goes by, SSDs will become cheaper and a much better alternative. Check out my journal article earlier this year where I compared the two for full details.

**Display** – This is an area where desktops can be a better value for the flexibility to connect to whatever size display you have. Whether it is a 4K UHD 75" panel or a 24" desk LCD panel, either will work on a desktop. Now, many laptops offer HDMI or other ports to connect to displays, but if the reason for the laptop is portability, then the size of the laptop screen is what you'll be using most of the time, typically 13" to 17". The larger the screen, the weight will also increase proportionally on a laptop.

**Graphics** – Without a doubt, desktops are better suited for gaming due to the flexibility to replace and upgrade the video card. Some laptops, such as those from Alienware, do offer several video card options to compete with the best desktop offerings, but these are limited and more costly. For non-gamers, the basic video in either laptops or desktops is sufficient 95% of the time.

In the December 2019 issue of Consumer Reports, there just happens to be an article about this very topic. They report that in a survey taken in 2009, about 72% of the households have a desktop versus the 52% reporting having a laptop. Jump forward to 2019 and the number is now reversed with more households reporting laptops than desktops in almost the same ratio – about 74% laptops and 52% desktops now. Check it out for their recommended models and other factors you may want to consider.

If you have suggestions for topics that you would like to see explained, please let me know!

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## February 1 is National Change Your Password Day

Author: Dorothy Fitch, Editor, GVR Computer Club, AZ

February 2020 issue Green Bytes — [www.ccgvaz.org](http://www.ccgvaz.org) — [dmfitch \(at\) cox.net](mailto:dmfitch@cox.net)

You know that you should pay attention to your passwords. You shouldn't reuse the same one on multiple sites, you should change them now and then, and you should use strong passwords.

But did you know that there is a special day that should inspire you to change your passwords? I just discovered that February 1 is National Change Your Password Day. (There is also a World Password Day on the first Thursday of May.)

According to an [inc.com article](#), the top 10 passwords in use are:

1. 123456
2. password
3. 123456789
4. 12345678
5. 12345
6. 111111
7. 1234567
8. sunshine
9. qwerty
10. iloveyou

A different article cites `ji32k7au4a83` as being a remarkably common password? Why? Because it translates to "mypassword" in English when typed on a bilingual keyboard in Mandarin Chinese. [Click to read this interesting article.](#)

So, as you head to your computer today to change your passwords in honor of this special day, keep in mind these password "best practices" from the [inc.com article](#):

Don't use personal information in your password.  
Make it memorable, but not simple.  
Use longer passwords mixed with letters and numbers and symbols.  
Don't re-use your passwords.  
Use Two-Factor Authentication (when you are sent a code to your email address or phone to authenticate your identity)  
Strategize Your Password Manager (Read [PC Magazine's article](#) on Best Password Managers for 2020.)

Automated hacking systems use a "brute-force" method of simply trying random passwords to break into an account. [This analysis](#) of how quickly (approximately) a password could be "guessed" using this method proves the importance of creating strong passwords. Here are some examples:

5 characters (3 lowercase letters, 2 numbers): .03 seconds  
7 characters (1 capital letter, 6 lowercase letters): 9 minutes  
8 characters (4 lowercase letters, 2 special characters, 2 numbers): 2.6 days  
9 characters (2 capital letters, 3 lowercase letters, 2 numbers, 2 special characters): 9.1 years

[Read the article](#) to find out a password type that would take approximately 7.5 million years to hack!

How strong is a password you have chosen? [Check it here](#).

So, go change your passwords. Now! (Even if is no longer Feb. 1.)

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## **BACK TO BASICS—File Extensions – Helpful and Not**

Author: Jim Cerny, Forum Leader, Sarasota Technology Users Group, Florida  
October 2019 issue, Sarasota Monitor —[www.thestug.org](http://www.thestug.org) —[jimcerny123 \(at\) gmail.com](mailto:jimcerny123@gmail.com)

So someone sends you a file attached to their email – you try to open the file and you can't, why is that? I mean they obviously could open the file on their computer, why couldn't you open it on yours? Unfortunately, this is the frustrating part about FILE EXTENSIONS (also known as "file types").

If you use a program to CREATE a file, it is nice to have the SAME PROGRAM to open or work with the file you created. Naturally, if you use your computer to create a file then your computer has the program needed to open the file later. The problem is when someone creates a file on their computer and sends it to you – you need to have a program that can open the file on your computer. Let's look at one example: I have the Microsoft Word app (or program) on my computer and I create a new document with it. I save the document as a file, and the computer assigns it a "file extension" or "file type" of ".docx". The file extension is always the last three or four characters of the file name right after the dot. This indicates that this file was created using the latest version of Word. If I send this file (as an attachment to an email) to someone else and they do NOT have Word, they cannot open the file!

It is an option in Windows whether to display the file extension, so your computer may not show you the file extension as part of the file name. To see the file extension when you use File Explorer, open the File Explorer app, click on the "View" menu tab and check the box labeled "File Name Extensions". This will display the file extensions (file type) as part of the file name for all files.

Things have changed over the past few years as there are more options to open the file to READ it or to EDIT it. Your computer may suggest some internet sites or free apps that may be able to open the file for you.

A good app like Microsoft Word may allow you to save your file as a different type of file – so you can pick one that is easier for more people to open. You could save it as a ".pdf" or ".rtf" file type if you want.

A “.pdf” file can be opened by many apps but usually, the contents, or text, of the file can NOT be edited, only read. The “.rtf” file type (Rich Text File) can also be opened by several other apps and can be edited, BUT the text will have lost any formatting or options used in Microsoft Word.

Are you working with photo files? Most photos or pictures today are saved as a “.jpg” file type and any app that can open or work with photos will be able to open this file. That’s nice.

Here are just a few of the most popular file extensions (types):

.doc or .docx – Microsoft Word

.html – webpage

.jpg – picture or photo image

.pdf – a document file that can be open or read by many apps but cannot be edited

.rtf – rich text file that contains formatting (the Wordpad app creates these files)

.txt – plain text file will no formatting

.xls and .xlsx – Microsoft Excel spreadsheet

There are probably many thousands of different file types, but thankfully you do not have to know them all. If you have any questions about a particular file type, just Ask Google and you will find out what apps could have created the file and which apps can open or work with that file.

I know this all sounds a bit confusing, but you should only run into a problem when you try to open a file that you did not create on your computer. Should this happen you may have to contact the person who sent you the file and ask them to send it to you again as a different file type – one that you know you can open.

Hopefully, you will become comfortable with the most common file types that you use. Remember you can always Ask Google for help!

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## How Has AI Changed Your Life?

By Stephen D. Ambrosini, CLU ChFC

20/20 Financial Advisers of Cardiff by the Sea — LLCsambrosini (at) 2020fa.com From Drive Light, the Under the Computer Hood UG newsletter

When I find myself at social events, I like to ask a question to start a conversation with those around me. The question is: “ Tell me how Artificial Intelligence (AI) has changed your life. What are your experiences?” Then I sit back and listen.

I started asking this question after attending a few seminars and reading books about the topic. Everyone has a story. Recently I asked my dental hygienist that question. She immediately became very tense and anxious. She denied it was affecting her at first, but after a few moments, she proceeded to tell me about a few new devices that will clean your teeth. They’re available on Amazon of course and are Bluetooth compatible. You charge this dental retainer type device, then you pop it in your mouth. Fifteen minutes later, your teeth are cleaned. That’s one less dental visit.

This week I asked a journeyman electrician how his life is changing. His answer: homes and offices being built today have less copper wire. It’s not needed anymore since everything is wireless. They still have to run some copper to the lights, but nowhere else. That’s a huge savings in new home construction. Also, the power companies are putting in controls that let them dim our lights when needed. So instead of black or brownouts, the power company can dim our lights from their location to save power.

From the books and articles I’ve read, I came across the name Jim Dator, an author and Professor at the University of Hawaii at Manoa. One of the Dator Laws is: “Any useful idea about the future should appear to be ridiculous.” Think about that for a moment. Things that we mocked, saw on TV, laughed at in

movies are now modern-day. Star Trek communicators, Dick Tracy watches, “Back to the Future” hoverboards, “Beam me up, Scotty”, it’s here. They seemed ridiculous at the time, yet they are as real as the Apple Watch you’re wearing.

If it’s scary, and it is, it’s because change is hard. It’s rarely accepted or appreciated. We’re all stuck in our ways and want to leave it like that. However, we must accept the change because it’s happening whether we want it or not. The banks didn’t ask us if we want to now withdraw money from a machine and replace the friendly teller. They just did it, and we adjusted. As a result, many of us haven’t been inside a bank for years. This week I needed to refer a friend to a personal banker. I couldn’t, I don’t have one. Those days of walking in, saying hi, asking about the kids and work, are gone. AI has taken that away. And you know, that’s okay. We all have adjusted very well to that change.

So, let’s not be afraid of these changes. Let’s instead open up our eyes to see what’s coming. How can we benefit from them? How will it improve my life?

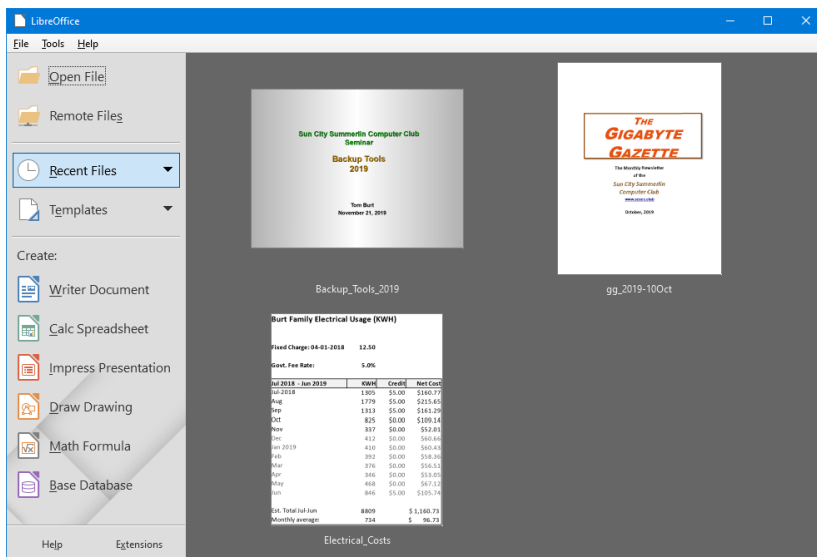
Example: the BMW dealership contacted me recently because my car sent them a message informing them that an oil change is overdue. Now I’ll be bringing the car in for service. That’s a good thing, it’s extending the life of the vehicle.

## LibreOffice—A Powerful, Free Office Suite

Author: Tom Burt, Vice-President, Sun City Summerlin Computer Club, NV  
 December 2019 issue, The Gigabyte Gazette — [www.scscclbub](http://www.scscclbub) — [tomburt89134 \(at\) cox.net](mailto:tomburt89134@cox.net)

About every 18 months I teach an introductory seminar on how to use LibreOffice. Attendance is usually good, but I still only am reaching about 20 of our members at any one time. So, I decided this month to write about it here. Also, I had a recent question about “deals” for Microsoft Office 2019 Professional being offered online for prices like \$49.99. These offers are very dubious. I suggested the questioner consider LibreOffice as a legitimate alternative.

LibreOffice is a free full-featured open-source office suite that is very highly compatible with Microsoft Office. LibreOffice is offered and supported by the Open Document Foundation. The latest version is 6.3.3. You can download it at [www.libreoffice.org](http://www.libreoffice.org). There are versions for Windows, Mac, and Linux. LibreOffice can open and save documents in Microsoft Office format or in its native (.odf) formats.



LibreOffice Home Screen

The LibreOffice home screen displays thumbnails of recently used documents. You can reopen one by simply clicking on it. You can also click in the Create section to create a new document.

The LibreOffice suite includes six components:

**Writer** word processor, compatible with Microsoft Word

**Calc** spreadsheet tool, compatible with Microsoft Excel

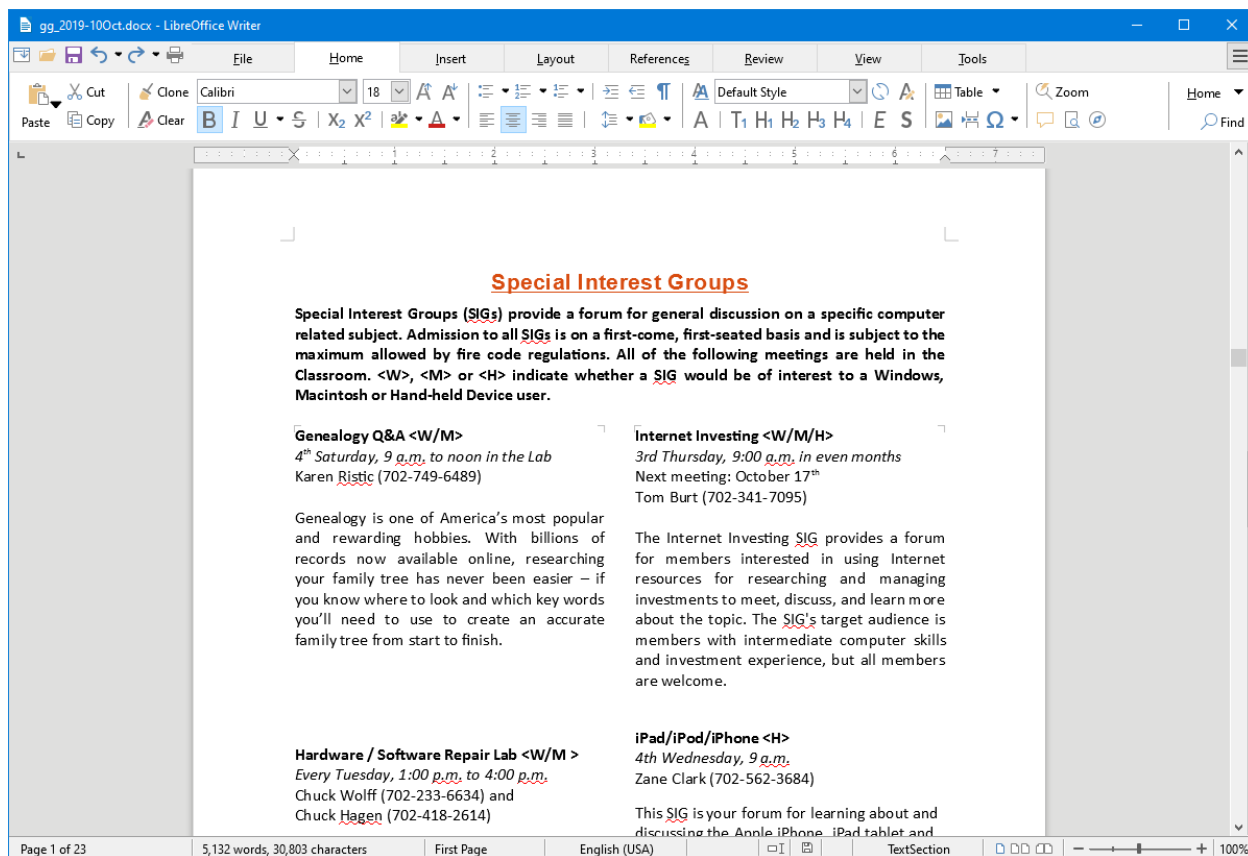
**Impress** presentation graphics, compatible with Microsoft PowerPoint

**Draw** diagramming and drawing tool, compatible with Microsoft Visio

**Math**, a tool for laying out complex mathematical formulas and expressions

**Base**, a database tool for creating and interfacing to relational databases

Space limits here preclude my covering all of the components. Let's look at Writer to get a sense of how LibreOffice looks and feels.



### LibreOffice Writer Using the New Tabbed Interface

Beginning with release 6.3.3, LibreOffice offers a choice of several user interfaces, including a ribbon-style tabbed interface similar to that in Microsoft Office 2007-2019. Also available is a “classical” menus and toolbar interface, similar to that in Microsoft Office 2003. Shown in the screenshot is part of the SIGs page of the Computer Club’s monthly Gigabyte Gazette newsletter. I opened this document, which I usually edit with MS Word 365 (2019) and almost everything came in fine (styles, graphics, tables, etc.). The only flaw I saw was that my running footers stopped showing after the 5<sup>th</sup> page. This was caused by an embedded Section break to a new page. Happily, I was able to easily fix this by copying the footer from page 4 to page 5.

Let's look at a screenshot from the Calc spreadsheet.

Jul 2018 - Jun 2019	KWH	Credit	Net Cost
Jul-2018	1305	\$5.00	\$160.77
Aug	1779	\$5.00	\$215.65
Sep	1313	\$5.00	\$161.29
Oct	825	\$0.00	\$109.14
Nov	337	\$0.00	\$52.01
Dec	412	\$0.00	\$60.66
Jan 2019	410	\$0.00	\$60.43
Feb	392	\$0.00	\$58.36
Mar	376	\$0.00	\$56.51
Apr	346	\$0.00	\$53.05
May	468	\$0.00	\$67.12
Jun	846	\$5.00	\$105.74
Est. Total Jul-Jun	8809		\$1,160.73
Monthly average:	734		\$ 96.73

**LibreOffice Calc Spreadsheet Using the New Tabbed Interface**

This is a fairly simple Excel spreadsheet I use to track my monthly electrical costs. It has multiple worksheets in a single workbook. I opened it with Calc and everything came in fine. This sheet only has formulas; no macros.

In summary, if you're looking for a powerful, free office suite with very high compatibility to MS Office, LibreOffice 6.3 would be an excellent choice. However, after opening a Microsoft Office document in LibreOffice, it's wise to scan through and make sure everything looks right.

Finally, if you see a "too good to be true" offer for Microsoft Office Professional on the web, it almost certainly is. Many of these are selling Enterprise product keys and downloadable media as a retail product, in violation of the Enterprise licenses. Microsoft can kill these product keys at any time and the buyer has no recourse. So, Buyer Beware!



## A Windows 10 screen saver to display your photos

Put your computer to work when you are not using it, to show off your favorite photos automatically  
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You are swimming, or perhaps sinking, in an ocean of photos. Your relatives and friends send photos all the time. You might shoot some yourself too.

You can turn those photos into an entertaining and personalized slide show screen saver on your Windows computer. Read on to learn how.

### WHAT IS A SCREEN SAVER?

Many years ago, before flat-screen monitors became available, we used TV-like cathode ray tube (CRT) computer monitors. Those were big and ungainly things, power-hungry, and I am glad they are gone. But they had another significant problem: if an image was displayed on the screen for a very long time, the phosphors on the screen became “burned” by the brightest portions of the image. Those burns were permanent, and those burned portions of the screen were unable to portray whatever the computer wanted to show there later.

Hence screen savers were born, simple programs that appeared automatically after some minutes of computer inactivity, displaying moving images so that no burns could happen. Several screen savers are provided by Windows 10 and prior versions of Windows.

That same burn effect could also happen to TV cameras of that era. One of the most famous occurred in the TV camera carried to the Moon by the Apollo 11 astronauts. With no atmosphere, the sky was black and the objects in view were very brightly lit by the sun, a high contrast challenge for any TV camera. The metal flagpole, placed by the astronauts, was so bright that it burned the TV camera. When the camera was panned slightly to one side, *two flagpoles appeared*, the real one in its new position and the burned image showing where the pole had previously appeared. The astronauts could not see that, but Walter Cronkite did and so did the rest of the world. Cronkite was mystified by that, and said so, which surprised me because he was a TV broadcasting professional. At that time I was only 16 years old, and I recognized the cause of it immediately.

A second related purpose of a screen saver is to *hide and lock* the current screen so that nobody can view it. This was an early cybersecurity effort to prevent passers-by who might accidentally change your work in progress or have illicit intent to see your work or use the computer without your permission. Those concerns remain important today.

When you return to the computer and tap a key, the slide show ends and you are prompted to log in.

### STEP BY STEP

**First step:** copy all the photos you want to include in a slide show screen saver into one folder on your Windows computer. One possible place is the Pictures folder.

If you already have a huge number of photos in Pictures, and you do not want to include all the photos in a screen saver, then you can make a new sub-folder specifically for screen saver photos, select the photos you want to include in the slide show screen saver, Copy those selected photos, and then Paste the copies into the new sub-folder. Yes, folders can contain sub--folders. The containing folder is often called a parent folder.

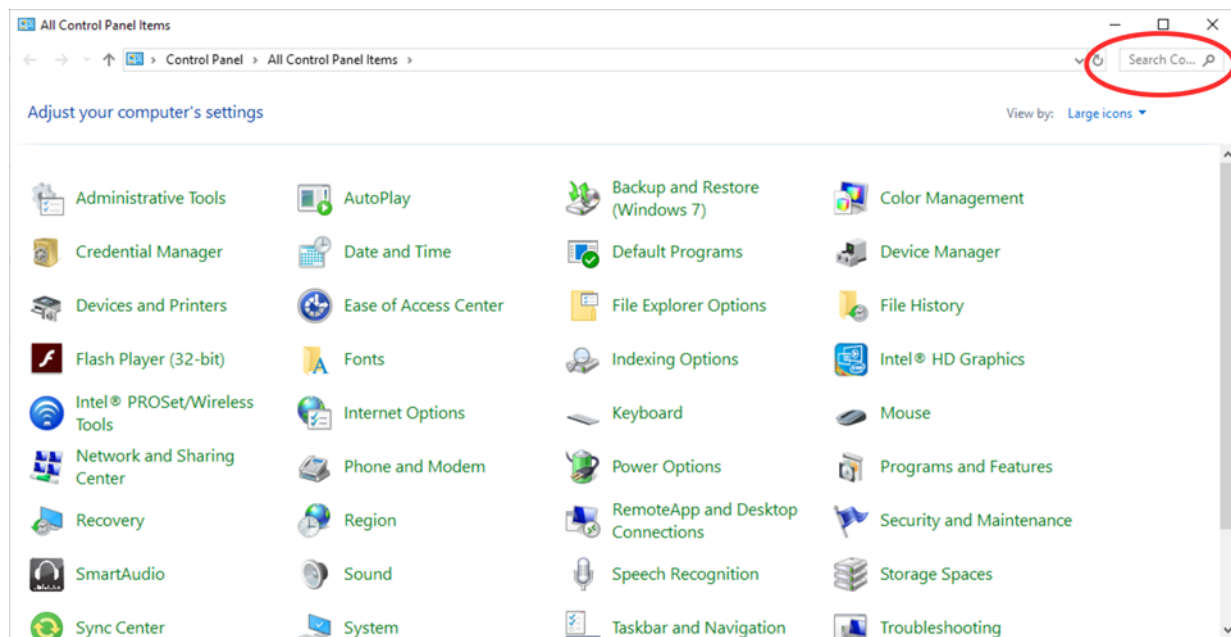
If you do not know how to make a folder, here is a quick tutorial:

- Open File Explorer. Browse to the Documents folder.
- In the right pane, the current contents of the Documents folder are displayed.

- Right-click there, and a menu appears, including the word **New**.
- Point at that word **New** and a sub-menu appears, including the word **Folder**.
- Left click on the word **Folder**, and a new folder is created, and named New Folder (what a surprise). The name is highlighted, which means you can type any other name you want, so long as that name you choose is not already given to another folder in the same parent folder.

**Second step:** In the Windows 10 Start menu, select Control Panel.

You will see something like **Illustration 1**. Alas, Screen Saver does not appear in the rather long list of icons.

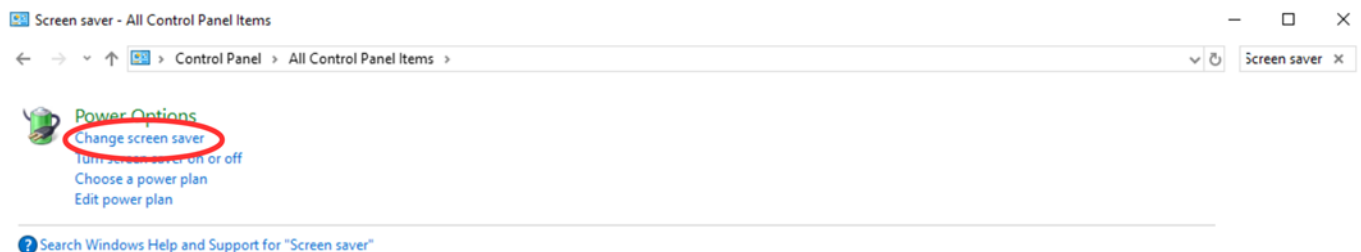


*Illustration 1.*

Note the Search field in the upper right corner, which is circled in the illustration. Click in the Search field, so a cursor appears there. Type **Screen Saver**. Results appear immediately, so you do not need to tap the Enter key.

Control Panel Search is a great quick way to reach specific parts of the Windows 10 settings without learning exactly how to navigate through three or four screens. In this case, Search shows a results page such as that depicted in **Illustration 2**.

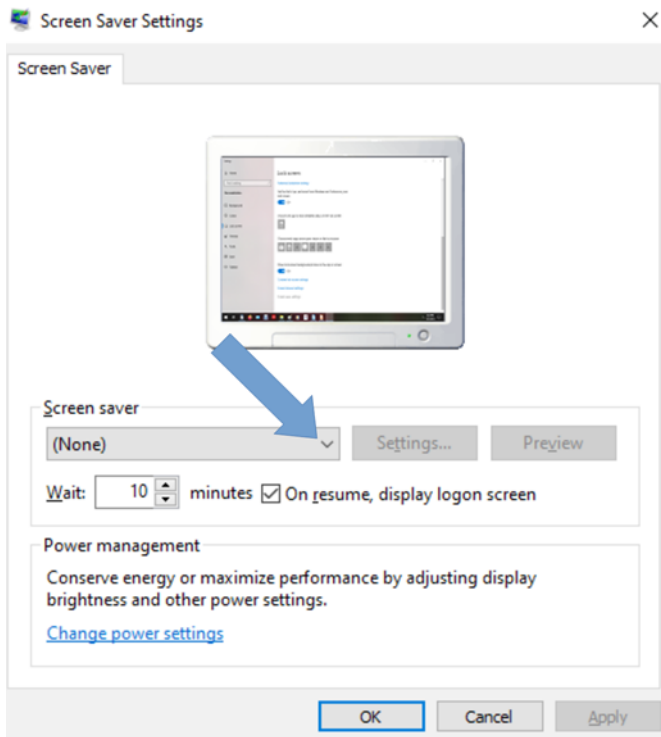
Under the heading Power Options, click on **Change Screen Saver**, which is circled in *Illustration 2*.



*Illustration 2.*

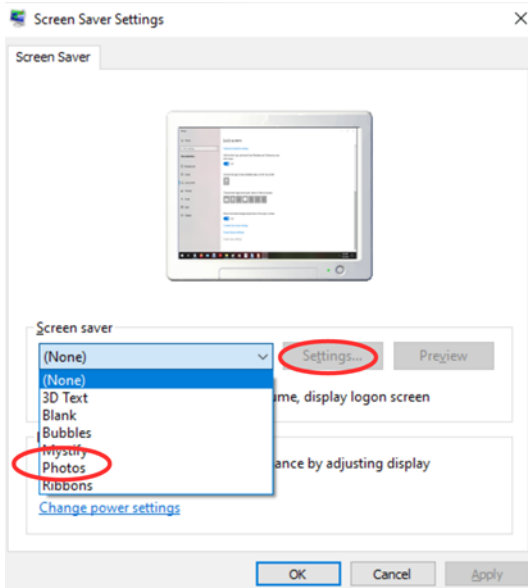


The Screen saver dialog window appears, as shown in **Illustration 3**. This is where you can get down to the business of activating and configuring your Photos screen saver. The dialog window includes a dropdown menu for the selection of screen saver types. Initially, yours will likely say None, which is the default.



There is a down-arrow symbol to the right of the screen saver type selection; I included a pointer in the illustration to draw your attention to that symbol. Left click on that down-arrow symbol.

Illustration 3

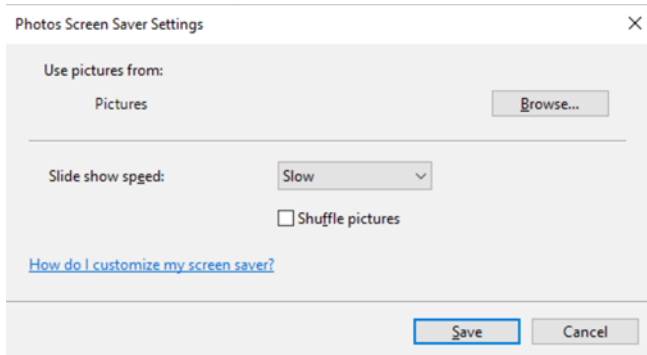


A typical menu is shown in **Illustration 4**. Yours may differ depending on when you obtained your version of Windows because some types are added from time to time. Photos, which has been a Windows screen saver for a very long time, should appear in all the versions of the menu and is circled in illustration 4. Select **Photos**.

Selection from the menu causes the menu to disappear. You can tell that you selected Photos because that word remains visible, to the left of the down-arrow.

Illustration 4

After that, in the dialog window, the Settings button is active. Click on the Settings button, which is also circled in Illustration 4. A Screen Saver Settings dialog window opens. That dialog window is shown in **Illustration 5**.



*Illustration 5*

The Settings dialog window has three important purposes.

The first purpose is to specify the **folder in which you stored your selected photos** in Step One above. The default folder is Pictures. If you put your screen saver photos in Pictures, then you do not need to change this setting. Otherwise, click the Browse button, and a standard Windows folder selection navigator window appears. Navigate to and select your folder, and then click the OK button in the folder selection window.

The second purpose is to choose the **speed** of the slide show of photos, meaning the duration of each photo on the screen. The speed options include Slow, Medium, and Fast. Not very descriptive, right?

The speed is a matter of individual taste. Try Medium first. In a moment or two, you will learn how to test that setting. If that speed is not ideal for you, then go back to the Screen Saver Settings window, change the speed setting, and test again.

The actual duration of photo display each setting on your computer depends on a great variety of factors, such as the speed of your hard drive, the speed of your CPU, the amount of RAM memory in your computer, and the number of programs running on your computer.

The third purpose is to choose the **order in which the photos are displayed**. The Shuffle checkbox tells the computer to display the photos in Random Order. If you do not check that box, then the photos will be displayed in filename order. Once you are done with the settings, click on the Save button, and the Settings window closes.

**Third Step:** You can test your slide show by clicking the Preview button in the Screen Saver dialog window. This preview capability allows you to see the actual duration of each photo. You can try it out and decide if the speed is too fast or too slow for your taste, and then reopen the Screen Saver Settings window to adjust the speed if necessary.

When you are done setting up your screen saver, tap the OK button at the bottom of the dialog window. The dialog window closes. You can close the Control Panel Search Results screen as well.

After that, all you have to do is wait, keep your hands off your mouse and keyboard. Eventually, your customized screen saver will take over.

ABOUT THE AUTHOR: John Krout is a past president of the Washington Area Computer User Group (WAC). After his tenure, the group merged with another to form the Potomac Area Technology and Computer Society (PATACS). He has been taking photos since the early 1960s and writing about the uses of personal computers since the early 1980s. His digital photos won first and second place in the 2018 Association of PC User Groups (APCUG) digital photo contest. After many years working as a software engineer using C and C++, now John is a tech writer for the Thales Group, supporting the use of that company's advanced automatic fingerprint matching technology in the computer system of a major federal government agency.

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