



THE WYSIWYG



February 2021

Volume 33 Issue 2

STERLING HEIGHTS COMPUTER CLUB

PO Box 385

Sterling Heights, Michigan 48311-0385

MAIN MEETING: TUESDAY FEBRUARY 2 7:00 PM

**Same day/time as usual
Location: Your house,
Video conference**

(Please use your real name when you log in, just as we all do when we attend our in-person meetings. The ZOOM event host may restrict admittance to confirmed club members only.)

IN THIS ISSUE:	
About SHCC	2
President's Pen // Are You "Zoom Challenged"?	3
Helpful Memory Bytes	4
Windows 10's Speech to Text Feature	5
25 Years of Making Connections With USB (After 3 Attempts)	6
Video Cable Types Explained	7
How to Make the Text Cursor Easier to See	9
SOC — Save Our Connectors	10
Cloud Storage	12
Data Privacy Day Jan. 28	13
Web Page Reviews	13 & 14

This Month's Main Meeting Topic:

“Security/Privacy Settings in Windows 10”

**will be presented online by
APCUG Speakers Bureau member**

Jere Minich

Guests and visitors are welcome. People can attend any SHCC meetings during two consecutive months before deciding whether to become a member or not. July and August don't count since there is no main meeting in those months. Membership includes admission to all SHCC functions and the newsletter. Membership is open to anyone. It is not limited to the residents of Sterling Heights.

DUES: \$30/YEAR

CLUB ADDRESS: PO Box 385, Sterling Heights, MI 48311-0385
CLUB E-MAIL ADDRESS: Info@SterlingHeightsComputerClub.org
CLUB WEB PAGE: <http://www.SterlingHeightsComputerClub.org>

2021 SHCC Officers – Thanks for all your hard work!!!

President	Don VanSyckel	President@SterlingHeightsComputerClub.org
Vice President	Mike Bader	VP@SterlingHeightsComputerClub.org
Secretary	Paul Baecker	Secretary@SterlingHeightsComputerClub.org
Treasurer	Bernard DeFazio	Treasurer@SterlingHeightsComputerClub.org

Resource People

Firefox	Don VanSyckel
General Computer Questions	Jack Vander- Schrier
Hardware	(open)
MS Publisher	Paul Baecker
MS Word	Rick Schummer
Spreadsheets	Rick Schummer

SHCC Coordinators

Associate Editor	Rick Schummer
Door prizes	Don VanSyckel
Greeter for visitors	Jim Waldrop
Newsletter Publisher/Editor	Paul Baecker
Program Coordinator	Mike Bader
Publicity	Patrick Little
Publicity	Phil Reynaud
Welcome & check-in desk	Jim Waldrop
Web Site Admin	Don VanSyckel
Web Watch column	Paul Baecker

Contact Information

(Use the appropriate e-address for your questions/comments.)

Mike Bader	586-447-6683	programs@sterlingheightscomputerclub.org
Paul Baecker		newsletter@sterlingheightscomputerclub.org webwatch@sterlingheightscomputerclub.org
Patrick Little	586-264-1497	publicity@sterlingheightscomputerclub.org
Phil Reynaud	586-212-2848	publicity@sterlingheightscomputerclub.org
Rick Schummer		assoc-ed@sterlingheightscomputerclub.org
Don VanSyckel	586-731-9232	doorprizes@sterlingheightscomputerclub.org webmaster@sterlingheightscomputerclub.org
James Waldrop	586-731-6481	greeter@sterlingheightscomputerclub.org check-in@sterlingheightscomputerclub.org

Club Dues Amounts

The club dues were increased to \$30 per year at the November 2018 meeting.

This includes a digital version of the newsletter sent monthly, except for July and August, when the club does not meet.

A paper version of the newsletter is available in place of the digital newsletter, for an additional \$31 per year. (increased at March 2019 meeting)

Associate memberships, for a second member of a household, remain at an additional \$15 per year.

Two-Month Meeting Schedule

MARCH 2021
 2 - SHCC Main Meeting
 14 - SEMCO meeting

APRIL 2021
 6 - SHCC Main Meeting
 11 - SEMCO meeting

Newsletter submissions are due 10 days before the club meeting, but the earlier the better. They should be sent to : newsletter@SterlingHeightsComputerClub.org

© Unless stated otherwise, all materials contained in this newsletter are copyrighted by the Sterling Heights Computer Club. License is hereby granted to other clubs (non-profit) to reprint with credit.

The President's Pen

by Don VanSyckel



Data Privacy Day occurs on January 28th; I hope you attended some of the online presentations and reviewed other materials available online. As I write this, since it takes a bit to produce the newsletter, it's actually before the 28th. So on the off-chance that you read this before the 28th, check the emails I've sent and join in on Data Privacy Day.

One of the pieces of data privacy is using a **Virtual Private Network (VPN)**. But what does this actually mean? In the simplest form, a piece of software on your PC grabs all your out-bound Internet traffic, encrypts it, and sends it to a VPN server. Of course the software on your PC has to be from the same company as the VPN service's server. When the VPN server receives your traffic, it decrypts it and sends it on its way. Data coming back to you goes to the VPN server, it's encrypted, and sent to your PC. Your PC decrypts the data and hands it off to you to use.

So how is this different than when you use a web site with an "HTTPS" URL? Isn't the data encrypted? Isn't that what the 'S' in HTTPS means, secure? Well not all the data in the HTTPS transmission is encrypted. Your address and the address of the site you're communicating with are *not* encrypted; how could it be, when it has to be in plain text to be usable.

With a VPN your entire transmission, including all the stuff that has to be in plain text, is encrypted. So WOW, Comcast, or whoever your ISP (Internet Service Provider) is can't track your Internet usage. All they see for your web usage is that you only visit one web address, that of the VPN server. Your ISP can't sell any information about you and their web trackers can't pin you down. The web sites you're visiting can't define *your true geographic location*.

Most VPN providers have many VPN server locations and some have locations around the world. This has its pluses and minuses. If a site uses geo-fencing (limiting access based on geographic location), you can choose a VPN server inside the geo-fence. On the other hand, this VPN's location spoofing is known and some companies such as banks and media outlets *could* block access from known VPN servers. But this is another whole level of effort on the web site's part, and unless the site has a real need, they may not bother.

Recently I read an article about VPNs and was made aware of something that I had never thought of. All of the stuff in your house that uses the Internet is being tracked by your ISP. Your ISP sees that you have two Vizio TVs, each of the Roku's, the thermostats, the cell phones via WiFi traffic, the new printer (sends out for software updates and problem reports), that new DVD/Blu-ray player with web apps, the smart refrigerator, your home security system, lawn sprinkler controller, garage door opener, the home automation lights and gadgets, and other stuff I don't even know about all communicate with a web site out there. *{These web-connected gadgets and appliances are known as IoT devices — Internet of Things.}*

(Continued on page 9.....PrezPen)

Are You "Zoom Challenged"?

News and/or Opinion from the Editor

Do you occasionally attend online events (so-called webinars and such) using the popular ZOOM application? There are so many event and meeting offerings on the web, including (probably) from your local public library.

Or do you not attend any because you just do not know how to use ZOOM or how to install it onto your computer?

If you are in the latter group, be sure to contact someone to help you get your device ready. The process, as with so many computer tools, programs, and features, is easy once you know how. Contact a friend or someone in your computer club (including the Officers). Everyone is there to offer assistance. After all, we had to go through the same short ZOOM learning curve, too.

One person recently told me that she doesn't have a camera or microphone on her desktop PC, so she figured that she could not attend online events (using ZOOM or any other similar event tool). This is a common misconception! To attend and view such an event, the viewer only needs a monitor and speaker (which every modern desktop PC and laptop PC already contains). If the viewer wants to be seen and heard by the event host and/or attendees, this is when a camera and/or mic are necessary. But attending an event does not necessarily require the viewer to be seen or heard.

And if your computer equipment includes a camera and mic, you do not HAVE to use them. By disabling the camera and/or muting the mic (inside of the ZOOM tool), you can still enjoy the event without being seen or heard. I often turn off my camera and mute my mic when someone is presenting, until a Q&A or discussion segment comes along. Seeing other attendees sleeping or eating in their individual video screens is SOOOO annoying.

ZOOM is probably the most common of the web conferencing platforms available through the web. (Others include GoToMeeting, Google Meets, Microsoft Teams, etc.) SHCC and APCUG events use ZOOM.

The ZOOM web site includes a test page, where anyone can practice accessing a ZOOM event:
<https://zoom.us/test>

Walk through a fictitious web event there to discover and try out the various buttons and configuration settings to get familiar with using this tool. The common settings allow you to name yourself and test your computer's speakers and mic, before you enter the event.

Remember, there are no dumb questions. Do not feel intimidated. Ask for assistance. If you don't get the answers you need, ask again or ask someone else. You are probably missing some very interesting and entertaining experiences.

"See" you at a ZOOM event soon!



Helpful Memory Bytes

By Jim Cerny, Help Desk Host
The Saratoga Users Group
www.thestug.org
jimcerny123@gmail.com

Let's review and explore what we really need to know about basic computer storage (bits and bytes) and how it helps us get an idea of the data space needed to save and backup our stuff.

Suppose you landed on a planet and the aliens there only had one hand and only one finger on it (not ten fingers like we do). All they could do is flash a single digit or none at all (hence, a zero or one). How high could they count? Could they do basic math?

All computers use the binary system (a single digit of 1 or 0) – that is, they store and work with data saved in memory as zeros and ones. But there is NO LIMIT to how high you can count – you just keep adding on more zeros and ones. For example, the digits we know in our numbering system such as 1, 2, 3, 4, 5, 6, 7, 8, 15, 16, 31, 32, 33, etc. would be the following in binary = 1, 10, 11, 100, 101, 110, 111, 1000, 1111, 10000, 11111, 100000, 100001, etc. So, adding a new digit to the left doubles the size of the memory (or number). Believe it or not, math gets a lot simpler with only two digits.

A single binary digit is called a BIT. Eight bits together form a BYTE of data. Eight bits allow for 256 different combinations, enough to cover not only our 26-character alphabet but special characters and more. Every key-stroke on your keyboard enters one byte into memory!

I love the old science fiction movies – where the spacecraft command center was filled with gauges and dials! To read a value on a dial you had to look closely and see where the arrow was. It showed measurement on a scale of lines and it was up to you and your eyesight to see the amount or “reading.” But with binary digits, you don't care about “how much” you only need to know if it is there or not there -- a one or a zero. To get more accuracy, you just add more binary digits. So, you will need a lot of them, but they are cheap and much easier for use in electronics.

One KILO-byte of memory is 1024 bytes, but when we start dealing with really large amounts of computer storage, we round it off and call it a thousand.

One MEGA-byte of data is one million bytes or one-thousand kilobytes. Those old 3.5-inch computer disks (remember them?) held about one and a half megabytes or about 220 pages of text. A CD-ROM (computer disk) could hold about 700 megabytes, that's over 400 of those old floppy disks and about 90,000 pages of text. It is good to remember that photos, depending upon the number of pixels in them, can be from 10 or 20 kilobytes up to

2, 12, 24, or more megabytes each! So, is a picture worth a thousand words? You bet, and more!

One GIGA-byte is one trillion bytes or one-thousand megabytes. Now we are talking serious (and very inexpensive) memory! You can buy a small portable USB drive (called a “thumb” drive or “flash” drive) in various gigabyte sizes – I tend to like the 32 or 64-gigabyte size because it can easily hold all my photos and documents as my backup.



Just one gigabyte can hold almost 700,000 pages of text. That's a den full of books. One HD (high definition) movie can take 2 to 5 gigabytes of memory. Movies and videos are moving pictures, of course, several pictures (or “frames”) per second. Fortunately, the data used to store photos and movies are “compressed” or coded to take up much less space than you would expect.

One TERA-byte is one thousand gigabytes. For us normal people, this is a HUGE amount of memory! You can get a one-terabyte drive for about \$50. It can hold 300,000 photos or about 500 hours of movies. And, unlike my memory, it will never forget anything.



The next memory size up is the PETA-byte -- yup, one-thousand terabytes! And, no, they are not going to run out of prefixes. All just to store ones and zeros.

I use a nice little thumb drive to back up my memory, but I seem to forget where I put it!

This article has been obtained from APCUG with the author's permission for publication by APCUG member groups.



(Speech to Text.....Continued from page 5)

Give it a try, even if you have no problem typing. It is a bit of fun, plus it sure is surreal watching the text automatically appearing on the page — like the invisible man is typing.

This article is republished, with permission, from the DavesComputerTips web site.

{Ed. note: I tried this feature in LibreOffice's Writer application with total success. This is really something enjoyable to use (and pass some idle time, too). Practice how distinct you need to speak for your computer to understand your own speech characteristics. Speak the punctuation (such as “period”, “comma”, etc.) you need to instruct the appropriate insertions. See how accurate it can be. Try it out!}



Windows 10's Speech to Text Feature

By Jim Hillier

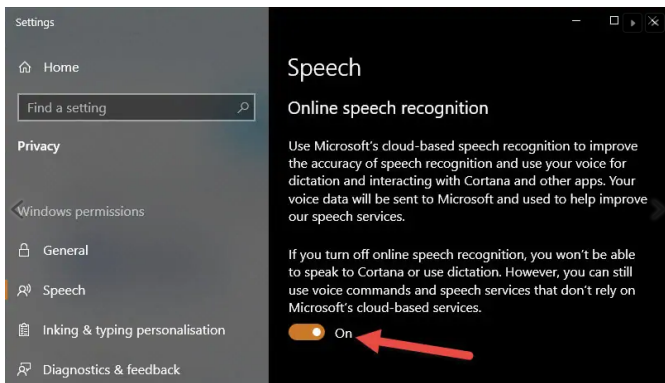
<https://davescomputertips.com>

We recently published an article on [how to make text bigger in Windows 10](#), a very helpful option for users who might be sight-impaired. These types of assistance features/options are available via Windows 10's *Ease of Access* settings. In this article, I'll be showing you how to access and use Windows 10's "Dictation" feature, which is a native speech-to-text tool designed to help users who have difficulty typing due to arthritis or some other impairment. Obviously, you will need to have a microphone connected – the microphones built into webcams will work fine.

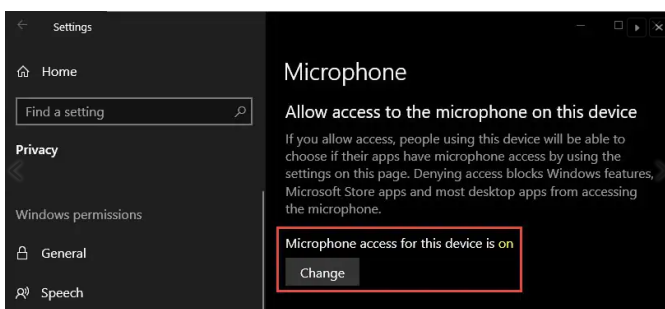
Enable Dictation In Windows 10

First off, to use this feature you'll need to make sure two settings are turned on:

- Go to **Settings > Privacy – Speech** and switch on **Online Speech Recognition** (if not already set to **On**).



- Still in **Settings > Privacy**, scroll down and click on **Microphone** in the left-hand panel. If you see the message "*Microphone access for this device is on*", you're good to go. If not, click the **Change** button and switch it to **On**.



Using Dictation In Windows 10

In this example, I'll be using a Word document, but it works with just about anything that will accept text — Facebook posts, comments, email, dialogue boxes, etc. — just place your mouse cursor where you want to start the text and dictate away.

To initiate the Dictation feature, hold down the Windows key and tap the **H** key. A small window will open in the top center of the screen which includes a microphone icon:



At first, the associated message will say "Initializing" and a few seconds later it will change to "Listening". When "Listening" appears, that means it is ready for dictation. During dictation, if you don't say anything for a little while, the microphone icon will change to a gray color. When you're ready to continue dictating again, all you need do is click on the microphone icon, "Listening" will reappear, and you are good to go again.

You have to be careful how you insert punctuation. The feature works best if you complete full sentences at a time including punctuation as you go. For example, if you want it to type "All is well here thank you." with a full stop at the end, you must include "fu"ll stop" at the end of the sentence without pausing – All is well here thank you full stop." And, if you want to include a comma between the "here" and "thank you" you would say "All is well here comma thank you full stop". I found it to be fairly accurate, considering my broad Australian accent, and the feature does learn as you go along so the more you use it the more accurate it will get. Here is what I dictated into a Word document:

Hello, this is Windows 10 dictation in action. This is a great feature for anyone who struggles to type. Especially for those who might have arthritic hands.

It did struggle with "arthritic" but got it right on the third attempt. As I said, my Australian accent is probably mostly to blame. Microsoft has published a list of verbal commands that supposedly work with the Dictation feature: Dictation Commands. However, I could not find a back-space command that worked and had to do that manually using the keyboard.

BOTTOM LINE:

The Dictation feature in Windows 10 does take a bit of getting used to but I only dabbled and I believe with more consistent use, including a little trial and error, it can quite easily be mastered. It would certainly be a terrific help for anyone who struggles with typing.

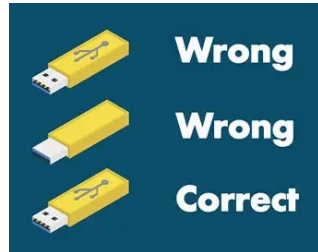
(Continued on page 4.....*Speech to Text*)

25 Years of Making Connections With USB (After 3 Attempts)

By Benj Edwards

<https://www.howtogeek.com>

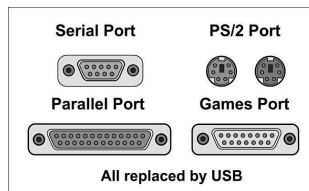
Everyone knows USB sticks must be flipped three times to get them in correctly.



Version 1.0 of the Universal Serial Bus (USB) standard was released in January 1996. 25 years and three attempts later, we've gone from USB 1.0's 12 Mbit/s speeds to USB4's 40 Gbit/s speeds. Here's how USB conquered the world.

The Problem: Wrestling with Ports and IRQs

In the early 1990s, connecting peripherals to PCs was a mess. To use set up any PC, you had to utilize a handful of different types of incompatible ports and connectors. Most commonly, those included a keyboard port, a 9- or 25-pin RS-232 serial port, and a 25-pin parallel port. In addition, PC game controllers used their own 15-pin standard, and mice often plugged into serial ports or proprietary cards.



At the same time, peripheral manufacturers began bumping into data rate limits in existing ports used for peripherals on PCs. Demand for telephony, video, and audio applications was growing. Traditionally, vendors had sidestepped these limitations by introducing their own proprietary ports that could be installed as add-in cards, but that added cost and increased compatibility issues between machines.

And finally, adding a new peripheral on a PC was a headache. It often meant configuring technical details like IRQ settings, DMA channels, and I/O addresses so that they did not conflict with other devices installed on the system. (Average computer users don't have to think about these anymore.) There had to be an easier way.

The Solution: USB

Relief would soon come in the form of a single port that could unify the industry: the Universal Serial Bus. USB originated as a 1994 joint project between eight high-profile firms: Intel, Microsoft, IBM, Compaq, Digital Equipment Corporation, NEC, and Northern Telecom. After development for the next year and a half, the group published the USB 1.0 specification on January 15, 1996.

What they came up with was a serial computer peripheral bus that used simple 4-pin connectors that were rugged and inexpensive. USB allowed up to 12 megabit-per-second connections (enough for network applications at the

time) and could serve up to 127 devices on a single bus if chained together using hubs. Best of all, USB was completely plug-and-play, which meant devices automatically configured themselves (or sought appropriate drivers) when you plugged them in. No more wrestling with IRQs. And unlike earlier standards, USB supported hot-swapping, which meant you could plug and unplug your peripherals while the computer was still running: no need for reboots when switching something as simple as your mouse.



At the time, the industry was also eyeing competing standards such as Firewire (IEEE 1394), Apple GeoPort, ACCESS.bus, and SCSI. But the simplicity and flexibility of USB won out — especially when vendors demonstrated they could create relatively low-cost USB chipsets for hubs and peripherals.

USB Appears in the Wild

The PC industry adopted USB slowly at first, with incremental improvements in the standard taking place over several years before widespread adoption took hold. Microsoft first supported USB in Windows 95 OSR 2.1 in August 1997 (and Win NT around that time as well).

According to ComputerWorld, the Unisys Aquanta DX desktop, announced in May 13, 1996, was the first PC announced with built-in USB ports, though other vendors like IBM may have beaten them to market. Reports in Byte Magazine say USB chipsets weren't available at scale until mid-late 1996. Still, by the end of 1996, almost a dozen PC vendors had announced PCs that included USB ports—usually two ports per machine.

Even with some early support for USB from PC manufacturers, USB peripherals that could actually use the ports were few and far between until around 1998. Until that time, almost every PC still shipped with legacy ports, so manufacturers continued to develop and sell devices that used them.

One event changed the availability of USB peripherals dramatically. In August 1998, Apple released the iMac, a sleek all-in-one machine that ditched all of its legacy ports for USB. For the first time in over a decade, Apple had created a machine without SCSI, ADB, or serial ports, and Mac peripheral manufacturers were forced to jump into USB in a significant way.



While Apple can't claim sole credit in popularizing USB (there's a healthy debate about that on StackExchange), the heavy press focus on the iMac's reliance on USB brought the port into the popular consciousness in a big way for the first time.

Soon, those Mac USB peripherals were also available for PCs with USB, and with healthy support for USB in Windows 98, lower-cost chipsets, and revisions to the USB standard, the PC market began to adopt USB with gusto

(Continued on page 13.....USB)

Video Cable Types Explained: Differences Between VGA, DVI, RCA, and HDMI Ports

By James Frew

<https://www.makeuseof.com>

All those video cables can get confusing. What is a VGA port? What is DVI? Learn the difference between video cable types.

As technology has progressed, so, too, have the cables we need for our devices. Even though many manufacturers are moving to wireless solutions, you'll likely always need some form of cable.

This is especially true for video devices. Televisions, monitors, and peripherals need a wide variety of cables and connections to work correctly. So, what are the differences between them all, and which ones do you need?

Let's take a look at some of the most popular video cable types and when you may want to use each one.

VGA Cables

VGA stands for **Video Graphics Array**. The connection was developed by IBM in 1987, making it one of the oldest video connections still in use today. It was widely used for video cards, TV sets, computer monitors, and laptops.



VGA can support resolutions up to 640x480 in 16 colors, although you can increase the colors to 256 by lowering the resolution to 320x200. This is known as Mode 13h and is commonly used when booting your computer into Safe Mode. Mode 13h was often used for video games in the late 1980s.

VGA is capable of transmitting RGBHV video signals, which includes, Red, Blue, Green, Horizontal Sync, and Vertical Sync. The iconic blue adaptor comes with a screw on either side to secure the connection. The socket consists of 15 pins, arranged in three rows of five.

It has since been surpassed by digital connections like HDMI and DVI but is still popular thanks to the resurgence of retro gaming and its inclusion on cheaper monitors and displays.

RCA Cables

The **RCA** lead is one of the most visually identifiable video cables. The red, white, and yellow plugs are synonymous with audio/visual equipment



produced in the 1990s and early 2000s. It was also the primary connection for many games consoles, including the Nintendo Wii. Most televisions no longer support RCA inputs, but there are still plenty of [ways to connect your Nintendo Wii to your TV](#).

The name doesn't refer to the technology itself, but to the company that popularized it, the **Radio Corporation of America**. The red and white connectors provide audio, while the yellow offers a single channel composite video.

When used together, the three cables transmit stereo audio with video up to 480i or 576i resolution. Just as with VGA, the once-popular RCA cable has been superseded by the digital DVI and HDMI connections.

DVI Cables

The **Digital Visual Interface**, or **DVI**, was launched in 1999 by the Digital Display Working Group as the successor to the VGA cable. DVI connections can transmit uncompressed digital video in one of three different modes:



- **DVI-I** (Integrated) combines digital and analog in the same connector.
- **DVI-D** (Digital) supports digital signals only.
- **DVI-A** (Analog) supports analog only.

DVI-I and DVI-D can come in single or dual-link varieties. Single-link can support 1920x1200 at 60Hz while adding a second digital transmitter for dual-link means the resolution can be increased to 2560x1600 at 60Hz.

To prevent forced obsolescence of VGA devices, DVI was developed to support analog connections using the DVI-A mode. This meant that DVI connections and devices could be backward-compatible with VGA connections.

HDMI Cables

The most popular digital video connection is the **High Definition Media Input**, also known as **HDMI**. This proprietary interface was created by a group of electronics firms, including Sony, Sanyo, and Toshiba. HDMI connections transfer uncompressed video and audio to computer monitors, TVs, and DVD or Blu-ray players.



There have been many iterations of the HDMI standard to accommodate advances in technology. The most recent is HDMI 2.1, which was launched in 2017. Among other technical changes, this update improved support

for 4K and 8K resolutions and increased the bandwidth of HDMI up to 48 Gbit/s.

Importantly, HDMI cables are backward compatible, so that you can use a cable with the latest features on older devices. The reverse is also true, meaning you can use an older cable on devices made to the HDMI 2.1 standard. This is useful, as the HDMI Forum previously ruled that no HDMI cables or devices can display which standard they were manufactured to, making it impossible to determine your setup's configuration.

HDMI uses the same video format standards as DVI, so the two are compatible through the use of an adaptor. As no signal conversion is necessary, there is no loss of quality either. Although, unlike HDMI, DVI does not support audio.

There are three commonly used HDMI connectors. Type A is the full-sized HDMI connection for use on TVs and home theater equipment. Mini-HDMI (Type C) is frequently used on laptops and tablets, while Micro-HDMI (Type D) is mostly used on mobile devices.

DisplayPort Connections

DisplayPort is a digital display interface developed by the Video Electronics Standards Association (VESA). DisplayPort can carry digital video and audio, making it functionally similar to HDMI. As of DisplayPort 2.0, these connections support resolutions up to 8K, High Dynamic Range (HDR) at higher resolutions, and better support for multi-display configurations.

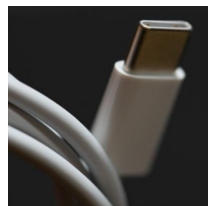


However, HDMI and DisplayPort were designed for different markets. While HDMI is primarily for home entertainment, DisplayPort was designed for connecting computing devices to monitors.

Due to their similar functionality, it is possible to connect DisplayPort and HDMI devices together using a Dual-Mode DisplayPort adapter. DisplayPort operates using packet data transmission, most commonly used in Ethernet and USB connections. Thus, making it ideal for use in computing rather than home entertainment.

Thunderbolt Connections

Thunderbolt is an interface commonly found on Apple computers, iMacs, and MacBooks. Intel developed the standard with support from Apple as a means to connect peripherals to your computer.



The connection made its debut with the launch of the 2011 edition of the MacBook Pro and is still common-

place on the company's hardware. If you own an Apple computer, it might be worth checking out the [best Thunderbolt accessories for your Mac](#). Like other video connections, Thunderbolt cables integrate other technologies into a single device.

The connection combines PCI Express and DisplayPort, while also providing DC power, enabling up to six device connections on a single cable. To complicate matters, there is an overlap between Thunderbolt and USB Type-C. Thunderbolt specifications have been integrated into USB standards across the years.

With the introduction of Thunderbolt 3, all Thunderbolt cables share the same connector as USB Type-C cables. This means you can use the cheaper USB-C cable with Thunderbolt ports and devices. However, performance will be limited as USB-C cables don't support the same rates of data transfer or power.
The Right Video Cable for Your Needs

When a new technology hits the market, manufacturers compete to make their version the global standard. This is why there are so many video cable connection types that are still in use today.

However, standardization is possible. In the mid-2000s, each cell phone would come with a proprietary charger. These days, it's almost guaranteed your smartphone will charge via a micro-USB or USB-C connector.

The same is true of video standards, where HDMI has become the most common connection. If you need a new cable, then consider one of the [best HDMI cables for Smart TVs and displays](#).

This article is republished, with permission, from the MakeUseOf web site.



(Connectors.....Continued from page 11)

ports on the computer have become unreliable; I often must wiggle the Flash drives to allow them to be recognized. To provide continued access to the computer, I connected a cheap four-port USB hub into one of the computer's rear-panel USB ports. This provides handy access and acts as a connector saver for the rear ports.

Though your device connectors cannot send a distress signal (other than by failing), you can help extend their lives by using the connector saver concept on heavily-used connectors where possible. Magnetic charging cables, wireless inductive chargers, adapters, and USB hubs can all play a part in reducing connector wear and keeping your devices running longer. Avoid connector disasters - Save Our Connectors!

This article has been obtained from APCUG with the author's permission for publication by APCUG member groups.



How to Make the Text Cursor Easier to See

By Jim Hillier

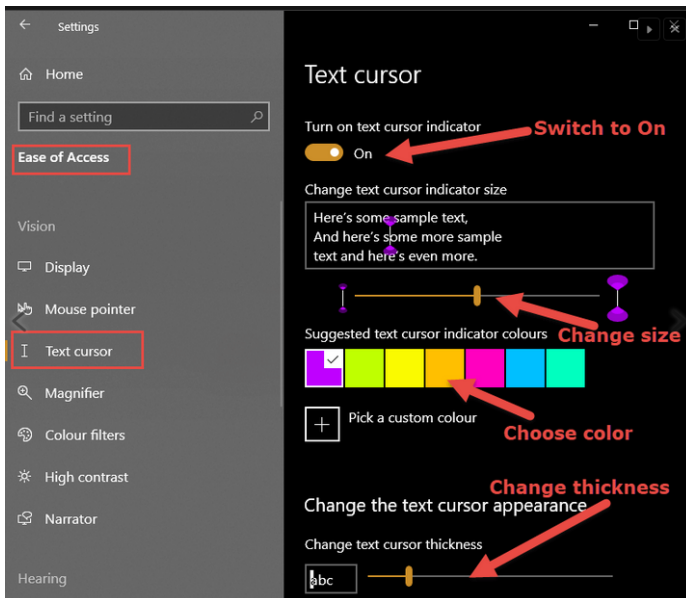
<https://davescomputertips.com>

The text cursor is that little vertical blinking line you see in a dialogue box or document that lets you know where you're at. Sometimes the text cursor gets lost and is difficult to find, and for people whose eyesight is not the best, it is not that distinct to begin with. This is another of those adjustments available via Ease of Access settings specifically designed to help users with special needs.

Make The Text Cursor Easier To See

- Go to **Settings > Ease of Access** and, in the left-hand panel, click **Text Cursor**
- Switch the option **Turn on text cursor indicator** to On

From here, you can change the size and color of the text cursor indicator as well as change the thickness of the text cursor itself.



- **Change size:** move the slider to change the size of the indicator
- **Choose color:** choose from seven default colors or Pick a custom color
- **Change thickness:** use the slider to thicken the text cursor

Here is a screenshot of the text cursor before and after applying the settings as per the above screenshot- indicator size set to 4, cursor thickness set to 3:



BOTTOM LINE:

During testing, I found the text cursor settings a bit hit and miss. They work fine in all current applications but not so much in older software, such as older versions of Office for example. Still, for anyone whose eyesight is not the best, or has trouble locating the text cursor for whatever reason, these settings can surely help.

This article is republished, with permission, from the DavesComputerTips web site.



(PrezPen.....Continued from page 3)

So by collecting the address, the stuff in your house is talking to your ISP and then the ISP knows what stuff you have in your house. They don't know the precise model numbers, but categorically and quantity wise, they know.

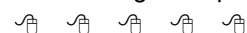
I also read that some routers can have applications installed on them; in particular, VPN software. I should mention here that some VPN software is all-or-nothing (either *all* web sites are VPN-connected, or *none* of them are), and some VPN software can "white-list" sites which means when you go to a white-listed site, the VPN software routes your Internet traffic *around* instead of *through* the VPN process. This allows you to use your bank's site without turning off the VPN (for example, in case the bank rejects the VPN connection — it may need to know *your* IP Address, not the VPN's IP Address, to *confirm your identity*), so your other web surfing is still going through the VPN.

I've chosen to purchase a VPN service that works on both the PC and on the new router I just bought to host this service on my home network. I've been very busy lately but plan to set up the router and VPN soon. Possibly next month I'll have enough usage info to report on this.

This month I'm pleased to welcome back **Jere Minch** of the APCUG Speakers Bureau. Jere presented to SHCC last May. In February Jere will present "**Security/Privacy Settings Windows 10**". This is a continuation of the Data Privacy theme. Even if you don't use Win 10, there will be some good tips about Windows security and privacy. See you on Tuesday the 2nd.

Last Month:

We had a great presentation in January by Jim and Chris Guld of **Geeks On Tour**, made available by APCUG's Speakers Bureau. The presentation topic was "**How Do I Make My Own Custom Maps**". It's little known that some mapping sites allow you customize and download maps for your own unique needs. They showed us many tips and tricks to use this at mymaps.google.com (this mapping tool requires you to have a Google account). I also found a site that offers a library of "locations" for various categories of things. For instance, I downloaded the file for Cracker Barrel restaurants and now the map will display them all. Many other files are available for location collections of all kinds of things and places.



SOC – Save Our Connectors

By Greg Skalka, President
Under the Computer Hood User Group, CA
www.uchug.org
president@uchug.org

In the early part of the 20th century, the internationally recognized way to signal that your ship was in distress was to send a radio telegraph message of three dots, three dashes, and three dots in Morse Code. This translated to “SOS”, which, though selected as a distinctive pattern, became associated with the phrases “Save Our Souls” and “Save Our Ship.” Though rarely used in Morse Code these days, SOS in the printed and spoken forms is still associated with distress situations.

When our tech devices are in distress, they seldom send us such a clear and unmistakable signal of their condition. We usually have to interpret indications of faulty operation to determine when and why our devices are having problems. One problem our devices can have is failing connectors. There are very few truly “wireless” devices in our technology collections; most involve connections through wires or cables at some point in their operation. Interconnecting, charging, and reading/writing data to devices almost always involves some wired connections. These wired connections are typically made through physical electrical connectors on the devices and cables, and unfortunately, these connectors, being mechanical, can and do wear out and fail, especially if frequently connected and disconnected.

We may think of our smartphones as wireless devices, and in most modes of operation, they are. They still come with an electrical connector, however, as that is the most convenient and sometimes only way to charge their internal battery and connect them to other devices for data transfer. The connectors used are usually USB, typically the large Type-A on computers and the smaller Mini, Micro, and Type C on portable devices, while Apple products use the small Lightning connector. These connectors have a rated life that often ranges from a thousand insertions or removals to ten thousand, with 5,000 typical for a good connector. Five thousand connections or disconnections for a connector’s lifetime may seem like a lot, but if you charge a smartphone every day, that uses up two per day or 730 in a year. Connect to the phone three times a week to offload photos and you have over 1000 connections per year, meaning your phone’s connector might work reliably for only five years.

If you bought a lower-end product, used poor-quality cables, or used less care in connecting them or protecting them while connected (allowing large side forces on the cable connector, for example), the lifetimes of the connectors will wind up being even shorter. Lower-cost devices and cables may use low-cost, less reliable con-

nectors. Some connector types may be less costly to manufacturers but also less reliable (such as the now less frequently used USB Mini).

In the test engineering world, especially for military products, connector savers are often used to prevent the useful life of product connectors from being reduced by interconnections made in product testing and debug. Connector savers are small adapters with the same type on each end, but with opposite genders. When plugged into a product connector, the connector saver presents to the world the same type and gender as the product connector. The connector saver is plugged into and removed from the product only once in the test cycle, with any necessary additional connections made during testing to the expendable connector saver.



Photo 1: Magnetic Power Cable

To make your consumer electronic products last longer, you should extend the connector saver concept to your heavily used devices. I have had several perfectly good tech items become unreliable or unusable due to connector problems. Fortunately, there are ways to improve the reliability of failing connectors, as well as steps that can be taken to prevent connector wear failures and extend the life of product connectors.

For most of us, our smartphones are in constant use, sometimes requiring multiple charges per day. The risk of wearing out the power/data connectors (on device and cable) is significant if you plan to keep the phone for some time. The cable can usually be replaced when its connectors become unreliable, but when the phone’s connector wears out, it usually cannot be changed. Fortunately, there are now some new products that follow the connector saver concept for USB Micro and C connectors, as well as Apple Lightning.



Photo 2: Mag Cable Adapters - C and Lightning and Micro

Search “magnetic charging cable” on Amazon and you will find some products that hold contact connections together using small but powerful rare-earth magnets. A small magnetic connector adapter is plugged into the phone connector; the cable connects to this adapter through a strong magnet in the cable end, holding them together. This saves the phone’s connector as the adapter remains with the phone and the connection breaks between the two magnetic pieces.



Photo 3: Magnetic Power Cable Adapter

There are cables for charging only (a two-wire connection) as well as cables for data transfer (four-wire). Most come with adapters for USB C and Micro, as well as

Lightning.

I have been using a magnetic data cable with my Samsung smartphone for a month and it works well for charging and transferring data (I have used the Amazon



Photo 4: 4 wire Magnetic Data Cable and Adapter on Phone

TOPK data cable set), and the power cable I have been using is a magnetic data cable with my Samsung smartphone for a month and it works well for charging and transferring data (I have used the Amazon TOPK data cable set and the power cable set by Terasako).

Because these tiny adapters contain powerful neodymium magnets, care must be taken to keep them away from anything that is magnetically sensitive. The adapters are small and pose the same risks to children as small neodymium magnets.

Another connector saving option for smartphones, smartwatches, and tablets is the inductive charger. Many devices, including some from Apple and Samsung, follow the Qi wireless charging standard. A wire coil and additional circuitry built into these phones and devices allow a complimentary charging pad to transfer power to the device through inductive coupling. Small wireless charging receiver pads can also be added to the outside of older smartphones (plugging into the normal charging connector) to make them compatible with the Qi charging pads. These wireless charging schemes eliminate connector wear, but inductive charging is less efficient (may take longer) than direct charging.



Photo 6: iPhone on Inductive Charging Pad

Though the magnetic charging cables work well, I've yet to find one that includes USB Mini in its adapter line-up. The USB Mini connector has a reputation for poor reliability, yet it has been used on many non-phone tech products. I have had three products so far with failed USB Mini connections.

I once had a set of three identical USB2 external, hardware-encrypted hard drives (2.5" drive form factor) that I used to store and back up my most important personal and financial data. The drives had USB Mini connectors on their cases and connected to PCs through USB A to

Mini cables that came with the drives. After years of use (where I disconnected the cables from the drives when not in use), the cable connection to the drives became unreliable. Trading the cables around helped, as did twisting the cables to put more pressure on the connector, but eventually, I was forced to buy new USB3 drives and discard the old ones. My new drives have a different USB3 connector, but I now leave the cables connected to those drives.

I have a pair of rechargeable bike lights (front and rear) that I normally recharge at least once a week; they have USB Mini connectors to their charging cables. Recently I have been having problems charging them; I've had to twist the cable around to make good contact with the connector in the lights. A USB Mini magnetic charging cable would help, but they are not available.



Figure 8: Bike Lights with Adapters & Mag Cable

I was able to buy a small USB Mini to USB Micro or C adapters. I cannot keep these adapters on the lights as connector savers, as they are too big in this application, but the adapters do help make a better connection to the lights. I am presently using the adapters in conjunction with the magnetic charging cable; this has improved the reliability of the connection. Since I am still making frequent connections to the light's connectors, I will no doubt eventually need to buy new bike lights.



Photo 8: USB Mini Adapter

I have an auto dashcam (photo 9) that I normally power from a battery through its USB Mini connector. For several years I frequently moved it between cars, disconnecting that Mini connection and eventually wearing it out. Fortunately in this application, I can use the same USB Mini adapter but leave it on at all times, disconnecting it at the magnetic charging/data cable.

This seems to be more reliable, and I will now not have to wear the dashcam connector out any further.



Photo 9: Dash Cam with Adapter and Mag Cable

The USB Type-A receptacle connectors used on computers and laptops are very robust, but even they wear out eventually. I still run an XP computer as it supports interfaces and programs I cannot run elsewhere. I no longer have it connected to my home network, so I transfer files to and from it through USB Flash drives. After 15 years of use, the two front-panel USB



Photo 10: USB2 Hub and Flash Drive

(Continued on page 8.....**Connectors**)

Cloud Storage

By Dan Douglas, President
Space Coast PCUG, FL
www.scpcug.org
datadan@msn.com

The mystery of what is the 'Cloud' is actually very simple. On the Internet, each accessible device has an IP address assigned by the Internet Service Provider (ISP) that connects that device to the internet. This internet address is then shared among the many servers worldwide that link all internet paths together. This is how you can access a given PC or Server that provides services such as a web site.

Our SCPCUG web site, for example, is actually on some PC that no-one in the club has ever seen, likely based in the company facilities, of the company that we pay to 'host' our web site. So, when you use a browser to access www.scpcug.com, your ISP (Spectrum or AT&T, most likely in our area), refers to the Domain Name Servers (DNS) to locate the actual IP address to go to, to request the web pages for the SCPCUG.

Now when it comes to cloud storage, the process is quite similar. The app that you use to perform cloud backups or copies of your files, like DropBox, Apple iCloud, Microsoft OneDrive, Google Drive, etc., connects to the target PC for that service across the internet and then proceeds to do whatever you have instructed the app to do.



For example, I use OneDrive to back up all of my personal files on my home PC. The app is associated with my personal Microsoft account, which is required to use OneDrive services. That way my data is accessible to only my Microsoft account, from whatever app is requesting it. I have a OneDrive app on my iPhone as well as on all other Windows 10 PCs. As long as I log into that app with the correct credentials of my Microsoft account, I can access the files stored in my account.

Each remote PC is, in essence, just like your PC, except it has much more data storage available to it. Enough data storage to create a directory or folder for each user that has an account for that service. In reality, it is not one PC but rather a cluster of PCs or servers that appear as one logical server to provide connections to the various apps accessing the storage. Email works in a similar manner, where each Email account (email address) has its own storage directory and is accessible only when the correct credentials are used (email address and password).

A few years ago, many email servers would limit the size of your email storage, as storage was relatively expensive. Now, with storage being so much cheaper, your email provider either has increased your storage limits or has removed restrictions altogether. This may depend on whether you pay for your email account or if it is free. When it comes to my personal preferences for cloud storage, I like OneDrive as I'm a Microsoft partner and the ease of accessing OneDrive can't be easier in my situation. DropBox and Google Drive both offer some nice features if you are part of a company where multiple users may need to access common files frequently and keep changes to those files in sequence.

No matter what your choice may be, the important thing to remember is to *backup your data somewhere!* Cloud storage makes it easy and automatic, which is what I've learned is the key to having good backups in place.

This article has been obtained from APCUG with the author's permission for publication by APCUG member groups.

{Ed. Note: Although cloud storage is convenient, and often free, there are pitfalls — typical with everything that appears so attractive:

- *If your cloud storage service is not accessible when you need something restored (a file, a whole drive), you have to wait for a connection to open. Perhaps you (or they) are experiencing power brown-outs during retrieval, or the storage location is having maintenance or other connectivity problems.*
- *Internet bandwidth speeds and storage max can be more limited than a your local network or your own backup disk, particularly during usual business hours when Internet traffic is very high.*
- *You have no control over the data privacy in cloud storage. Are the administrators bored enough one day to go snooping through your stored data? (Yup, it happens — I saw it while I was employed in IT.)*
- *There is no assurance that the data stored in the cloud storage is perfectly secured from outside intervention or deletion or hacking. We can only hope so.*
- *Cloud storage lacks on the side of support, especially if you are a user of a free version of cloud storage. You may be directed to a forum (a collection of questions and concerns from other users — sometimes solved) to get your problem addressed.*

Bottom line is:

*Convenience comes with Risk.
The more Convenience, the more Risk.}*



(USB.....Continued from page 6)

around the turn of the 2000s. Eventually, cell phones began supporting USB connections as well, and the popularity of USB hasn't slowed down since.



USB Through The Years

Examples of the major USB connector types over the years.

Since 1996, USB has expanded dramatically in capability, including support for newer, smaller connector types and much faster speeds. Throughout, the standard has been maintained by the USB Implementers Forum (USB-IF). Here are some highlights.

- **USB 1.0 (1996):** The formal introduction of the USB standard with Type A and Type B connectors. High-speed is 12 megabits/second, low-speed is 1.5 megabits/second.
- **USB 1.1 (1998):** This release fixed bugs in the 1.0 standard, including issues with USB hubs, and became the first widely-adopted USB standard. It also introduced USB Mini Type A and B connectors.
- **USB 2.0 (2001):** This introduced a new, higher-speed 480 megabit/second mode while retaining backward compatibility with USB 1.1 devices. A 2007 revision introduced USB Micro connectors for the first time.
- **USB 3.0 (2011):** The 3.0 standard introduced a new 5 gigabit/second data rate called SuperSpeed. It also introduced new Type A, Type B, and Micro connectors with more pins to support the higher data rate.
- **USB 3.1 (2014):** This increased the USB data rate to 10 gigabits/second. Around this time, the USB-IF also introduced the symmetrical USB-C connector, which can be plugged in either way and still work. (No more flipping your USB device around three times to find the correct alignment!)
- **USB 3.2 (2017):** With this revision, USB climbed to 20 gigabits/second and deprecated the Type B and Micro connectors in favor of Type C.
- **USB 4.0 (2019):** This standard is compatible with Thunderbolt 3 and supports up to 40 gigabit/second connections. All connectors other than USB-C have been deprecated.

The Future is USB

As of 2021, USB is still going strong, supported so widely that USB connectors have become de facto power sockets for charging smartphones, tablets, video game controllers, battery-powered children's toys, and for novelty items such as coffee mug warmers and tiny desktop vacuum cleaners.

USB hasn't stopped improving. USB4 shows the industry is serious about keeping the standard competitive as computers get faster and the data we shuffle between devices grows ever-larger.

It's even making inroads—Apple's iPad Pro tablets dumped their proprietary Lightning ports for USB-C, although Lightning still endures on the iPhone and many other Apple devices.

Happy Birthday, USB!

This article is republished, with permission, from the How-To Geek web site.



Data Privacy Day Jan. 28

By SHCC member Bernard DeFazio

Thursday Jan. 28th is **Data Privacy Day (DPD)**. Everyone should be concerned about online safety and security, whether it's for work you do at a company, or for your own privacy.



The Durham Personal Computer Users Club (Courtice, Ontario, CA) presented a webcast "**How to Get Involved in Data Privacy Day 2021**" in January that is 1:21 hours long with Q&A. View it here: <https://www.youtube.com/watch?v=6cTnlTW4MVQ>

The presenters represented the **National Cyber Security Alliance (NCSA)**. You will find a wealth of useful information. I signed up our computer club as a *Data Privacy Champion*, and will be getting all kinds of information in the future which I will be forwarding to our club members.

You can sign up for a periodic newsletter from the NCSA. Their link is in the WPR section below.



Web Page Reviews Overload

(Web sites that did not fit on page 14)

Discover events and sign up for the newsletter from the **National Cyber Security Alliance (NCSA)** about online safety/security/privacy. <https://staysafeonline.org/>

Trivia fans may find this quiz collection entertaining. <https://www.mindbounce.com/trivia/>

You can use **Emoji** in file names on Windows 10. <https://www.howtogeek.com/682868/%e2%9c%a8-you-can-use-emoji-in-file-names-on-windows-10/>

Listen to **radio stations** around the world for free. <https://onlineradiobox.com/>

Web Page Reviews

by Paul Baecker — webwatch@sterlingheightscomputerclub.org



This column attempts to locate sites containing valuable, amusing, and free content, with no overbearing pressure to purchase anything. ***Our club members only*** are encouraged to submit favorite sites (a description is optional) to the e-address noted above, for inclusion in a future WYSIWYG issue. Also check the SHCC web site (“Web Page Reviews”) for previous gems.

3 ways to fortify your Firefox browser and browse even more securely.

<https://www.makeuseof.com/ways-fortify-firefox-browser/>

Linuxfx 10: A Windows Doppelgänger — An easy way for Windows 10 users to convert from Windows 10 to Linux?

<https://fossbytes.com/linuxfx-10-review/>

Water: How much should you drink every day?

<https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/water/art-20044256>

Solve 7 clues, build 7 words. A new game each day. (See “How to Play”.)

<https://www.7littlewords.com>

U.S. schools buying phone-hacking tech that FBI uses to investigate terrorists.

<https://gizmodo.com/u-s-schools-are-buying-phone-hacking-tech-that-the-fbi-1845862393>

How to turn a Windows laptop into a desktop PC.

<https://www.howtogeek.com/706234/how-to-turn-a-windows-laptop-into-a-desktop-pc/>

Why is Google Chrome using so much RAM? Here's how to fix it.

<https://www.makeuseof.com/tag/chrome-using-much-ram-fix-right-now/>

“Test it before you hate it...” Find many Linux operating systems, which you can try out directly online without an installation.

<https://distrotest.net/>

How **supply chain hacks** affect your online safety. Teams of hackers work together to attack a specific target. The supply chain just happens to be the path of least resistance.

<https://www.makeuseof.com/what-is-a-supply-chain-hack/>

What are **Windows PE Bootable Recovery Disks**? How can you find them useful?

<https://www.maketecheasier.com/windows-pe-bootable-recovery-disks>

You can't believe everything you read — or see. How to tell if an image has been manipulated or Photoshopped

<https://www.howtogeek.com/697821/how-to-tell-if-an-image-has-been-manipulated-or-photoshopped/>

Take a tour through **Dragonman's military museum**, with an impressive collection of equipment, uniforms, and weaponry from a century of US involvement in international wars. (12-min. video)

<https://www.youtube.com/watch?app=desktop&v=9hUI5Fz1jOg>

Do you find your bright (typically white) computer windows starting to irritate your eyes? Try out the “**dark mode**” options available in Windows 10 as well as in many applications (including web browsers).

<https://www.howtogeek.com/222614/how-to-enable-windows-10s-hidden-dark-theme/>

9 decentralized, P2P and open-source alternatives to mainstream social media platforms like Twitter, Facebook, YouTube and Reddit.

<https://itsfoss.com/mainstream-social-media-alternatives/>

NOTE: Many of the links in the digital newsletter connect to the Internet if clicked. For those that do not, copy and paste the link into your Internet browser.

Web Watch Column on the Club Web Site

Check out the **WebPageReviews** section on the club's web site. There you can see past web sites reviewed in this column. They are arranged into various *keyword* categories to help locate a specific topic or site.