

THE GIGABYTE GAZETTE

The Monthly Newsletter
of the
*Sun City Summerlin
Computer Club*
www.scsccl.com

November, 2019

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Issue Contributors

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| Tom Burt | Peggy Cushman |
| Kathy Kirby | David Kretchmar |
| Jeff Wilkinson | Phil Sorrentino |



President's Message

by Jeff Wilkinson

Lithium Ion Battery Concerns

At a recent Tuesday morning Kaffee Klatch an interesting question was posed – how do you put out a cell phone fire? The question arose from the many news stories about Lithium Ion batteries and their associated problems in portable devices. A lively discussion took place and we cautiously concluded that it was a mistake to pour water on a Lithium-ion battery fire. The preferred choice for extinguishing a Lithium-Ion battery fire, considered a Class B fire, is standard ABC or BC dry chemical fire extinguisher. A First Alert class ABC fire extinguisher can be had for under \$20 and is a recommended addition to any home. Battery fires burn very hot and can emit toxic byproducts and flare up even after they appear extinguished. While there have been cases of flight attendants being instructed to use available liquids to cool a battery fire – they can reach 1,000 degrees, it is not the recommended method.

Lithium Ion batteries are commonly found in portable devices such as cell phones, tablets and other portable devices. While Lithium-Ion batteries have several of the manufacturing steps that take place in cleanroom and dry room facilities, contaminants do creep in occasionally. These contaminants can lead to a short circuit resulting in rapid internal current flow and overheating which can cause a fire! Lithium Ion battery failure can also occur from overheating - thermal runaway occurs when the internal cell temperature reaches 350°F and the cell of the battery over pressurizes and releases a flammable electrolyte. When this occurs, the goal is to reduce the temperature and so a fire extinguisher is preferred. Water, juice, sodas and other non-alcoholic liquids can be used in an emergency. Avoid smothering the fire as containing the heat may cause additional battery cells to overheat and ignite.

The well-publicized Samsung Note 7 battery issue was traced to manufacturing defects. The custom batteries were supplied by two different manufacturers and in one case the “pouch” containing the battery components did not allow enough room in the case for thermal expansion under normal charge and discharge cycles in some cases pushing the electrodes together and causing a short circuit, rapid discharge resulting in high temperature and a fire. In the second instance, that manufacturer had quality issues as production ramped up, resulting in protrusions left over from the ultrasonic welding process causing short circuits.

So, while somewhat rare, battery issues do occur with our many portable devices and a little background on steps to take in case of a Lithium-Ion battery fire is useful.

https://batteryuniversity.com/learn/article/safety_concerns_with_li_ion

<https://resources.impactfireservices.com/how-do-you-put-out-lithium-ion-battery-fire>

<https://www.upsbatterycenter.com/blog/extinguish-lithium-battery-fires/>

<https://youtu.be/HfCO7ZV8E7I>

<https://lifelife.com/how-to-extinguish-a-battery-fire-1822040010>

The engineers looked at software, hardware, manufacturing process, quality and assurance testing, and supply chain. They looked at things like whether the iris scanner or software algorithms caused overheating, or if the device's fast-charging capabilities had an impact.

Initially, it was to no avail. "[There was] nothing in this round of hardware, nothing in the software, nothing in the processes, logistics, that could have contributed," Denison said.

Samsung turned its focus to the batteries themselves. Throughout the testing process, engineers were able to cause batteries to overheat, both in the device and on their own.

Samsung had two separate suppliers for its Note 7 batteries, which were custom-made for the Note 7. It specified the characteristics, like the voltage and physical size. Then it was up to its suppliers to design and manufacture the batteries as they saw fit. "If you open up Battery A and Battery B, they're different batteries," Denison said.

Samsung declined to confirm the names of the two suppliers, but the US Consumer Product Safety Commission said Samsung SDI (which is separate from Samsung Electronics but has the same parent company, Samsung Group) supplied the batteries responsible for the first recall. Hong Kong-based Amperex Technology [acknowledged on its site](#) that it was the second supplier. Amperex declined to comment following Samsung's report, while a representative from Samsung SDI said no one from media relations was immediately available.

In the first supplier's battery, dubbed Battery A, Samsung discovered a design flaw that caused the battery to short-circuit. The supplier created a pouch (the battery's outside casing) that didn't have enough space to allow the battery to expand and contract when going through normal charge and discharge cycles. That caused the positive and negative electrodes to touch, short-circuiting the battery.

(Some earlier reports speculated that Samsung's phone itself didn't leave room for the battery to expand. That wasn't the case, but Samsung plans in the future to leave even more room inside its devices for the battery.)

In the case of Battery B, from Samsung's second supplier, the flaw was related to manufacturing and quality issues. The initial batteries from that supplier worked fine in earlier Note 7 devices, but when Samsung increased its order and pushed that supplier to become its sole battery provider, the battery maker introduced errors. Some protrusions were left over from the ultrasonic welding process that caused the battery to short-circuit.

Samsung had asked the second supplier to build about 10 million new batteries. "Ultimately, they were not able to manufacture those with sufficient quality," Denison said.

Until next month ...

Jeff Wilkinson, President
(702) 527-4056 pres.scsc@gmail.com

Submissions Welcome

We are always looking for new information to share with our club members. If you have computer or technical information you would like to share with members of the club, send your articles to editor **Tom Burt** at tomburt89134@cox.net. Thank you to everyone for your contributions.

SCSCC Board of Directors Actions

The Computer Club Board of Directors took the following actions on October 9, 2019

George Lobue made a motion that the minutes of the September 11 Board Meeting be approved as corrected. The motion was seconded by Tom Burt and unanimously approved by the Board.

Chuck Hagen and Chuck Wolff were appointed as the Nominating Committee for the election of 2020 officers and board members.

Howard Verne made a motion that the meeting adjourn at 10:20AM. Kathy Kirby seconded the motion and it was unanimously approved by the Board. The meeting was adjourned at 10:20 AM.

General Membership Meeting

Our next General Meeting will be held at 2 PM on Thursday, November 7th, 2019 in Desert Vista Room 5.

Our guest speaker will be Kolo Kolev from Wells Fargo Bank.

For Club information: go to www.scsccl.com, contact Jeff Wilkinson, President at (702) 527-4056 or email him at pres.scsccl@gmail.com.

Welcome New Members

The following new members joined the Computer Club between September 27th and October 26th.

**Eve De Jong
Cathy Durant
Kimberly Dyer
Gene Engelson
Pamela Ferreira
Patrick Ferreira**

**Howard Forkos
Alicia Mendegorin
Robert Miller
Jeffrey Robin
Lavera Row**

November 2019 Calendars

To view this month's classroom and lab calendars, click the following hyperlink:

http://www.scsccl.com/Calendars/scsccl_calendar_2019-11Nov.pdf

Special Interest Groups

Special Interest Groups (SIGs) provide a forum for general discussion on a specific computer related subject. Admission to all SIGs is on a first-come, first-seated basis and is subject to the maximum allowed by fire code regulations. All of the following meetings are held in the Classroom. <W>, <M> or <H> indicate whether a SIG would be of interest to a Windows, Macintosh or Hand-held Device user.

Genealogy Q&A <W/M>

4th Saturday, 9 a.m. to noon in the Lab
Karen Ristic (702-749-6489)

Genealogy is one of America's most popular and rewarding hobbies. With billions of records now available online, researching your family tree has never been easier – if you know where to look and which key words you'll need to use to create an accurate family tree from start to finish.

Hardware / Software Repair Lab <W/M >

Every Tuesday, 1:00 p.m. to 4:00 p.m.
Chuck Wolff (702-233-6634) and
Chuck Hagen (702-418-2614)

The Repair Lab provides **CLUB MEMBERS ONLY** with no-cost assistance for those having upgrades and / or hardware and software problems with their computers. Bring in only your PC tower, your Mac or your laptop and your problems. Our TECH team will give you our best effort. ***Be sure to mark your cables so you can re-connect when you get home.***

Internet Investing <W/M/H>

3rd Thursday, 9:00 a.m. in even months
Next meeting: December 19th
Tom Burt (702-341-7095)

The Internet Investing SIG provides a forum for members interested in using Internet resources for researching and managing investments to meet, discuss, and learn more about the topic. The SIG's target audience is members with intermediate computer skills and investment experience, but all members are welcome.

iPad/iPod/iPhone <H>

4th Wednesday, 9 a.m.
Zane Clark (702-562-3684)

This SIG is your forum for learning about and discussing the Apple iPhone, iPad tablet and iPod devices as well as Macintosh PCs. It's for Apple users of all experience levels.

Kaffee Klatches

Kaffee Klatches provide a forum for general discussion on all computer-related subjects. Admission to all Kaffee Klatches is on a first-come, first-seated basis and is subject to the maximum allowed by fire code regulations. The following meetings are held in the Classroom. **<W> or <M> or <H> indicate whether a SIG would be of interest to a Windows, Macintosh or Hand-held Device (iOS or Android) user.**

Windows 10 SIG / Q&A <W>

First and Third Saturdays, 9:30 a.m.

Bill Wilkinson (702-233-4977)

If you are a novice or near-beginner computer user, or if you just want some refresher information together with a refreshing cup of coffee, then jump-start or recharge your computing knowledge by attending these Win 10 SIG / Q&A sessions. At each session, attendees will explore several topics of interest to beginners and near-beginners. The topics are always announced a couple of days in advance via e-mail to SCSCC members who have subscribed to the club's SCSCCNews mailing list. Each topic is presented in a step-by-step manner and is supported by "how to" notes that can be easily and conveniently downloaded from the SCSCCBKK.org web page. Following each "up front" presentation of one or more topics (approximately 60 minutes in duration), an informal open-ended Question and Answer period takes place for those who wish to participate, listen, reflect, or inquire.

Kaffee Klatch <W/M/H>

Every Tuesday, 8:30 a.m.

Sandy Mintz (702-838-2525)

This Kaffee Klatch is an open, free-form discussion group for all users, from beginning to advanced. KK discussions are not restricted to any one subject, computer platform or computer-knowledge level but should be computer or technology related. We will try to answer your questions, help you keep your systems updated and provide some useful "tips and tricks." Since our SCSCC is built on "neighbor helping neighbor," if you have a tip or information, we encourage you to bring it in and share. The fellowship is great, the coffee is good, and the education received from the KK attendees is priceless. Stop by on Tuesday morning and have a cup of coffee with us.

November 2019 Hands-On Classes

No hands-on (Lab) classes are scheduled in November.

November 2019 Free Seminars, Q&As and Workshops

For Computer Club seminars, there is no requirement for advanced registration unless explicitly stated. Seating is first-come, first-seated.



“All Things Apple” Q&A

9 AM on First and Third Wednesdays (November 6 & 20)

Presenter: Zane Clark

Location: SCSCC Classroom

Bring your Apple iPhone, iPad, Watch or MacBook to get one on one help with your questions about how to use any Apple device and popular iOS or MacOS apps.



Android Q&A

Wednesday, November 13th at 1 PM

Presenter: Susan Heifetz

Location: SCSCC Classroom

Bring your Android phone and Susan will answer your questions about how to use the phone and popular Android apps.



Backup Tools

Thursday, November 21st 9:30 AM – 11:30 AM

Presenter: Tom Burt

Location: SCSCC Classroom

With ever-increasing threats of ransomware and other nasty viruses, backing up your system and your data files is one of the most important things you, as a computer user, *must* do on a regular basis. This 2-hour seminar will review key concepts and activities related to performing backups on your PC.

We'll review Tom's composite backup strategy that uses the **FREE Macrium Reflect** for regular complete hard drive backups plus a blend of **Windows File History** and **cloud or network services** to back up frequently changing files.

We'll demonstrate several of these powerful backup systems. Along the way we'll clarify imaging, cloning, incremental backups, file backups and other features. We'll also reserve plenty of time for your own questions and answers. The seminar notes will be available about **November 16th** at: <http://www.scscclub.com/smnr>.



Let's Talk (Genealogy) and Lab Monitors

4th Saturday (November 23rd), 9:00 am to 12:00 pm

Presenters/Monitors: Karen and Ray Ristic

Location: SCSCC Computer Lab

Genealogists ask a lot of questions. That's what research is all about! Google can provide you many websites with genealogy questions to ask of those you are researching for family information. Many websites are particularly of value especially when you have little or no data about your ancestors.

So, if you have a question or two about genealogy or you've hit a brick wall in your family history research, come for a visit to the Computer Lab and we'll talk about it. The computers in the Computer Lab have Family Tree Maker on all of them.

Karen Ristic and Ray Ristic have been doing family history research for over 40 years, teaching classes, members and officers of genealogy societies, and have published two of their own family history books. They will continue to be in the Computer Lab, primarily to Monitor the Computer Lab, on the 4th Saturday of the month from 9:00 am to 12:00 pm, but also to be available in the Computer Lab (multitasking?) on those days at those times (along with others who may drop by) to "***Let's Talk***" to provide direction and/or answers to your own genealogy questions.



Tom's Tech-Notes

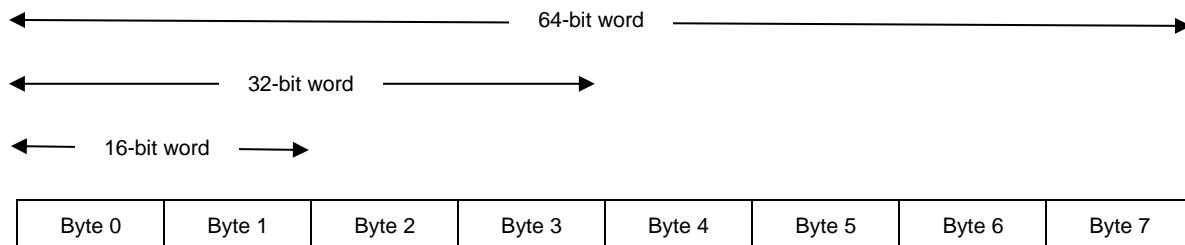
32-bit vs 64-bit Software Issues Tom Burt, SCSCC Vice-President

I'm revisiting a topic I wrote about in July, 2015. However, this time we're looking at it in relation to software applications you might run, rather than the basic differences between 32-bit and 64-bit computer CPUs. Two situations have prompted my decision:

1. Apple's new MacOS 10.15 (Catalina) has dropped support for 32-bit applications.
2. A software consulting project I've been working on ran into a snag because I built the programs to interface to 32-bit MS Office, but the client has 64-bit MS Office installed.

"x86" / "x64" CPU Architecture

Here's a reprise of the differences between 32-bit and 64-bit CPUs. The Intel / AMD CPU chips have evolved over 30+ years to increase the width of the largest memory address and data word that the CPU can access. Over time these CPU chips have gone from 8-bit bytes to 16-bit words to 32-bit (4-byte) words and finally, with the latest "x64" CPUs, to 64-bit (8-byte) words. Along the way have come virtual memory extensions, multiple CPU cores and the ability to address a theoretical 4.2 billion terabytes (2^{64} bytes) of memory.



The original DOS and Windows 3.1 operating systems were built to run on a 16-bit CPU. Windows 95, 98, ME, NT3.5 and NT4 were designed to run on 32-bit "x86" CPUs. Windows XP and Vista, descendants of NT4, were primarily 32-bit, but had 64-bit variants. In the early 2000s, AMD actually pioneered the "x64" 64-bit CPU architecture, which was then cross-licensed by Intel. X64 is an extension of the x86 CPU architecture from 32-bit wide data words and addresses to 64-bit wide data words and addresses.

All x64 CPUs are able to run in either *native* x64 (64-bit) mode or *virtual* x86 (32-bit) mode. This greatly facilitates running older 32-bit applications on an x64 CPU.

Modern 64-bit Windows 7, 8 and 10

About 2010, major PC vendors abandoned 32-bit Windows and began routinely installing 64-bit Windows 7 on almost all Windows PC laptops and desktops. This simplified their support systems and reduced costs. Also, Microsoft had added some major security features to 64-bit Windows to make it more difficult for malware to infect a PC. One of these features was *mandatory driver signing*. 32-bit Windows drivers had *no* security model. Any vendor could provide a driver and it would be installed without question. This was a favorite path for malware to infect PCs.

64-bit Windows requires that the executable file for any driver include a certified “digital signature” before that driver would be installed. The signature is basically a complex check-sum calculated using the driver vendor’s certified *private* digital key. Windows verifies the signature by recalculating the executable file’s checksum using that vendor’s certified *public* key. Only if the file’s checksum is correct will the driver be installed. Windows keeps a list of known legitimate vendor’s certified public keys. This list is regularly updated via Windows Update.

64-bit / 32-bit Support Issues

Now let’s return to my original concerns about 32-bit support on 64-bit operating systems.

In Windows 7, 8 and 10, to support 32-bit applications, Microsoft actually includes a comprehensive version of the 32-bit Windows programs, dynamic link libraries and other supporting files. These are kept in a folder at C:\Windows\SysWOW64. This folder is the 32-bit equivalent of the C:\Windows\System32 folder. This 32-bit subsystem is present because 32-bit application programs can only interface to 32-bit system programs and dynamic link libraries. This duplication creates a huge additional testing burden for Microsoft to ensure that everything works properly in both 32-bit and 64-bit application mode.

I’m not deeply familiar with MacOS’s (pre 10.15) internal structure, but it had to have something similar to support running 32-bit applications on 64-bit MacOS. I infer that is a major factor in Apple’s decision to abandon support for 32-bit applications in Catalina. However, the impact for MacOS users is that, if you *rely* on 32-bit applications, you can’t upgrade your Mac to Catalina until your application’s software vendor converts that application to native 64-bit mode. If your vendor is no longer in business, that could be a *long* wait. Even if the 64-bit application is available, it’s likely to cost something for the “upgrade”.

In the Microsoft Windows universe, because there are many older PCs still running 32-bit versions of Windows 7, 8 and even 10, many application vendors market only a 32-bit version because they can be confident it will run on both 32-bit and 64-bit versions of Windows. Many of the “free” versions of applications also are available only as 32-bit applications. Gradually this is changing and vendors are offering their applications in both 32-bit and 64-bit versions. However, this comes at the cost of more complexity and expense for the vendor to provide dual versions of both the application and its setup tools. Despite that, I suspect it would be very difficult for Microsoft to remove support for 32-bit Windows applications for quite a while.

Inter-Application Communication Issues

This brings us to an issue I recently encountered while building a new Visual Basic .Net application that interfaced to some MS Access 2010 databases and also generated some Excel spreadsheet mailing lists. A common way of communicating between programs in Windows is an inter-process messaging protocol called OLE Automation. It allows one application to launch another (usually a MS Office application like Word or Excel) and then send commands and data to it. A key requirement, however, is that the initiating application program and the serving application (MS Access or MS Excel) have the same bit-ness (32-bit or 64-bit); you can't mix and match.

I had built my application to run in 32-bit mode and thus it used 32-bit OLE Automation to interface to my 32-bit version of MS Excel to dynamically generate the two mailing list spreadsheets. This all worked great on my 64-bit Windows 10 Pro system at home, which has 32-bit MS Office installed. Of course, when I delivered the application to my client for in-situ testing, it was quickly discovered they have 64-bit MS Office installed, so neither the database interfaces nor the Excel interfaces worked. Bummer!

Happily, in Visual Basic .Net, it was a trivial fix to change a single project setting and then rebuild my application to run as a 64-bit application, using 64-bit OLE Automation Interfaces. This is one big advantage to building applications using .Net technology; all the interface issues are managed by the .Net runtime system. Had I built the program in a low-level compiled programming language - say C++, it would have been a huge challenge to convert it from 32-bit to 64-bit.

Conclusions

For MacOS users with 32-bit applications, things may get a bit trying for a while. However, Apple will support MacOS 10.13 and 10.14 for some time and there's no rush to upgrade. Application vendors will upgrade to 64-bit or risk losing their customers to competitors. End users will adapt if necessary and life in the Apple universe will go on.

In the case of my own consulting project, I was fortunate to have made a good choice in development language and tools, so my 32-bit to 64-bit interface issue proved to be a minor hiccup, as well as an interesting topic for this month's column. I expect 32-bit Windows applications will gradually fade away as Windows 7 loses support on January 14th, 2020; there are relatively few 32-bit Windows 8.1 and Windows 10 systems out there. Time will tell.

Until next month ...



Kretchmar's Korner

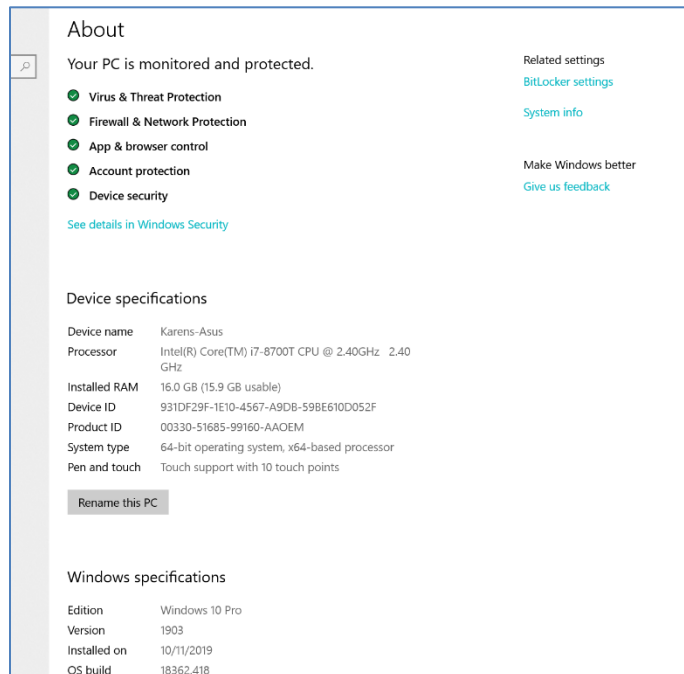
By David Kretchmar, Computer Technician

What's Under the Hood?

As you might have guessed, I'm talking about what is inside of your computer, not your vehicle. Often some important information can be gleaned from your computer; information that can let you know whether or not your system is updating properly, or if your system's specifications are adequate for some demanding applications. A lot of information can be obtained using features and built into Windows, and some information requires third party applications. I'm going to focus on showing how you can determine if your computer is updating properly using only Windows' internal features, since this can be an important early indicator of computer problems. Also, since Microsoft uses the update process to provide the latest virus definitions, updates are a vital part of keeping your PC secure.

Start by looking at your system

To start to see what is inside of your computer, click on the "Start" pane that appears at the



lower left-hand corner of your monitor, click on the gear to get to Windows Settings, then click on "System". On the bottom left hand side of that settings window click on "About".

You should see a window similar to the one to the left. This window shows that this PC is protected by Windows Security, and since all of the checkmarks are green, no action is required.

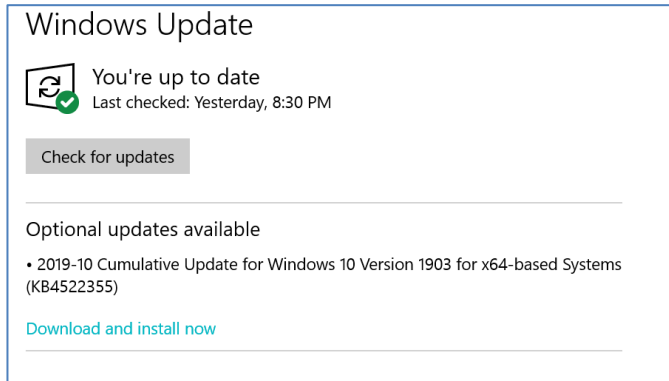
Under Device specifications we see the name of the device. This area also shows exactly what CPU and how much memory are running the system.

The Windows specifications section shows the operating system specifications. Note that the version of

Windows 10 should be 1903 (in October, 2019) no matter if the version of Windows 10 is Home or Pro. If the Windows version is NOT 1903, it begs the question "Why not?".

Look at updates

Click on the “Start” pane, click on the gear, then in Windows Settings click “Update and Security”.



The box to the left reflects the information in the previous window,

If the window does not show the system is running the latest version of windows you might want to try to “force” the update by clicking on “Download and install now”.

Windows operating system major updates are known to often fail on the first attempt at installing the update, and

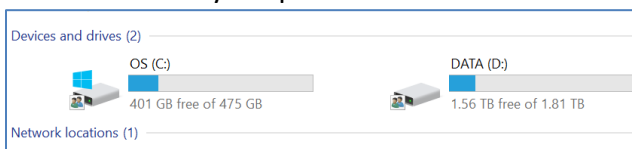
sometimes a second or third attempt is required before things install the way they’re supposed to.

If your computer continues to fail to install an update, it’s time to run diagnostic software, either what is built into most systems or third-party software, to try to determine what the malfunction is.

Are my drives too full?

Many update failures are caused by drives that have more data than they can successfully manage.

To see if this is your problem click on the icon that looks like a file folder on your Taskbar, now



called “This PC”. In the window that opens click on “This PC” on the left side of the window to show the storage in your system.

In the box to the left the logical drives within

that system are shown. In this system the two logical drives (C: and D:) also reflect the two physical drives in the system. As with many newer systems, the C: drive is a smaller SSD (solid state drive) and the larger D: drive is a mechanical drive dedicated to data storage.

Neither of the above drives are full enough to cause issues, but as any drive, SSD or mechanical, fills up it can noticeably slow down or even freeze or show other errors (such as failure to install updates). It is a good idea to not use more than 70% of an SSD drive or 50% of a mechanical drive, to avoid slowing down your system.

APCUG Guest Article

Smart Devices in the Home – With Voice Control

Author: Phil Sorrentino, Contributing Writer

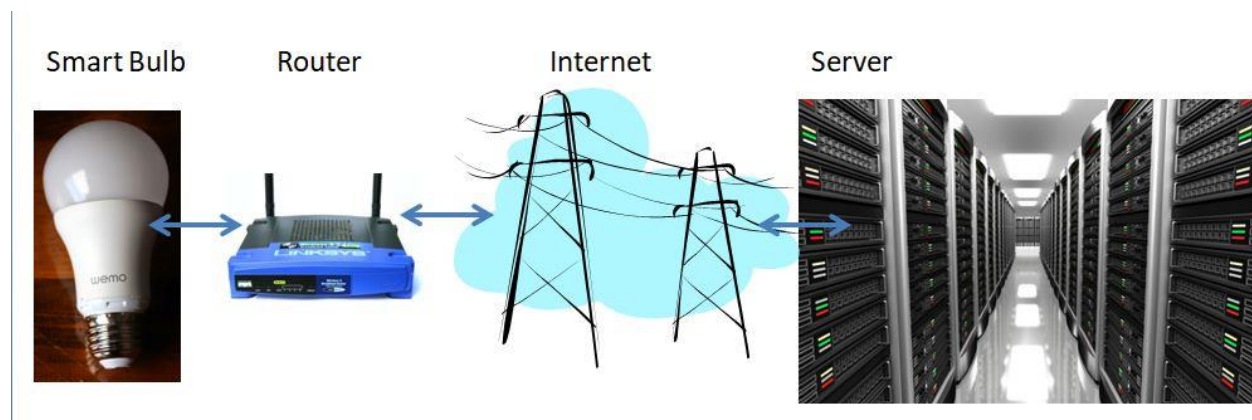
The Computer Club, Florida

September 2019

www.scccomputerclub.org Philsorr (at) yahoo.com

There are a whole host of smart devices available for use in the home now. Some of the most basic and least expensive ones are smart bulbs, smart plugs and smart cameras. (Yes, I know cameras can be expensive, but there are some fairly inexpensive indoor-only cameras.)

First of all, what makes these devices smart? Well as I have alluded to in previous articles, it's all about Client – Server technology. The devices have some limited intelligence in them. Read “intelligence” as basic processing power, downloadable firmware, and wi-fi electronics. This allows them to be able to communicate with a local wi-fi router, which in turn allows them to access the internet. Once they can access the internet, they can take advantage of the servers on the internet (sometimes referred to as “in the cloud”). The intelligence in the accessed server is where all the magic happens. Here read “intelligence” as very fast, very powerful, server computers capable of handling millions of requests for service per second. So, it's the combination of the smart device, the internet, and the server that really makes the smart device: smart.



Once you have your smart device ready for installation, it is the App on your smartphone that takes over and steps you through the installation process. (Yes, a smartphone is required for the installation, either Android or Apple.) The App that you will use for installation will be the App from the specific smart device manufacturer. For example, if you have a TP-Link smart bulb, you would have to get the TP-Link App for your smartphone. In this example that would be the “Kasa” App. Similarly, if you have a Wyze smart bulb you would use the Wyze App for the installation. These Apps are free and are intended to work with the servers from the specific manufacturer. (As an aside, think about this ... If the company that operates the server, the smart device manufacturer, goes under and the server goes away, your smart device will no

longer be smart. The bulb may not even be able to be turned on if there is no server to command it to turn on.)

The installation process is usually pretty easy; after all, it's the App that is doing all the work. The first thing you have to do is get the device ready for installation. The App will usually start this by having you select something like "add a device," or "add a product", or maybe you just have to select the "+" on the screen (as found on the Kasa App) to add a device. You will have to let the App know what type of device you are adding. This is usually done by just selecting the device type from a list of device types manufactured by that specific manufacturer.

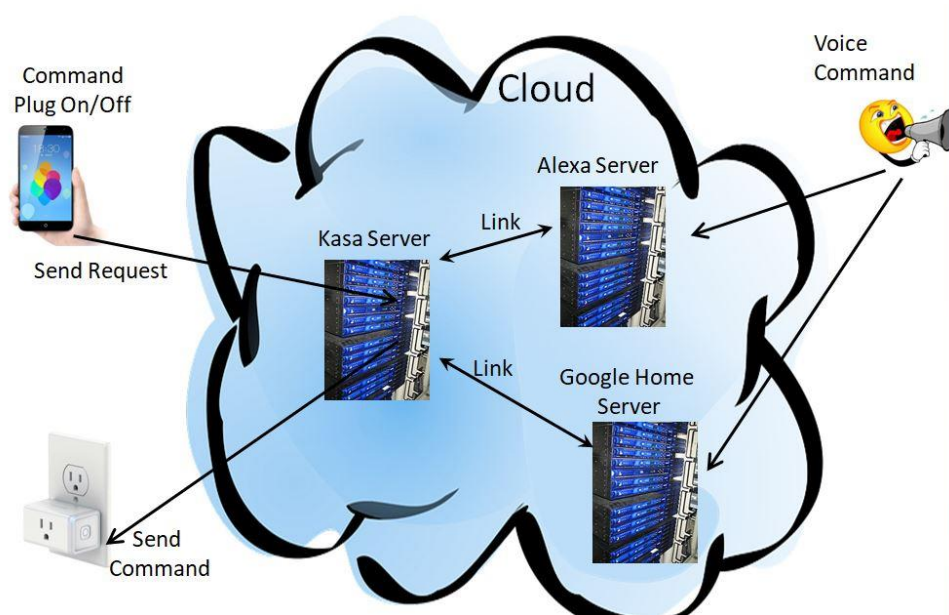
Once the device type is selected, you are ready to go into the setup mode. The App will give you instructions for getting the device into the "Setup" mode. On a smart plug with a push-button switch it is really easy because pushing the button as directed by the App will get the smart plug ready for installation. With a smart bulb, usually you quickly turn the power on and off maybe three times and the smart bulb goes into the Setup mode. You will know the device is in setup mode when whatever you were watching changes. With a smart bulb, the light may start to pulsate slowly, with a smart plug, the small light on it may blink or change color. Once the device is in the setup mode, it will need to know the name of your wi-fi network and the password for that network. (Note: some devices only support 2.4 GHz networks only; not 5 GHz networks.)

You may have to use your "Settings App" on the smartphone during the setup; just follow the directions from the App. Once you enter the wi-fi network name and the network password you may see a timer count down for a few seconds till the installation is complete. Finally, you will be asked to name the smart device; something like "desk light" or "bedroom plug". (Keep in mind that each manufacturer's App will be a little different, this is just a general example.) The installation may seem complex but after you have done it once or twice it will probably become automatic.

However, you might want to keep those instructions that you get with the device in a safe, convenient, place because you might have to go through the whole process again. (Before I lose the instructions, I scan them into a file and place the file in a "Home Automation" folder so I can review the directions when I have to do another installation. This was recently necessary when I changed my router and the new wi-fi network had a new name and new password. This forced me to reinstall every device that used the house wi-fi. At the time, I had 7 smart devices that had to be reinstalled.) So now with the smart device installed you can control it from your smartphone App. Typically, you can turn it on and off and maybe even set up a schedule.

Once the device is installed and working, it's time to move on to voice control. Voice control is supported by Amazon's Alexa and Google's Google Home. You can use either of these or both. Amazon calls the link between Alexa and smart devices "skills." Google Home refers to them as links. In either case you need to have the appropriate App on your smartphone; the "Amazon Alexa" App for Alexa, and the "Home" App for Google Home. Again, the Apps are free and available for Android and Apple. Once you have the appropriate App, you just have to follow the instructions to link your smart device. Typically, you will have to select the type of device and the device manufacturer.

On Alexa this is started by selecting the “+” on the “Devices” screen and then selecting “Add device,” and then the type of device, and then selecting the manufacturer of your device from a list of manufacturers. To make sure you are linking “your Alexa” to “your smart device,” the App will require the Username and Password for the manufacturer of your smart device. (So, as a general rule, make sure you know the Usernames and Passwords for all of the manufacturers of the smart devices that you use.) Once you have authenticated yourself with your Username and Password, a link will be made between the Alexa server and the smart device manufacturer’s server. And now you can control the smart device, at least to the extent that the skills allow, by voice control. Now enjoy the feeling of power.



November Lab Monitor Schedule

Open Lab sessions are held twice per week: 9 am to noon on Wednesdays and Saturdays.

| November Monitors | Monitor Schedule |
|---------------------------------|-------------------------|
| Jeff Southwell Ann Warhaftig | Saturday 11/2/2019 |
| Mitch Swetsky Bonnie Lum | Wednesday 11/6/2019 |
| Jim Enlow Fred Cohen | Saturday 11/9/2019 |
| Jim Edwards Jan Edwards | Wednesday 11/13/2019 |
| Mary Hedin John Zuzich | Saturday 11/16/2019 |
| Blanche York Mitch Swetsky | Wednesday 11/20/2019 |
| Ray Ristic Karen Ristic | Saturday 11/23/2019 |
| Millie Taylor Kathy Kirby | Wednesday 11/27/2019 |
| Gail Weiss Mary Hedin | Saturday 11/30/2019 |