

The Monthly Newsletter of the

Sun City Summerlin
Computer Club

www.scscc.club

January, 2020

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President's Message

by Jeff Wilkinson Happy New Year

I hope everyone had an enjoyable and safe holiday and that the New Year is full of fun, learning, family and friends.

Some of you may have received streaming devices that you can use to supplement or replace your cable or satellite TV service. In 2020, we plan to continue to address these ever-changing alternatives to cable. A class on "Getting the Most from Your Roku" will be held on January 23, 2020 at 1 PM. You can review some earlier offerings on our <u>Seminar Handouts</u> page.

As we begin a new decade it promises to be full of exciting new technology. As the shift away from stationary devices towards mobile computing devices accelerates, new technology will require new skills which we can embrace through our <u>Sun City Computer Club</u> offerings. The coming 5G technology offers vast speed improvements allowing further development of interactive devices such as driverless vehicles. The continuing shift to the "cloud" also offers many new opportunities from synchronizing photos to backing up and sharing important files. A major move to streaming video entertainment content is underway and many shakeouts are occurring as the streaming services fine tune their offerings and volley for their niche. As always, research before cutting the cable and make use of the free trial offerings.

The past year saw many changes in the technology landscape. Our Sun City Computer Club had some significant changes as we deployed two file servers, which are located in our classroom closet. The Windows file server contains club files and archives that are remotely available to board members and allows updates to be made from home rather than a trip to the club to retrieve sign-in data. We have updated the classroom computer and fitted it with a solid-state hard drive. We've done the same to both sign-in computers which access the Windows server, rather than hold the data locally, eliminating the need for manual retrieval of the sign-in data.

We also installed a Linux server which is used to experiment with various web site improvements and program applications.

As the decade ended so did Microsoft support of Windows 7. This means security updates won't be pushed to Windows 7 users although the OS will remain operable. Our Tuesday repair SIG can assist in updating to Windows 10 so you can take advantage of the new security and features.

I am always open to suggestions for improvements to the club's offerings and speakers for our monthly meetings email or call me.

Jeff Wilkinson, President (702) 527-4056 pres.scscc@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 December 11, 2019

Chuck Hagan made a motion that the minutes of the November 13 Board Meeting be approved. The motion was seconded by George Lobue and unanimously approved by the Board.

Tom Burt moved the final 2020 budget be approved. Irene Burt seconded the motion. The vote to approve was unanimous. The budget will be submitted for ratification by the membership at the January 2nd General and Business meeting.

George Lobue made a motion that the meeting adjourn at 10:35 AM. Chuck Hagan seconded the motion and it was unanimously approved by the Board. The meeting was adjourned at 10:35 AM.

General Membership Meeting

Our next General Meeting will be held at 2 PM on Thursday, January 2, 2020 in Desert Vista Room 5.

The club will vote to ratify the 2020 budget and then have a presentation by Mr. Ed White of ClearCaptions about their phone captioning service for the hearing-impaired.

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

Welcome New Members

The following new members joined the Computer Club between November 27th and December 28th.

Tony Derhake Sandy Hippensteel Joan Perry Lyle Perry Alona Stephenson Howard Stephenson

January 2020 Calendars

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

http://www.scscc.club/Calendars/scscc_calendar_2020-01Jan.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 keywords 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: February 20th 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.

January 2020 Hands-On Classes

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

January 2020 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 Dark January 1

9 AM on First and Third Wednesdays (January 15)

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, January 8th, 2020 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.



Getting the Most from Your Roku Streaming Device

Thursday, January 23rd, 2020 at 1 PM

Presenter: jeff Wilkinson Location: SCSCC Classroom

Jeff will discuss and demonstrate tips and tricks to get the most enjoyment from your Roku streaming device. This should be useful for novice cord-cutters.



Managing Your Passwords Saturday, January 25, 2020 at 9:30AM

Presenter: Gail Weiss

Location: SCSCC Classroom

If you are like a lot of people, you probably have more usernames and passwords than you can remember. You should start to think about organizing them and keeping them in a place that you and someone you trust can access.

There are many password manager applications available to you that claim they will store your passwords securely and even help generate passwords for you. In this class we will explore some of these password manager applications and if they are a good option to use. We will also discuss the importance of why you should use a different password for every website you visit.

But then we also need to discuss the sensitive topic that what would happen if you should die or become incapacitated. Would your executor or love ones be able to access all your on-line data (your bank and brokerage accounts, your photo storage accounts or even your social networking accounts) that you so carefully secured and then didn't bother to share the passwords with anyone.

This class will explain all your options for managing your passwords and we will also discuss how to preserve your digital legacy. For more information about this class or if you have any questions or ideas for future classes, please email me at gmweiss5@gmail.com.



Let's Talk (Genealogy) and Lab Monitors

4th Saturday (January 25th, 2020), 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. Drop by to "*Let's Talk*" to get direction and/or answers to your own genealogy questions.



Tax Preparation Software – Tax Year 2019

Thursday, January 30th, 2020 9:30 AM - 11:30 AM

Presenter: Tom Burt

Location: SCSCC Classroom

Two of the most popular programs for preparing your personal income tax return are **H&R Block** and **Turbo Tax**. You can run these programs on your PC or Mac or you can work with the online versions. Purchase one of these software programs, install it on your PC (or go to the maker's website) and answer the step-by-step questions that are presented to you. When you've finished, either program will provide you with a finished tax return ready for filing. You can even choose to file your return electronically! Happily, for 2019 the tax law changes from are few and minor.

In this year's seminar we will discuss both programs briefly and then do a demonstration of the excellent H&R Block Deluxe program. We will create a 2019 tax return for a fictitious senior couple who have typical financial transactions such as: wage income or retirement benefits, interest and dividends, social security benefits, capital gains, itemized deductions, required minimum distributions, etc. You may be surprised how easy it is to prepare and file your own tax return. We'll also look at how to set up electronic payments on the IRS web-site.

2019 presentation notes will be available about January 22nd at: http://www.scscc.club/smnr.



Tom's Tech-Notes

Making Windows 10 Look and Act Like Windows 7 Tom Burt, SCSCC Vice-President

By now, most Windows 7 users have heard that Microsoft will end support for Windows 7 on Tuesday, January 14th. After that date, there will be no further updates, bug fixes or security patches for Windows 7. The short-term consequences of the end of support are minimal: Windows 7 and installed applications will continue to work. Over time, however, as hackers discover new security flaws to exploit, Windows 7 will become less secure. So, it's time to think about moving to Windows 10, which has a more secure core design and still has support.

Another concern for Windows 7 users is that it's no longer available. If your current Windows 7 PC's hardware finally gives up the ghost and can't be repaired at a reasonable cost, your only option will be to buy a new Windows 10 PC via the retail market.

Coming from Windows 7, you may Initially find Windows 10's user interface unappealing or difficult to navigate – especially the Settings interface. Our article this month will offer some ways to set up Windows 10 so that it looks and acts much like Windows 7. This can help with easing the transition to using the native Windows 10 user interface. For small businesses, this could afford a big saving on retraining staff accustomed to using Windows 7. We'll also talk about some ways to get applications written for Windows 7 to run on Windows 10. This can be critical if the support for that application has gone away – a not uncommon occurrence with "free" programs downloaded over the years.

Helpful Articles

Here are some links to helpful articles I found while researching for this month's article. I'll be highlighting a few of the items these articles offered.

https://www.howtogeek.com/277448/how-to-make-windows-10-look-and-act-more-like-windows-7/

https://www.theguardian.com/technology/askjack/2019/jun/06/how-can-i-make-windows-10-look-more-like-windows-7

https://www.windowscentral.com/top-10-ways-make-windows-10-more-windows-7 https://www.digitaltrends.com/computing/how-to-make-windows-10-look-like-windows-7/

Classic Shell

One of the biggest differences between Windows 7 and Windows 10 is the Windows Start menu. Classic Shell is a free program that you can download and install to give you a variety of Start Menu styles, including that of Windows 7. You can find the download link at: http://www.classicshell.net/

The original author has placed the program in the public domain on GitHub.com, but you can still download his final version from the above site.

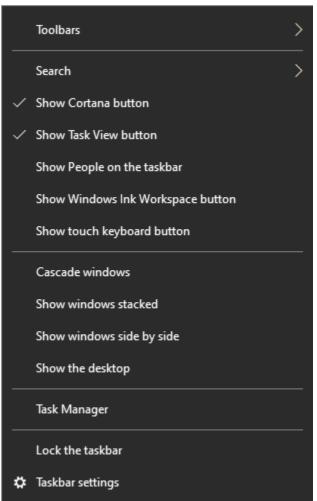
Classic Shell was originally built when Windows 8 was released; Windows 8 had NO Start Menu. It is compatible with Windows 8, 8.1 and 10. The articles above also offer a link where you can get an image file of the Windows 7 Start orb to be used with Classic Shell.

File Explorer

The Windows 10 File Explorer features the tabbed "ribbon" interface, which differs from Windows 7's Windows Explorer, which featured a "menus and toolbar" interface. I didn't find File Explorer that different and like the way it presents the user interface in the ribbon. But, for a closer recreation of Windows Explorer, the "Classic Shell" setup includes "Classic Explorer", which allows you to get a highly customized File Explorer, including making it look and act like the Windows Explorer.

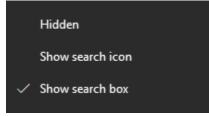
Task Bar

The Windows 10 Task Bar includes the Search box, the "Talk to Cortana" icon and the "Task



View" icon. These are not present in Windows 7. To remove them, right-click on an open spot on the Task Bar to display a pop-up menu.

Uncheck "Show Cortana button" and "Show Task View button" to remove those from the Task Bar.



If you hover over the Search item, a submenu slides out with toggle

options to "Show search box", "Show a search icon" or completely Hide the search.

You can also click "Taskbar Settings" to go to an extensive page of other Task Bar settings.

Title Bar Colors

In Windows 10's default color scheme, window title bars are colored white, making it difficult to see which Window has the focus to the mouse and keyboard. To add some color to title bars and other UI elements, you can go to Start > Settings > Personalization > Colors.



This will display a page of color settings. This screen shot shows the key parts for changing the color of various window and screen elements.

Uncheck (if checked) the "Automatically pick an accent color from my background" checkbox.

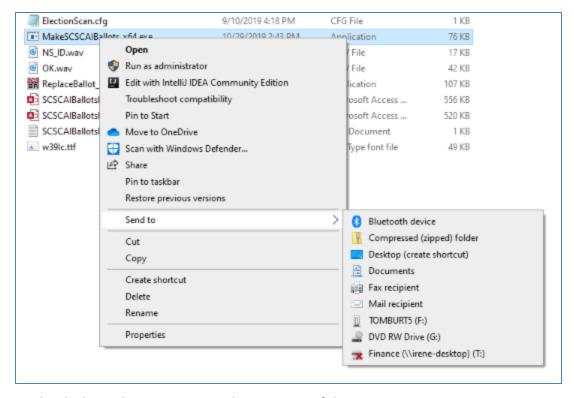
Select a pleasing accent color from the palette or click the + for a custom color. Check or uncheck the boxes for where the accent color should be used.

This tip can be handy even if you don't use any of the others.

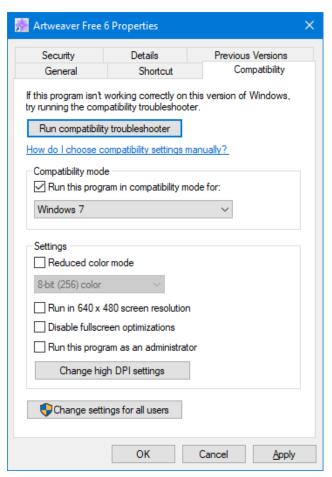
Program Compatibility

A separate concern from making Windows 10 look like Windows 7 is getting older programs that ran on your Windows 7 system to run on Windows 10. This can be a challenge for programs whose authors are no longer in business. Windows 10 provides options to run a program in "compatibility" mode and/or Administrator mode.

The best way to do this is to start by creating a desktop shortcut to the program. In File Explorer, browse to the program's .exe file, right click and, in the popup menu that appears, hover over "Send to" and then, in the secondary menu that appears, click "Desktop (create shortcut)". See the following screen shot.



Rename the desktop shortcut to something meaningful to you.



Next, right click the shortcut and choose Properties from the popup menu. In the Properties dialog, click the Compatibility tab. Check the box for "Run this program in compatibility mode for:"

In the dropdown, choose "Windows7".

You can also click the Shortcut tab and then click the Advanced button. A small dialog will display with a checkbox for "Run as administrator". Try checking this box if the program still doesn't run properly with Windows 7 compatibility selected.

When done with setting Properties, click OK. Then double click the shortcut to run the program. Hopefully it will launch and run normally.

Some Windows 7 utility programs, especially those with accompanying drivers, may not run, even with compatibility mode.

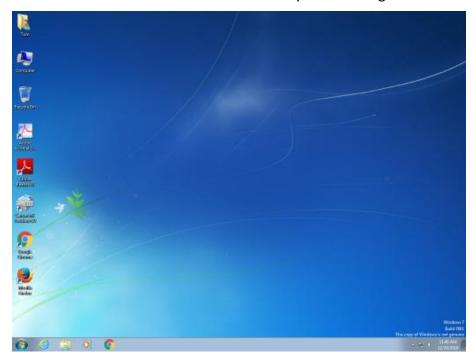
Creating a Windows 7 Virtual Machine

If a program still fails to run on Windows 10 after you've tried Windows 7 compatibility and Run as administrator, you may want to try setting up a Windows 7 virtual machine. This requires a fair bit of technical skill, so I recommend visiting the Tuesday Repair Lab team for help. Also check out my "Virtual Machine Primer" seminar handout at:

https://www.scscc.club/smnr/Virtual Machine Primer.pdf

The most universal virtual machine utility is the free Oracle Virtual Box, which runs on Windows 10 Home or Pro, MacOS and Linux. You can download Virtual Box at: https://www.virtualbox.org/

A virtual machine is a software/hardware emulation of a PC (the Guest) that runs as an application on a real PC (the Host). The Guest operating system and its applications run in the virtual machine and are unaware that they are running in a virtual environment. The virtual



machine can be "booted" when needed and "shut down" when not needed. The virtual machine has a virtual hard drive, which is a single large file on the Host PC.

The general approach is to capture a snapshot of your Windows 7 PC's C: drive and system partitions and use that snapshot to create the virtual hard drive file.

Windows 7 Running in a Virtual Box Virtual Machine on Windows 10

That virtual hard drive file is attached as the boot drive of a virtual machine configured to emulate a Windows 7 PC. Once this is done, you can "boot" the virtual machine and it will virtually start Windows 7 from the attached virtual C: drive. Your virtual machine will then be running your former Windows 7 PC and its applications.

The easiest way to make a snapshot of your Windows 7 PC's C: drive and system partitions is to create a backup image using Macrium Reflect or Acronis True Image. That image can then be restored to the empty virtual C: drive of the Windows 7 virtual machine. Once the restore is done, the virtual machine will be able to boot up and the same Windows 7 and applications that you had on the original PC.

Until next month ...



Kretchmar's Korner

By David Kretchmar, Computer Technician HDMI Cables

The old common analog video output, VGA, for all intents and purposes, is now obsolete. Some new computers are coming with only HDMI (High Definition Media Interface) video output. I would not buy a new video display monitor without an HDMI input jack, no matter how cheap it was, since you are buying obsolete equipment.

Today you can buy a 6-foot-long HDMI cable for \$4.99 up to \$99.99 or more. Retailers and cable manufacturers expend a lot of effort to make you believe that you'll get a better picture and

sound with a more expensive HDMI cable.



They're not telling the truth. No doubt that's because they can make more money selling pricy cables than the components the HDMI cable will be connecting.

The markup on expensive cables is so great that every brick-and-mortar and online retailer has a huge incentive to feature highend HDMI cables in the hopes of tricking the

buyer into spending many dollars more than necessary.

The signal transmitted by an HDMI cable is virtually perfect. Industry standards allow for one error in one billion bits of data, or roughly one second playing time of a high definition movie. No human eyes are sharp enough to see the errors.

For technical reasons, as detailed in an October 2012 CNET online review, expensive HDMI cables offer no difference in picture quality over cheap HDMI cables. A condensed and simplified summary of that analysis follows.

The HDMI Signal

The first thing to understand is exactly what's transmitted over the cable. The HDMI standard uses Transition Minimized Differential Signaling, or TMDS.

TMDS has two basic aspects. The first is that the ones and zeros at the source (a Blu-ray player or HD cable/satellite box) are not exactly the ones and zeros your TV uses to create a picture -- at least, not in exactly the same order. Before sending the signal out via the HDMI output, the ones and zeros are rearranged to minimize how many transitions there are. So instead of

10101010, the transmission may look like 11110000. If you really like math, how it does this is cool, but it's not really important to understanding the concept as a whole.

Even though this protocol seems strange, it makes it much more likely that the data transmitted can be rebuilt on the other end (as in, at the TV or computer monitor).

The second part of TMDS (the DS part) is the HDMI cable itself. Each HDMI cable is actually a bundle of small copper wires. Two versions of the data are sent over different sets of wires. One of these is out of phase with the "real" signal. The TV receives all the data, puts the out-of-phase signal back *in* phase, then compares it to the "real" signal. Any noise picked up along the way will now be out of phase, and as such it is effectively negated and ignored.

TMDS works really well, allowing for both short cables and long cables to carry a great deal off data. It also means you can have inexpensive cables that work just as well as expensive ones.

More important to you, it means that when something goes wrong, it goes really wrong. It's often said that with an HDMI signal, you either get everything and it's perfect, or it isn't perfect and you get nothing. If you are getting an image that looks correct, and there are no dropouts in the audio or video, then you're getting everything that's being sent. If the cable is faulty, or it's a really long but poor quality cable, most of the time you'll just get nothing at all.

As you've read, the ones and zeros of an HD image move happily along, more or less, from your source to your TV. Over short runs (the standard 6 feet or so), there really isn't anything other than a faulty cable (which itself isn't that likely) that would cause any issue. Over long runs, it's remotely possible that interference of some kind, or a poorly made cable can reduce the



"quality" of the signal to the point where the TV can't make heads or tails of it. Heads or tails -- that's a digital joke.

It's important to note that any artifact, usually "snow" on your screen, is pretty unlikely, even over long runs. You are way more likely to just not get anything at all.

All the claims about differences in picture quality are remnants of the analog days,

which were barely valid then and not at all valid now. There is no way for different cables to create a different color temperature, change the contrast ratio, or anything else picture-qualitywise.

Audio Over HDMI

Several companies claim that their HDMI cables sound better than other HDMI cables. One asserts this is because there is no error correction on the audio and its cables are more likely to transmit all the data. This is untrue. Audio over HDMI actually has more error correction than the video signal. But even if this weren't the case, it's still nonsense. Dolby digital sound has extensive error correction built into its codecs. In other words, if you are sending a bit stream of data over HDMI from your Blu-ray player, the data going into your receiver is bit-for-bit the same as what's on the disc. Cheap or expensive, the cable is irrelevant when it comes to transmitting digital sound.

If the cable is faulty or if there is some issue causing data to be lost between the player and the receiver, the decoders are designed to mute instead of blasting out bad data (noise). There is



no such thing as an audio version of "snow". Instead, you just get a total dropout of the audio. So, if you're getting audio dropouts, it's possible it's the HDMI cable. But if you're not getting video issues as well, the problem is likely elsewhere. If the audio isn't muting, then as long as you're outputting sound, you're getting exactly what's being sent.

The big "if" that I've been repeating is "if the signal gets there." Over short runs -- a few meters, say -- it is incredibly unlikely that even the cheapest HDMI cable won't work perfectly. Over longer runs – 50 feet or more -- the answer is less clear-cut. The variables of the transmitter and receiver combo in the source and display, plus any repeaters you have in the mix (like a receiver), mean that not every long HDMI cable can handle all the data.

If you need to run a long HDMI cable, it's a safe bet you're going to run it through a wall. If so, it is vital you test the cable with all your equipment before you install it. Plus, as tempting as it is to get the cheapest cable that will work in this case, just because a cable works with all your current gear, doesn't necessarily mean it will work with your future gear.

Another Cable Lie

When cable manufacturers claim their cables are "Made for 240 Hz" they are being misleading. The conversion to 120 or 240 Hz is done inside the TV. There is no such thing as a 120 Hz or 240 Hz HDMI signal.

More expensive cables can be more rugged, with thicker casings and beefier connectors giving higher potential durability. But how much wear and tear do your cables really endure?

Conclusions

There is absolutely no picture or sound quality difference between a \$3.50 HDMI cable and a \$99 cable.

Most users only need a few feet of HDMI cabling to run from a Blu-ray player and cable/satellite box to a TV. Over these short distances, even the cheapest HDMI cables are going to work. And if they work it means you're getting perfect image and sound.

APCUG Guest Article

Book Review Google Apps Made Easy – Learn to Work in the Cloud Author: James Bernstein

By Terry Flanagan, Club Librarian, GVR Computer Club, AZ October 2019 issue, Greenbytes

www.ccgvaz.org Newsletter (at) ccgvaz.org



What makes Google Apps different? First and foremost, Google Apps are web based. You do not download and install a program on your computer. You use your web browser, preferably Google Chrome, to go to www.google.com and log into your account and there they are. You do not have to be concerned with updates, maintenance, and backup issues. They are also platform or operating system independent. It does not matter if you are using a M/S Windows, Apple MAC or Linux computer, an Android smart phone, iPhone or iPad. The applications and your files are there in the cloud for you to access from

wherever you are.

There are several advantages and disadvantages to working in the cloud. Being on the cloud makes it easier to share your files with others, which makes collaboration easier. There is no need to send email attachments back and forth or copy files onto flash drives. Also, all of your data will be consistent between your devices. If you make changes in Google Docs on your PC and later open the file on your iPad the changes are there. Even if you save the file locally to your computer it will be synchronized to the cloud version. The disadvantages are that you must have an internet connection since most of the things you will do with these apps are cloud-based and done online. The applications do not have as many features as the other office suites and some may have security concerns about their data being on the cloud.

FUNCTION	GOOGLE APPS	M/S OFFICE	LibreOffice
Word Processing	Docs	Word	Writer
Spreadsheet	Sheets	Excel	Calc
Presentation	Slides	PowerPoint	Impress
Database	N.A.	Access	Base
Forms	Forms	N.A.	N.A.
Note Taking	Keep	OneNote	N.A.
Photo Organizing	Photos	N.A.	N.A.
Vector Graphics	N.A.	N.A.	Draw
Email	Gmail	Outlook	Thunderbird
COST	Free	\$100/yr.	Free

From the chart above, you will note that each office suite has applications that the other does not. Google Apps does not have a database module, but this is not a frequently used application by home users. Many common database functions can be handled by a spreadsheet. M/S Office and LibreOffice do not have a photo editing module, but there are a number of good stand-alone programs to perform those tasks.

Google Forms stands out as a unique application. Forms does what the name implies. You can easily create forms to gather information or take surveys. The data is automatically transferred to a spreadsheet and reports created to summarize the results and display them in easy to understand charts.

One final point to mention – notice the bottom line in the chart above. Google Apps are free along with 15 gigabytes of cloud file storage. More space is available for a fee.

January Lab Monitor Schedule

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

January Monitors	Monitor Schedule	
Closed	Wednesday	
	1/1/2020	
Jeff Southwell	Saturday	
Linda McMullin	1/4/2020	
Jim Edwards	Wednesday	
Jan Edwards	1/8/2020	
Jim Enlow	Saturday	
Fred Cohen	1/11/2020	
Blanche York	Wednesday	
Carol Przybycien	1/15/2020	
Mary Hedin	Saturday	
John Zuzich	1/18/2020	
Carol Przybycien	Wednesday	
Millie Taylor	1/22/2020	
Ray Ristic	Saturday	
Karen Ristic	1/25/2020	
Mitch Swetsky	Wednesday	
Kathy Kirby	1/29/2020	