

Lake County Area Computer Enthusiasts NEWS JOURNAL

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LCACE.ORG

Smart TVs

From Dan's Dan Douglas,
President, Space Coast PCUG, Florida
November 2017 issue, Space Coast PC
Journal
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If you haven't shopped for a new TV in the last few years, you are in for an education. There are now as many acronyms that you come across when selecting a TV as there is in buying a PC. The last TV I bought was a 'SMART' High Definition TV (HDTV) with 3D in the middle of 2012. At that time, you had a choice of a HDTV set with or without the 3D option and the choice of many sets that weren't 'SMART' or many that were 'SMART'. The 'SMART' that I'm referring to is the ability to stream content from sources such as Netflix, Amazon Video, Hulu, Vudu, etc. directly from the TV without the use of an external streaming device such as a Blu-Ray player, Amazon Fire, Apple TV, or Roku to name just a few of the most commonly found. 1080P was the best resolution available and sets bigger than 55" usually had a big price jump.

Now the easy part: when we jump ahead 5 years to 2017, we now find a mixture of both HDTV/2K 1920x1080 TVs and Ultra High Definition (UHD)/4K 3840x2160 TVs. There was a large price difference between the two types until this summer when the number of UHD sets has taken over from the number of HDTVs. Almost every set made is a 'SMART' one featuring an extensive collection of a mixture of both traditional (Netflix,

Hulu, etc.) sources and non-traditional 'channels' (specialty channels like those available through Roku). Many TVs can be priced a little cheaper by not including an antenna tuner, recognizing the fact that the typical user uses an external box(es) for watching the programs of choice. Those are referred to as 'Displays' rather than a 'TV' which implies a tuner with network channel selection capability. Watch out if you want to install an antenna later and find there is no place to plug it into.

When we dive down deeper to the specifications, we find the harder parts to understand: High Dynamic Range or HDR is really where UHD sets shine on those that offer this feature – delivering a picture that is much closer to real life than was ever possible with a HDTV. HDR greatly increases the



contrast range between white and black so that the image is more natural in its brightness and highlights. Coupled with HDR is a larger palette of colors that can be displayed – a HDTV can display about 17 million colors, whereas an UHD set, with an enhanced wide color gamut (WCG) can display over a

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LCACE February 10, 2018 demo Home Automation Part 2, presented by J. J. Johnson Meeting at the Grayslake Public Library at 12:30PM. See you there.



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Logo designed on an Atari Stacy Laptop in 1989 by Dwight Johnson Jr.

Lake County Area Computer Enthusiasts

**LCACE
c/o Group Ambassador**

["J.J." Johnson](#)

Membership

LCACE membership is open to all individuals and families interested in personal computing. Annual dues are \$20.00 per individual/family. Applications for membership may be obtained at the monthly meeting, by request on the club hotline, and are now available on our web site at <http://www.lcace.org>.

Meetings

LCACE meetings are usually held on Saturdays at the Grayslake Area Public Library, 100 Library Lane, Grayslake, Illinois. The meeting room opens at noon and the formal meeting begins at 12:30 p.m. All meetings are open to the public. Bring a friend!

Newsletter Submissions

Club members are welcome to submit classified ads, reviews, tips and other articles for publication, to our newsletter editor in Microsoft Word format (.doc). **Publication deadline is the 20th of the month for all ads and articles.** Please do not use tabs or special formatting.

Newsletter Advertising

Ad rates per issue: Full page - \$25, Half page - \$15, Quarter page - \$10, Business Card - \$5. Discounts are available on advance purchase of multiple issues. Please send camera-ready copy and payment to the club address by the 15th of the month preceding publication. For more information on ad pricing, please call our Hotline. Ads are **FREE** to all paid members.

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Phil's Ramblings



Some (cautious) good news on the security front! So far, I've not heard of any malware exploits attributable to the Meltdown and Spectre security flaws detected in many computer processors, and first reported on late last year.

Now for the bad news....

Intel has issued a BIOS update for its processors to OEM computer manufacturers. They are supposed to tweak the Intel update for their hardware and issue the modified BIOS update to their customers.

As of this writing, that second step has already happened for at least Dell and HP customers. Unfortunately, there were bugs in one section of the Intel update, that are causing problems for computer owners who have installed the new BIOS they received from their OEM. The OEMs are telling their customers who have not already installed this update to wait for an updated version and are reissuing the original BIOS (pre-update) so that those with affected computers can roll back the Meltdown / Spectre update.

Meanwhile, Microsoft has issued an out-of-band Windows update designed to modify their earlier update for the Spectre Variant 2 bug. (I was not clear about this in my second Google Groups email; this update is not related to the BIOS updates just issued by OEMs; it is instead designed to modify the mitigation update that Microsoft released to Windows customers on January 3rd.)

If you read about the original announcement of the underlying Meltdown / Spectre processor vulnerabilities in late 2017, you may remember that there was (1) amazement that researchers had been able to keep these vulnerabilities secret for a very long time while they worked on countermeasures, and (2) frustration that those countermeasures were not yet ready for release when the news finally broke. It appears that the countermeasures developed by Microsoft and Intel for the

Spectre Variant 2 vulnerability were not ready for Prime Time and are now being walked back.

On an entirely different front, let's talk a bit about Chromebooks. Not about Meltdown / Spectre, since most Chromebooks are immune to these vulnerabilities because they



use unaffected processors or run unaffected Linux kernels, but about the long-talked-about rollout of Android apps to Chromebooks.

As background, while Chromebooks have become quite popular in school settings because of cost and ease of IT administration, there are only a limited number of Chromebook apps available in the Chrome Store. Wouldn't it be great if many of those million + apps in the Google Play store would run on Chromebooks? Those embracing Android for their phones and tablets would then have a trifecta; their computer (Chromebook) would offer many of their favorite mobile apps.

This strategy was first announced by Google in May 2016, with the expectation that new Chromebooks would be ready for Android apps at release and that many (but not all) existing Chromebooks would be able to run Android apps by the end of 2016.

And then there was silence..... lots of silence, broken only by an occasional article

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billion! Most UHD sets will also up-convert 2K material to near 4K resolution.

As far as 4K material goes, there are many 4K sources now available. Netflix (for a small premium) offers a selection of many 4K shows/movies, as well as all Netflix original shows are shot in 4K now. Amazon Video also has a large selection of movies to rent/buy in 4K as does Fandango. My personal favorite is Walmart owned Vudu. Vudu offers a digital copy for life of almost every DVD or Blu-ray that you purchase. All new movies are also available to rent or purchase in 4K format, with older titles being added constantly.

Both satellite providers Direct TV and Dish offer a variety of 4K channels and rentals. Apple has just announced the new Apple TV box with 4K/HDR support with a large selection of material available on iTunes. YouTube also features many 4K/HDR videos and movie trailers. My personal favorite 4K source though, is a UHD Blu-ray player. Nothing outside of a movie theater can compare to the sight and sound of playing a 4K disc or streaming 4K content from Netflix or Vudu through a receiver with a Dolby Atmos 5.1.4 speaker setup in your own house. If anything in that last sentence is unknown to you, wait until next month when I'll discuss the sound aspects of UHD and the implications of HDCP 2.2 and HDMI 2.1!



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from a non-Google source mentioning some aspect of the program. Piecing together those bits 'n pieces, this has apparently turned out to be a lot more difficult than Google expected – in part because existing Android apps were scaled for the smaller screens of phones and tablets and did not display well on the larger screens of

Chromebooks. Almost all of those Android apps were written by third party developers, and Google was dependent on them to rewrite their apps to play well with Chromebooks. But those developers were already in the Android marketplace; as of June 2017, there were **two billion** Android devices in use! While Chromebooks finally passed Apple's Mac computer line in quarterly sales in 2016, we're talking perhaps **eight million** in annual sales. Now you see the problem. Why would developers invest much time in rewriting apps already selling in a huge marketplace so that they could be sold in a much smaller one?

In any event, the transition continues – albeit much slower than projected. New Chromebook releases are optimized for Android apps, and reviews have been positive. I think it is fair to say that for consumers already using Android phones and/or tablets, a new Chromebook running Android apps becomes a much more viable alternative to a Windows laptop. Meanwhile, the conversion for older, existing Chromebooks is slowly moving forward. (I have a small Acer Chromebook purchased in 2015 which is on the list for eventual conversion to Android apps, so Google is promising to take care of a large share of its existing Chromebook owners.) -Stay warm!



Wi-Fi - 2.4 or 5GHz

By Carol Picard, Editor / Webmaster, Midland Computer Club, Michigan
September 2017 issue of Bits and Bytes
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I normally have acceptable network speeds throughout my house but one day, while downloading file to desktop computer, which has a PCI wireless network card, was only getting 3 Mbps download speed. This is my primary computer and is also located in a

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Membership

Membership Chairperson Report

As of 1/13/18

Members = 53

Attendance =43%

THANK YOU FOR
JOINING

Joyce Page

THANK YOU FOR
RENEWING

None

THANK YOU FOR
VISITING

Chynna Rose (Presenter)



Michael
Mc Enery
Judy
Rehberger

History Report

2018-01-13 Meeting

By Les Larkin

LesLarkin@AIM.com

Our January meeting was conducted by Phil Bock.

The door prize was won by Stephanie Risinger. She won a selfie stick. She said she will probably give it to her granddaughter, who will give it LOTS of use!

David Carlson won the 50/50 raffle, he and the club each receiving \$10.00.

Congratulations to all prize winners!

Thanks to Linda Busch for making the coffee, and to Liz Barnett and Linda Busch for providing munchables for us.

This month's program was "Telecom Choices", presented by Chynna Rose. This was an EXCELLENT presentation, covering facets of telecom that I barely knew existed!

Another great meeting, and I hope to see you at our February 10 meeting.

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room farthest from where the router is located. My ISP is Charter Spectrum and highest download speed should be around 60Mbps.

Since slow speeds have happened before, I decided to take the time to see if there was anything I could do to improve the speed on the desktop computer. Running an Ethernet cable is an option but I was looking for solution that would work for multiple devices, e.g., tablets, laptop computers, etc.

Using my laptop computer, I ran a speed test in several locations within the house. The speed test on the laptop computer in the same room as the Netgear R7000 router showed 60Mbps download speed. About 10 feet from router I was getting 30Mbps. At 20 feet from router it was 15Mbps but at the farthest distance (within the house) from the router it was 5Mbps. Speed tests normally fluctuate so I thought it was a good idea to run tests on different days and at different

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THE WINNERS PAGE



Dave Won the 50/50

*The "Food SJG
participants.
Where members go to
enjoy the
After Meeting.*



*Stephanie
Won the
Door Prize*

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times of the day to get an average.

The router was dual band, capable of both 2.4GHz and 5GHz but had never used 5GHz.

I was surprised to discover that the PCI network card in seven-year-old desktop computer was dual band. I was concerned about the distance/obstructions between the computer and router. Several factors affect speed, other than distance, e.g., number and composition of walls, appliances, wiring, etc., and I had read that 5GHz had a shorter transmission distance than 2.4GHz.

After enabling the 5GHz band on the router, I ran more speed tests and was getting similar, high speeds on the laptop in the room where the router is located and on the desktop computer at the opposite end of house.

To check whether your computer is connecting at 2.4GHz or 5GHz, in Windows 10

- open Settings
- click Network & Internet Settings
- click Wi-Fi
- click Hardware Properties
- check information for Network band.



The Netgear R7000 router has a Smart Connect setting. The description of that setting indicates if SSID and network key are the same for both the

2.4GHz and 5GHz bands; the router would determine the best band for the connected devices. On the R7000, Smart Connect only applies to the main network. The Guest Network on the router has two bands (2.4GHz and 5GHz) but each band should have a unique SSID.

I configured SSID and network key on the router to enable Smart Connect. On the laptop, it successfully connected to the correct band, but using Smart Connect totally messed up the Internet connection on the desktop computer. I had difficulty connecting to the network and after connecting it either didn't get an internet connection or

got it for a short time and then dropped it. Resetting IP and flushing DNS on desktop computer didn't resolve problem. Neither did changing DNS servers. So, I reconfigured router to not use Smart Connect.

On the desktop computer, I ran various speed tests (beta.speedtest.net):

- 5GHz band and results showed Download = 67.67 Mbps; Upload = 5.71 Mbps.
- 2.4GHz band results showed Download = 35.91Mbps; Upload = 5.71 Mbps.

I also tested using Charter Spectrum speed test.

- 5GHz band results showed Download = 66.40 Mbps; Upload = 5.75 Mbps.
- 2.4GHz band results showed Download = 39.42Mbps; Upload = 5.97 Mbps.



Upload speeds are almost always considerably slower than download.

Normally, when working on a specific problem, I find one or two more problems but this time, while working on a solution for the Internet speed problem at home, I discovered a solution to another problem. We recently changed the location for our Club meetings and when attempting to connect to the Internet at the new location, several members did not see the wireless connection on their devices when viewing available networks and were unable to connect to the internet.

While testing different devices at home, e.g., laptop computers and tablets, I noticed that some of the devices were not showing the 5GHz SSID. I checked specifications for those devices and found the internal network card only had single band, 2.4GHz capability. A device that only has 2.4GHz network card, cannot see a network broadcasting at 5GHz. To further test this, purchased a Netgear AC1200 Wi-Fi USB Dual Band Adapter. Using the AC1200 adapter I could bypass the internal 2.4GHz network card and connect to the router's 5GHz band. I further tested this at last month's computer club meeting and was able to connect to 5GHz at the meeting location.

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There are different ways to determine if a network card/adaptor is capable of dual band.

Under Device Manager, Network Adapters, description may indicate whether it is dual band.

In Windows 10

- open Settings
- click Network & Internet
- click Status
- click View your network properties
- scroll down to Wireless Network Connection

You can also try an Internet search for the model number of your device; specifications may show information

Security reminder: If you own your own router make sure you have changed the password for logging into the router (this is not the same as the SSID password for connecting devices to the network/internet). Also check for and install router firmware updates, especially security updates.



Interesting Internet Finds

Steve Costello, Boca Raton Computer Society editor (at) brcs.org
<http://ctublog.sefcug.com/>

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

The following are some items I found interesting during the month of November 2017.

Why I Switched From Chrome to Firefox Quantum

<https://www.howtogeek.com/333393/why-i-switched-from-chrome-to-firefox-quantum/>

Firefox Quantum was recently released. This post explains the reasons the author has for switching back to Firefox from Chrome. I know a lot of you that have never left Firefox, and/or are not satisfied with Chrome. I have experimented with Quantum a little, but think you should read this post and decide for yourself.

Word, Excel And PowerPoint Viewers Are Being Retired

<https://www.ghacks.net/2017/11/20/word-excel-and-powerpoint-viewers-are-being-retired/#>

If you are still using these viewers, you need to read this post. This post also lists several alternatives to the viewers, if you don't already know of any. (Note: It has been years since I have used any of these viewers because I use LibreOffice which can read these types of files.)

The 50 Cool Uses For Live CDs

<http://www.makeuseof.com/tag/download-50-cool-uses-for-live-cds/>

I only knew 7 of the uses for live CDs, which surprised me a little. Check this post for yourself, and I am sure you will find a few that you have never thought of.

Why Traditional Antivirus Is Doomed

<https://davescomputertips.com/why-traditional-antivirus-is-doomed/>

This is a short opinion piece, to which I mostly agree. Also, it seems to advocate the use of sandboxing as an alternative to traditional antivirus software. My only problem with this is that the average computer user will not know enough to work without the traditional antivirus software effectively.

What Is Google Play Services? Why Do You Need It?

<https://fossbytes.com/google-play-services-necessity/>

If you have an android device (KitKat) you have probably seen Google Play Services. If you are wondering what it does, or whether you really need it, this post explains it all.



Lake County Area Computer Enthusiasts

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or need help with your computer?



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