



Midland Michigan

# BITS AND BYTES

JULY 2021

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

## **ARTICLE INDEX**

**Alerts, Notifications, and Alarms - Oh, My! — Page 2**

By Dorothy Fitch, Editor, GVR Computer Club, AZ

**Blocking Unwanted Email — Page 3**

By David Kretchmar, Computer Technician

**Interesting Internet Finds October 2020 — Page 4**

Steve Costello — scostello (at) sefcug.com

**Tech Travels 2020 — Page 5**

By Greg Skalka, Under the Computer Hood User Group

**A Brief Tour of the VLC Media Player — Page 8**

By Tom Burt, Vice-President

**Thank Ben Franklin – For the Library, that is — Page 12**

By Phil Sorrentino, Contributing Writer, Sun City Summerlin Computer Club

**Wi-Fi 6 – What happened to b, g, n, ac? — Page 13**

By Phil Sorrentino, Contributing Writer, Sun City Center Computer Club

**Casting, not in the theatrical sense – Cast your data to the screen — Page 15**

By Phil Sorrentino, Newsletter Contributor, Sarasota Technology Users Group

*Articles in this Newsletter have been obtained from APCUG with the authors' permission for publication by APCUG member groups. The Midland Computer Club has not verified the information contained in the articles nor tested procedures or hardware/software. Articles do not necessarily reflect the views of the Midland Computer Club.*

## **GENERAL CLUB MEETING Via ZOOM**

**Wednesday, July 28, 2021  
6:00 P.M.**

## Alerts, Notifications, and Alarms - Oh, My!

By Dorothy Fitch, Editor, GVR Computer Club, AZ

January 2021 issue, Green Bytes — <https://www.ccgvaz.org/> — dmfitch (at) cox.net

I have started using alerts, notifications, and alarms to get my attention. Some of these come to my phone and some by email. Most of the time, I can choose what works best for me for each purpose. Of course, there are notifications that you get even if you didn't specifically ask for them, such as doctor appointment reminders, books that are ready to pick up at the library, and many others.

Here are some of my finds and handy tools.

### Alerts:

My bank's website allows me to set up alerts for activity related to the bank and credit card accounts. For example, whenever my credit card is charged, either in a store or online, I immediately get an email. If that card is ever stolen or hacked, I will know right away. I can also set up alerts for payments due, deposits, balances, etc.

We have a smart indoor thermometer that alerts us to temperature changes outside a specific range that we set up. That way we can tell from wherever we are reading email if the house gets too hot or cold.

### Notifications:

You can [sign up at the AZDOT website](#) to be notified of construction activity, accidents, or delays on I-19. After you submit your email address, you can choose which areas of the state, including I-19, you wish to include. These notifications were particularly handy when the Irvington construction area was still active. They also have a [phone app](#) that can notify you of highway events.

The US Postal Service offers a free [Informed Delivery](#) service to let you know what mail is coming to your mailbox. As mail is scanned in the postal processing center, an image is sent to your email address. (Lately, my email keeps showing me a picture of a postcard from the USPS that says that mail may be delayed. Ironically, that postcard still has not yet arrived!)

UPS's [My Choice](#) system tracks your packages and notifies you of their delivery. It's fun to check the map that shows the exact location of the delivery truck when it is in your neighborhood! FedEx has a similar [Delivery Manager](#) system and offers to deliver the package to a secure location where you can pick it up if you don't want it left outside your door.

On Election Day, I learned of the phone app from [The Guardian](#) that sends alerts to the "lock screen" of my phone when breaking news occurs. The Guardian is a British newspaper with a great reputation and worldwide coverage. So during the evening on 11/3, as election results started coming in, I would hear the distinctive tone I set up for my phone. That sound would prompt me to go look at the television to see the latest results. It was very handy. I am still enjoying the breaking news. I'm using the free version of the app, though a premium version is also available.

I have also subscribed to the free [New York Times Morning Briefing](#) and "breaking news" emails. (I usually get the Guardian notifications about 5 minutes before the NYT ones!) Their Morning Briefing has a summary of news headlines and a mini crossword puzzle. To read the entire article or enjoy the full crossword puzzles, you need to pay for a subscription. Lately, the headlines have been enough for me!

The weather station on our roof sends us an email every day with the day's high and low temperatures, wind speeds, and other data (the rain measure has never worked well, so its rainfall reports are rather suspect). It even has its own website, which I can access from my phone. If we ever get to travel again, we'll be able to see what the weather is like at home!

### Alarms:

Alarms aren't just for waking you up. They can be great reminders to take your medicine, walk the dog, or whatever suits you. I use the Alarm feature of the Clock app on my Android phone and expect that an iPhone offers the same functionality.

Another phone alarm goes off at 6:59 pm Mon–Fri. We're usually preparing dinner at that time, and we like to listen to "[Exploring Music](#)" with Bill McLaughlin on the radio (KUAT, 90.5 FM). This reminds me to set the tuner to the radio so we can listen.

Once a month, my husband needs to submit data for his [Rainlog](#) project, where citizen scientists report the amount of rain received in their rain gauge. So, that alarm goes off on the first day of each month at noon as a reminder for him to do that. We have it on our shared Google calendar as a recurring task, but do we ever look there anymore? That calendar is rather empty these days.

It's nice that you can set up and customize multiple alarms to recur on specific days and times.

There are so many possibilities out there that you can subscribe to or set up. Give it a try! If you have a favorite attention-getter you would like to share, reply to this newsletter and let me know.

---

## Blocking Unwanted Email

By David Kretchmar, Computer Technician

Sun City Summerlin Computer Club — <https://www.scsccl.com> — [dkretch \(at\) gmail.com](mailto:dkretch@gmail.com)

Sooner or later this happens to all of us. You continuously receive unwanted emails, (spam) from an individual or organization. Legitimate organizations usually have an Unsubscribe button within their message, which enables you to be dropped from their email list. If you attempt to unsubscribe from a less-than-legitimate mailer you are just confirming that your email address is good and even more spam will come your way.

Some individuals will not respect your request to stop sending (usually forwarding) you useless or offensive messages; more charitably they might lack the knowledge to be able to remove you from their mail distribution list.



Unwanted emails can be more than just bothersome or offensive. Some contain viruses that can render your system useless and destroy your data. Some people have had to abandon email addresses when they received many dozens of unwanted emails every day.

Fortunately, all email programs have a feature that will allow you to block all emails from specific email addresses.

I'm going to describe the email blocking procedures for three popular web-based email programs: **Yahoo Mail, Outlook, and Gmail**. If you are using another email provider, the described procedures can be used to at least point you in the right direction.

Each of these programs allows you to use a list of blocked senders for individual senders whose messages you don't want to receive but can't easily stop.

### Yahoo Mail

Yahoo Mail can block all mail from up to 500 email addresses. All mail from these senders will be automatically deleted before you see it. To have Yahoo! Mail automatically delete all mail from a particular address:

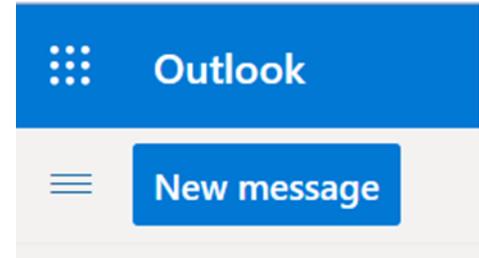


- Left mouse click (hereafter I'll just say click if it's left) or just put your cursor on the settings gear in the upper right corner of the Yahoo Mail page.
- Click on "Mail Options" from the pull-down menu that has appeared.
- Click "Blocked Addresses" category under Advanced Options.
- Enter the unwanted email address under "Add an address:".
- Click on "+".

Your updated list of blocked senders will be saved automatically.

### Outlook

- Click on the gear that appears in the upper right corner of the Outlook mail window.
- Click on “More mail setting”.
- Click on “Safe and blocked Senders”.
- Click on “Blocked senders”.
- Enter the unwanted email address in the “Blocked email address or domain” rectangle.
- Click on “Add to list>>”



Your updated list of blocked senders will be saved automatically.

### Gmail

- Click on the Settings gear that appears on the upper right corner of the Gmail window.
- Click on “Filters” near the top middle of the page.
- Click on “Create a new filter” at the bottom of the page.
- Enter the unwanted email address in the “From” rectangle.
- Click on “Create filter with this search>>”.
- Click on “Delete it”.
- Click on “Create Filter”.



### Conclusions and Recommendations

Never reply to or unsubscribe from spam; it just alerts the sender that it has a good email address. When you get a spam message, click on your program’s “Spam” or “Send to Spam” or “Report as spam” to get rid of it and help your email provider learn to block messages from that server.

Even though email providers have active programs to help stop spam, it still comes. What winds up in your inbox is just a small fraction of the trash that is sent your way. Spammers are constantly changing techniques to defeat any filters.

You can work around the problem by creating and maintaining a “junk” or “throw down” email address that you know will be mostly spam. When I have to give out an email address to a website that I feel might be questionable, I provide the junk address and avoid possible spam in my “good” inboxes.




---

## Interesting Internet Finds October 2020

Steve Costello — [scostello \(at\) sefcug.com](mailto:scostello@sefcug.com)

In the course of 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 September 2020.

### *How To Create Accessible Documents In LibreOffice*

<https://www.maketecheasier.com/create-accessible-documents-libreoffice/>

More and more users I know are dropping Microsoft Word and using LibreOffice. If you are one of those people, this post gives some tips for creating accessible documents with LibreOffice.

### *How To Set LibreOffice To Use MS Office Formats*

<https://davescomputertips.com/how-to-set-libreoffice-to-use-ms-office-formats/>

An issue with new LibreOffice converts is that it defaults to OpenOffice formats. This post shows how to change LibreOffice to default with MS Office formats. (Note: For optimal compatibility, I have set my defaults to Word 97-2003 (\*.doc), Excel 97-2003 (\*.xls), and PowerPoint 97-2003 (\*.ppt). Also, I use Times New Roman and Arial fonts, primarily.)

### *Optical vs. Digital Zoom*

<https://cynmackley.com/2020/09/08/optical-vs-digital-zoom/>

Do you know the difference between optical and digital zoom? If not, check out this post from Cyn Mackley to learn about them.

### *Don't Leave Your Kindle In A Drawer For Too Long*

<https://blog.the-ebook-reader.com/2020/09/14/dont-leave-your-kindle-shut-in-a-drawer-for-too-long/>

Do you have a Kindle that you rarely use? If that is the case, you should read this post. (Note: I have an older Kindle Touch I keep as a spare. I have set a reminder in my calendar to charge it up every two weeks.)

### *What Happens When You Refresh Firefox*

<https://www.guidingtech.com/what-happens-when-you-refresh-firefox/>

Has your Firefox installation started giving you problems that seem to have no way to fix? If that is the case and you are worried about resetting back to defaults, check out this post explaining what happens when you refresh Firefox.

### *How To Enable Zoom's Virtual Backgrounds On Android*

<https://lifelhacker.com/how-to-enable-zoom-s-virtual-backgrounds-on-android-1845182981>

I have not been using my phone or tablet for Zoom meetings because I couldn't figure out how to get virtual backgrounds to work on them. After reading this post, I can use a virtual background on my android devices with version 5.3.52640.0920 of Zoom installed.

\*\*\*\*\*

This work by [Steve Costello](#) is licensed under a [Creative Commons Attribution 4.0 International License](#).

As long as you attribute this article, you can use it in part, or whole, for your newsletter, website, or blog.

---

## President's Corner

### **Tech Travels 2020**

By Greg Skalka, Under the Computer Hood User Group

September 2020 issue, Drive Light — [www.uchug.org](http://www.uchug.org) — [president \(at\) uchug.org](mailto:president@uchug.org)

I've written before about using technology in my travels over the years. Each trip I take seems to reveal new travel-related devices and services and new ways the tech things I'm already using can enhance my journey. But this is 2020, the year dominated by COVID-19. Life has had to take on a "new normal," and so has travel. While limited by the pandemic, there are still opportunities (and sometimes necessary reasons) to get away, and technology can still help, sometimes with new twists.

My aunt, who lives outside Grand Junction, Colorado, was to celebrate her 50th wedding anniversary in June, and her children wanted to host a celebration for family and friends. They moved the celebration to early July, hoping the pandemic's effects would diminish, but if anything, there was a resurgence of the virus and an increase in social and business restrictions. My mom (her sister) had a hospital stay in late May and for health, reasons had to give up any hopes of attending. As the oldest nephew or niece on the West Coast, I wanted to go to represent the family. I was looking forward to seeing my aunt and her family, cousins from Nebraska, and just getting away from the life-in-pandemic routine.

**Planning Tech.** As with everything in our modern lives, the Internet is the place to go for travel information. Online searching is the best way to get accurate and up-to-date information on health advisories where I would be traveling, any travel restrictions, what is open, what has been closed due to COVID, where to stay, how to get food, and how to travel. Google Maps gave me answers to questions about road trip options. Airline and travel site searches filled in the information on air travel options from San Diego. I began creating my typical travel Word documents, listing options, and costs, which would eventually be pared down to one travel Word doc that would be my master plan for the trip.



I originally felt I would fly, but soon found it was expensive, didn't save that much time, and carried a higher coronavirus exposure risk than driving. Flying to the small airport in Grand Junction provided few and inconvenient flight options and was too pricey. I looked at flying on Southwest to Denver, Salt Lake City, Las Vegas, and Albuquerque, and though some flights were quite low in cost, the rental car costs for the final leg to get to Grand Junction were surprisingly expensive. To have the shorter drive I would fly to Denver, but the cost to rent a car at that airport was almost three times the cost to rent a car locally and drive the entire way. Las Vegas had the best-combined air and rental costs but it seemed silly to fly there and then still be less than halfway to my destination. In the end, my wife's concern about my flying and possibly being exposed to the virus in airports and on the plane tipped the scale to driving. Note that my wife was too afraid to travel in any fashion, so I would be going alone.

**Transport Tech.** While the drive of 830 miles one way could be made in 12.5 hours per Google Maps, I felt a solo straight-through trip might be risky, and so chose to break it into two days of about 6 hours of driving each. This would mean leaving on Thursday morning, driving two days, staying for the celebration on Saturday, leaving Sunday morning, and driving two more days, with a return on Monday afternoon. I planned to stay in St. George, Utah on the way out, as that split the driving time pretty much in half. On the return trip, I stayed in Cedar City, Utah, which gave me a 5-hour drive Sunday and a 7.5-hour drive on Monday. I did this to stay in a different town on the way back (variety) and to have a shorter drive on Sunday so I could possibly attend a local church service that morning before heading back home.



Since I'd found the local car rental cost was so low (I highly recommend Costco Travel), I decided it was a better option than putting miles on one of my cars. The rental car would be newer and if something did break along the way, I could just call Budget Car Rentals to get a new one and be on the road again. I got a 2019 Hyundai Elantra (intermediate class), and since I had space to bring anything I wanted (as compared to flying), I pretty much did. I brought two digital still cameras, a digital video camera, a laptop, and a Chromebook, as well as all the chargers and adapter cables to support them. After reviewing state restrictions on the Internet, I brought my

dashcam to record my trip.

Since I was unsure about how easy it would be to get meals on the road during COVID times, I also purchased an electric cooler to take in the car. The Wagan Tech 24 Liter Personal Fridge/Warmer I bought off Amazon uses the Peltier effect to transfer heat from one side of a special semiconductor device to the other when a current is applied. It runs on 12 Vdc, but I also purchased an AC to DC converter to run it in my hotel room. Placed on the floor of the back seat on the passenger side and plugged into one of the car's two 12V power ports, it kept my drinks and snacks plenty cold.



**Car Tech.** My rental car came with 20408 miles on it and lots of high-tech features my older cars lack, including a back-up camera, in-dash information system, USB port, blind-spot detection, and lane-keep assist. The USB port and in-dash display allowed me to put my MP3 music files on a USB thumb drive, plug it into the car USB port, and play them. This was great for when I couldn't find a good radio station to listen to (which was most of the time). In addition to the USB port, the front console had two 12V power ports, so I could use one to power my cooler and one to power my smartphone (with the 12V to USB adapter I brought). I also brought a vent-mount phone holder so I could easily see my phone for navigation.

The blind-spot detection (BSD) and lane keep assist (LKA) were useful safety features. BSD uses radar sensors at the rear corners of the car to detect objects in your blind spots (behind and in the lanes to the right and left). When a vehicle is in either of those locations, an indicator in the side mirror lights up. If you have your turn signal on to change lanes when a vehicle is in the blind spot, it also sounds a warning chime. BSD also works in conjunction with the backup camera to provide a warning sound when something is behind or coming from either side when backing up, even when out of view of the camera.

The lane keep assist feature helps keep the driver from wandering unintentionally into an adjacent lane. It uses a camera in front of the rearview mirror to monitor your lane position. When your car starts going into the adjacent lane (and you don't have the turn signal on, indicating an intentional action), the car applies a steering correction to keep the car in the lane, as well as sounding a chime. I let go of the wheel on some curves and it steered the car on its own. It does sense when the driver is not providing steering inputs and chimes if you keep your hands off the wheel too long, however.

This fancy car technology did give me some concern on my second driving day. I was heading east on I-70, through a particularly scenic part of Utah, when I heard a chime. A little orange triangle with an exclamation point in it lit up on the dash and the center text display put up a message, but it was only up about 5 seconds so I missed reading all of it. It said to check something. The car was driving fine so I waited for the next exit and pulled off, but couldn't figure out how to display that message again. I turned off the car, got out, and walked around it, but saw nothing wrong. I got in and started the car, and the orange triangle was gone. After continuing down the road a while, it lit up again, and again I missed what to check. On the third time, I finally saw that it said to check the BSD system. I saw that the BSD system was now off, but since I didn't consider it mission-critical, I proceeded on. I'm not sure if it had a problem at elevation or with temperature, but with the intermittent operation it finally came back on for good on my last travel day.

**Navigation Tech.** I love Google Maps, but I don't trust it (or the GPS satellite system, for that matter), so I brought AAA state maps. I also downloaded off-line maps for all the areas I would be traveling through in Google Maps on my phone, in case I lost cell coverage.

I only had three navigation issues my entire trip, which is not too bad, considering how much I was using Google Maps. The first occurred only a few hours into my trip. I exited I-15 north of Pala in San Diego County to get some snacks out of my cooler and found Maps could not direct me back onto the freeway. Once I got on I-15, my position on the Maps display did not change though I was traveling north. I pulled off in Temecula and turned the phone off, then on. I'm not sure if it was the power cycle or perhaps I had run into a point where my phone could not see enough GPS satellites to determine its location, but that issue never happened again.

The second issue happened later that day. After leaving Las Vegas, Google Maps informed me there was a 30-minute delay ahead due to road construction; it looked to be near Mesquite, NV, which is on the border with Arizona. I resigned myself to a longer driving day than planned. As I approached Mesquite, however, Google informed me it had found an alternate route that eliminated most of the delay. I accepted the reroute, and it had me exit I-15 on the west side of town and travel through town north of the now barely crawling interstate traffic. A few other cars appeared to be routed with me. As we reached the east side of town Google directed me to get back on the now flowing interstate, but I found the on-ramp was blocked with temporary barriers. Google apparently didn't know this. I decided to continue on the road I was on, which appeared to be a frontage road, with a few cars following me. At first, Google said to turn around, but finally said proceed. After winding around through a somewhat scenic drive along the Virgin River for about 15 minutes we came to an open I-15 on-ramp. I guess I just needed to have faith.

My third nav miscue occurred in Grand Junction. I had made it there only on low-cost Costco gas, filling up in Victorville, Henderson, and St. George. With no Costco in Grand Junction, I used my Gas Buddy app to find a low price fill-up - a Walmart gas station. It was 15 minutes away, in the direction I needed to go. When I got to the location Gas Buddy had transferred to Google Maps, however, I found I was in a high school parking lot. No gas there. As I turned and headed back the way I'd come, I saw a Walmart sign in the opposite direction that it had told me to turn. Not perfect directions, but close enough, I guess.

**Lodging Tech.** I stayed in Comfort Inns in St. George and Cedar City, UT, and in Grand Junction. In all locations, I had a minor issue with their free Wi-Fi. I could use my VPN when on my laptop, but not when using my Chromebook.

In all three places, the hotel Wi-Fi was not encrypted but required a password to be entered in a browser login page to access the service. This worked fine for both of my devices; I could then access the Internet. When I then turned on my VPN (I use Private Internet Access) on my Chromebook, I lost access to the web. Turning it off restored access. With my Windows laptop, turning on the VPN did not interrupt access. Fortunately, all activities requiring security (like email) were done through my laptop; I used the Chromebook only for general browsing. I have seen this before with the Chromebook, but I don't know if it is a problem with Chromebooks, the hotel internet provider (they might want to discourage VPN use), or my VPN provider.

**Roadway Tech.** I saw lots of online order fulfillment go by in my travels. Away from city traffic, it is easy to see that our tech companies are well represented on our Interstate highways. I saw lots of long Amazon "Smile" and Walmart trailers, and a lot more of the dual-trailer trucks we only occasionally see on San Diego freeways. I also saw quite a few of the triple-trailer trucks (mostly FedEx) we don't see; these were like mini-trains traveling on the highways.



**Traveling in a COVID World.** The coronavirus added new twists to my travels. I had to make sure I brought a supply of masks along with me. While safe in my car most of the day, I did have to venture out for food, gas, some sightseeing, and rest stops, as well as lodging each night. Used to the fairly restrictive rules of San Diego, I found adherence to that standard (especially mask-wearing) diminished the further east I went.

On the road in COVID times, I found it to be much easier to find food and drink than restrooms. Since they are now much more prevalent than gas stations, I used to think first of stopping at a fast-food restaurant when relief away from home became necessary. Now, with no indoor dining, travelers must look elsewhere. I found this out within the first few hours of my trip. Since I would be gone five days, I finished up the milk, rather than have it spoil. Big mistake. By Temecula, I knew I'd need to make a restroom stop soon. By Riverside, I was getting desperate. When I saw a Jack In the Box off the freeway, I pulled off. While the dining room counter was available for ordering, dining in was not allowed, and the restrooms were blocked off from the public by stacks of chairs. Back in the car, I searched on Maps for a McDonald's - same result. I then recalled what my wife, who works for a company stocking their products in Home Depot stores, said about their restrooms. I found a Home Depot in Riverside and found the relief I needed. After that, I paid as much attention to my bladder as to my stomach.




---

## A Brief Tour of the VLC Media Player

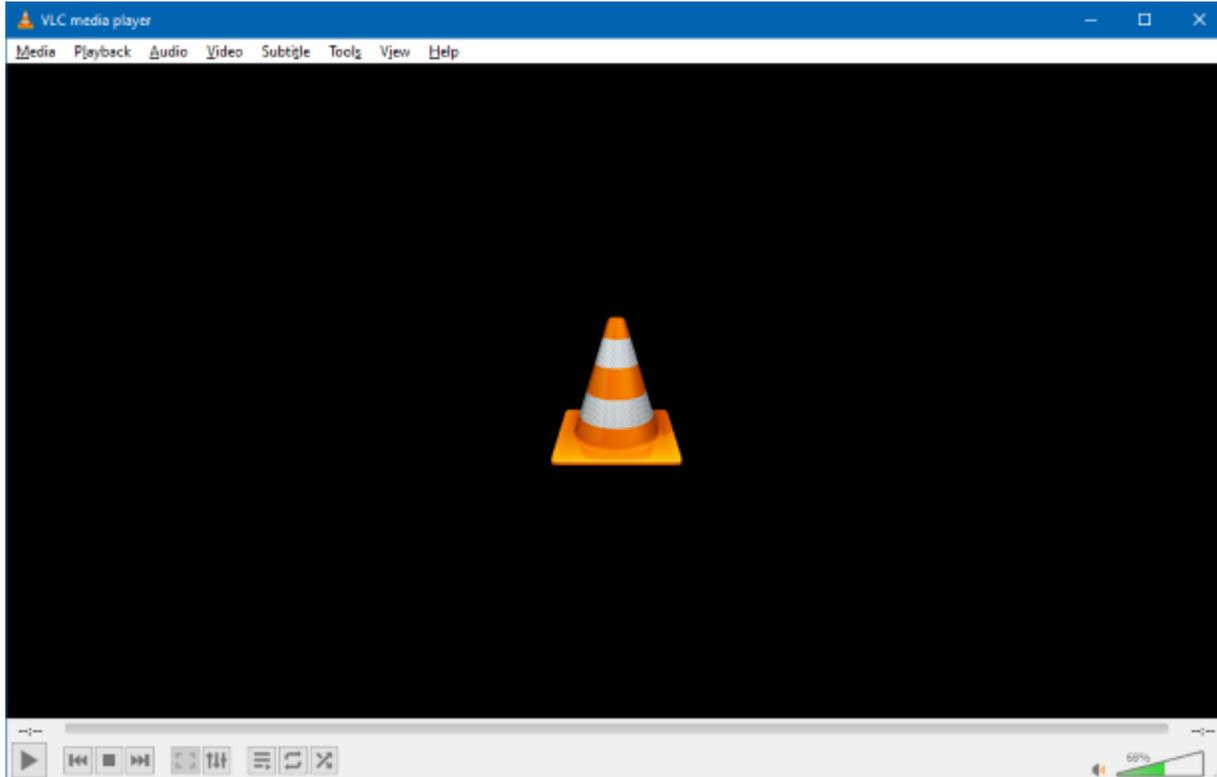
By Tom Burt, Vice-President

Sun City Summerlin Computer Club — <https://www.scscc.club> — [tomburt89134 \(at\) cox.net](mailto:tomburt89134@cox.net)

The free **VLC Media Player**, by non-profit VideoLAN Corporation, is a useful and powerful program for playing all types of audio and video files, including video DVD and Blu-ray disks. It also is able to convert audio and video files from one format to another.

The VLC Media Player has versions for Windows, Mac OS and LINUX. You can download it from: [www.videolan.org](http://www.videolan.org). The VLC installer from the VideoLAN website does not attempt to install any extra junk-ware, but always pay attention as you click through the setup dialogs. During the setup, you can choose the audio and video file types for which VLC will become the default player. Once VLC is installed, double clicking on one of its file types, such as .MP4 files, will launch VLC to "play" that file.

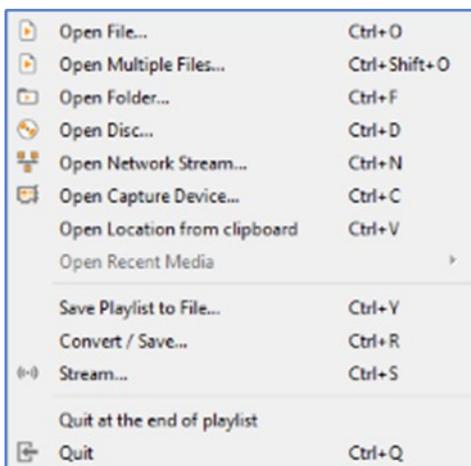
VLC can directly play Adobe Flash Videos (.FLV files) downloaded from web video sharing sites such as YouTube.com. This can be helpful if you want to build your own collection of YouTube videos and play them on your PC monitor or even stream them to your HDTV.



As you can see in the above screen shot, the VLC user interface is quite simple, featuring a menu bar at the top, the main video window and then player and volume controls at the bottom.

## Media Menu

The VLC **Media** menu is the gateway to all operations involving files. Commonly, if you have double clicked a media file, VLC will just start up and play that file.

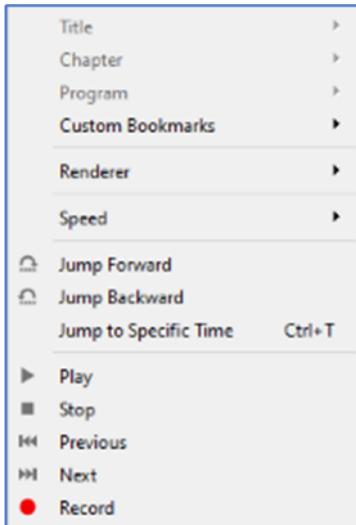


However, VLC can also play audio/video directly from a capture device, such as a camcorder or it can play audio/video from a network stream, such as an Internet radio or TV station.

The Convert / Save function allows you to convert a set of files from one type to another – for example from .WMV to .MP4 or from .AAC to .MP3. We'll look at this in more detail below.

## Playback Menu / Control

The Playback menu allows you to control the playback of the media file. Within a file you can control the playback speed (faster or slower), jump forward or backward or to a specific time.



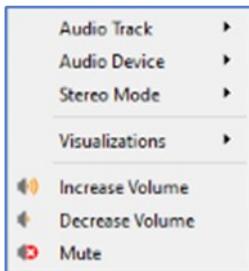
If playing multiple files or a playlist, you can skip forward or backward to the next or previous file.

You can also **record** whatever is playing. This can be handy if playing a streaming video.

The Playback control at the bottom of the VLC window offers a set of *graphical* controls to manage playback.



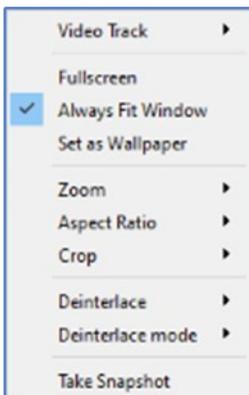
## Audio Menu



When playing an audio file, the **Audio** menu lets you control the audio playback, including turning on visualizations, stereo mode (stereo, left track, right track), what audio device to send the sound to, which track to play of a multi-track set, such as a CD.

You can also control the volume, although that is easier to do with the Windows volume control at the lower right of the screen.

## Video Menu



When playing a video file or disc, the **Video** menu lets you control the video playback. You can control which video track is played, switch to full screen and back and set the zoom factor and the aspect ratio of the video window.

You can crop the original video to only show part of the video on the screen. You can specify whether and how the original video should be deinterlaced. And you can grab a particular video frame as a single image.

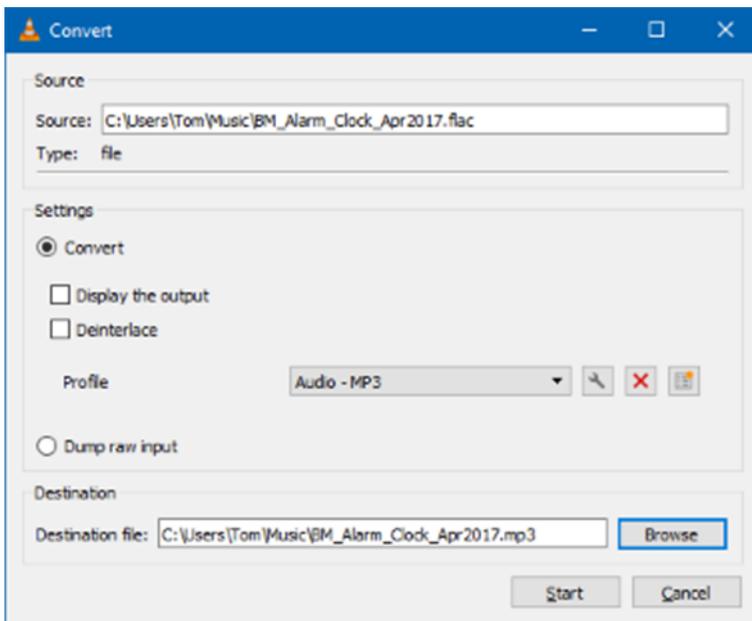
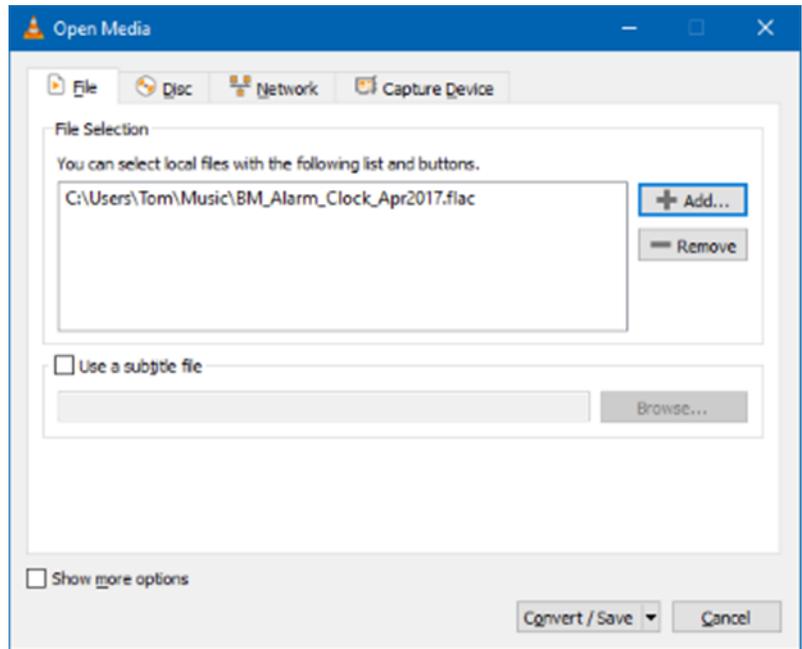
## Media File Conversion

Finally, let's explore the VLC Media Conversion tool.

On the Media menu, click "Convert / Save". The following dialog will open with an empty file list. Click the Add... button to add one or more files to the list to convert. The Convert/Save dropdown at the bottom right will become enabled. Click the down-arrow and then choose Convert.

That will open a second dialog (see below) showing the name of the source file. In the dropdown at the middle, choose the desired resultant file type.

In this example, we are converting a music file format called .FLAC to the more common .MP3 file format. However, you can convert to and from many audio and video file formats. A common format conversion is camcorder .MOV video files to .MP4 video files for posting to YouTube or Facebook.



Once everything is set up, just click the Start button in the lower right of the dialog and the file conversion(s) will proceed.

The time required by VLC to perform a conversion will depend on the size and complexity of the file. Audio files are usually done in a few tens of seconds. Videos may take quite a bit longer.

So, that's a quick look at some of the features of VLC. I've only covered the basics. There are many more features in this very powerful program.

Give it a try yourself.



## Thank Ben Franklin – For the Library, that is

By Phil Sorrentino, Contributing Writer, Sun City Summerlin Computer Club  
www.sccccomputerclub.org  
philsorr (at) yahoo.com

Ben Franklin is remembered for many things political and technical. I'll leave the politics to the history buffs, but on the technical side, he invented the Lightning rod, bifocal glasses, the Franklin Stove for home heating, and the odometer. And most important to us lately, he laid the groundwork for the public library system.

Libraries have changed a lot since Franklin's time, but the idea of a source of information or entertainment to be loaned out for free, to members, has endured for almost 300 years. Initially, books were probably the only things being loaned out, but nowadays the library loans out eBooks and audible books, as well as movie DVDs, music CDs, and TV shows, and the always popular classically bound books, many of which are mercifully in Large Print. Although initially and up to just a few years ago, a person had to visit the library to borrow an item, today we have computers, tablets, and phones that allow us to borrow an item without ever having to show up at the library. (However, you probably have to go once just to join the library and get a library card, though that, recently, may have even migrated to online activity.)



OverDrive Icon



Libby Icon

Today, most public libraries subscribe to a service called OverDrive to catalog and manage their electronic offerings. When you borrow an electronic item, you download a license file to your computer. The license file is an .acsm file type, for those of you interested in the details. So, borrowing an electronic item entails downloading the item's license file to your device and then using the appropriate reader/viewer/player to read/view or play the electronic item. And don't worry about returning the item because after the borrowing period ends, the item will automatically be returned to the library (No Late Fees, pretty neat, don't you think).

You can even return the item early if you finish it before the borrowing period ends; just look for a button to "Return" the book. Fortunately, all of the steps required to borrow and return an item are done for you by an app that you initially download to your device. Once it is downloaded, you then use it to borrow the electronic items. When you first use the app to connect you to your local Library system, you will establish an account with an account name (usually your library card number) and a password or PIN. This is now the account you will use to borrow electronic items. Two of these apps are Overdrive and Libby, both of which are used to borrow eBooks and audible books. Overdrive has been around for a while and allows you to borrow eBooks and audible books so you can then read them with a reader like the Kindle reader. Libby is newer. Not surprisingly, Libby is made by the same company that makes OverDrive - the OverDrive Company. Libby not only helps you borrow the item, but it provides a reading environment, so you can borrow and read eBooks or listen to audible books, all within Libby. (So, you don't need the Kindle reader if you use Libby.)

eBooks and Audible books are typically shown in a library-like view, and you will have an opportunity to borrow any available item, i.e. the book's license has not checked out. If you find a book that you are interested in, typically you can borrow the book just by clicking on "borrow." The book (license file) will be downloaded to your device and you will be able to read or play it with an appropriate reader or player, for the amount of time specified by your library. Just like physical books, these electronic books can only be borrowed by one person at a time. If an item is checked out by someone else, the item will show up as not available and you will see an option to place a

hold on the item. Once you place a hold on an item, it will be added to the “hold” section of your account. When it becomes available, you will typically get a “book available” notification email. Just as an example, an eBook borrowed from the Hillsborough County library, using Overdrive can be kept for 14 days.

Many of us may remember Hoopla, Fran & Ollie, or was that Kookla, Fran & Ollie. (Well, that probably gives away the fact that I grew up in the 1950s near New York City.) But the important point here is that Hoopla is a new free Streaming service being offered by many library systems, in particular the Hillsborough County Public Library Cooperative. (HCPLC). Many of us are probably familiar with borrowing eBooks and audible books from the library using Overdrive or Libby on our mobile devices (phones and tablets), but Hoopla goes a step beyond and provides free streaming of much of the library’s video inventory. Hoopla is a cloud-based digital media platform that enables users to instantly borrow entertainment and educational material using the Hoopla app on a tablet or smartphone. Think of Hoopla as pay-per-view or video streaming, where your public library is picking up the cost.

Hoopla is a website (Server) and app (Client for mobile devices) that allows you to borrow movies, TV (shows & episodes), and Music selections. The website is [hoopladigital.com](http://hoopladigital.com) and the App looks like this:



All streaming services are vying for your time and most are also after your money, but Hoopla is free. Hoopla is more like a library than a “blockbuster” store (for those of you who can remember that far back). All you need is a library card and you can get an account. Once you have an account, you can borrow movies, TV shows, music CDs, eBooks, audible books, and comics (cartoons). When you borrow these items, like borrowing items from any library there are some restrictions. Libraries have different limits, so check with your particular library system. Libraries may limit the number of items borrowed per month, or the amount of time you may have access to the item. HCPLC allows you to borrow 20 movies per month. When you borrow a movie, you can have it for up to 3 days. CDs borrowed via Hoopla are good for 7 days and audiobooks are good for 21 days. A quick look at HCPLC revealed over 12 thousand movie titles, over 2 thousand TV show episodes, over 45 thousand CD titles, over 180 thousand eBooks, over 51 thousand audible book titles, and over 10 thousand comics (cartoons) listed. With that much free streaming from the library, you may not need all those costly streaming subscriptions, though I doubt if Hoopla will replace any of the popular streaming sites like Netflix or Amazon. It is probably just a free adjunct, but if funds are tight it may just be a good free alternative.

---

## Wi-Fi 6 – What happened to b, g, n, ac?

By Phil Sorrentino, Contributing Writer, Sun City Center Computer Club  
[www.sccccomputerclub.org](http://www.sccccomputerclub.org)  
[philsorr \(at\) yahoo.com](mailto:philsorr@yahoo.com)



Ever since Wi-Fi appeared way back around 2005, the Wi-Fi version has been described by a letter because of the letter reference used in the 802.11 Local Area Network standard. Initially, there were 802.11a and 802.11b. Most of us became familiar with the “b” version because this version used the 2.4 GHz frequency band which had better coverage than the “a” version that used the 5 GHz frequency band. (Today many Wi-Fi routers provide networks at both 2.4 and 5 GHz.) So, until recently the version of the standard has been used as the version for the Wi-Fi router product. When there was only a and b, that was easy enough, but as time went on, faster and more capable standards were developed and each had a new designation, and now the standards are using multiple letters for the designation like ac, and ax (the latest).

To simplify the designation for products, the Wi-Fi Alliance (the group responsible for certifying Wi-Fi products) decided to use numbers to designate the version. The newest standard 802.11ax is to be known as Wi-Fi 6. Earlier versions will be called Wi-Fi 5 (previously ac) and Wi-Fi 4 (previously n), but you will probably never see those designations in practice. This may initially cause some confusion but eventually, it should be a simpler way of determining Wi-Fi product capabilities. Eventually, we'll all know exactly what the 6 in Wi-Fi 6 indicates; well, at least as well as we know what the "n" indicates in the n version of Wi-Fi.

Unlike many of the earlier Wi-Fi updates, Wi-Fi 6 is not just an increase in speed, it also provides the groundwork for future improvements that will ensure that Wi-Fi speeds continue to increase in the future. Wi-Fi 6 is just starting to arrive this year. There is a good possibility that it will be in your next smartphone or laptop. At some time in 2021, new Wi-Fi 6 routers will start to include 6E which will be the use of a new 6 GHz frequency band (I guess the E indicates an extension into the 6 GHz band).



So, what is Wi-Fi 6? Wi-Fi 6 is just the next generation of the Local Area Network standard that will do the same thing past Wi-Fi standards have done - it will connect your many devices to the internet, but it will do that at faster speeds, and it will introduce new, faster and more efficient technologies into the router. Wi-Fi provides the critical link between our Client Apps and the internet Servers (remember Client-Server Technology?). Much of the improvements with Wi-Fi 6 are aimed at handling the demands of the Internet of Things (IoT). (In fact, very small networks might not even notice much of an improvement. A single Wi-Fi 6 device connected to a Wi-Fi 6 router may only be slightly faster than a single Wi-Fi 5 device connected to a Wi-Fi 5 router.) Another benefit of Wi-Fi 6 will be the fact that all Wi-Fi 6 certified devices will include WPA3, a new, stronger, Security Protocol that improves on WPA2 making it harder for hackers to infiltrate a network.

Many of our homes now have many devices that need to be connected to the internet. Think about it, there are smart bulbs, smart plugs, smart assistants (Alexa comes to mind), indoor and outdoor cameras (Ring doorbell camera comes to mind), door or garage locks, smart thermostats, door or garage door magnetic sensors, as well as laptops, desktops, smartphones, streaming devices (Amazon fire stick comes to mind), and tablets. The last time I had to change the password on my router, I had to change it in 23 devices before I was finished, though the number for an average house today is about nine. (I have seen predictions that the average home in the future may have up to 50 devices.)

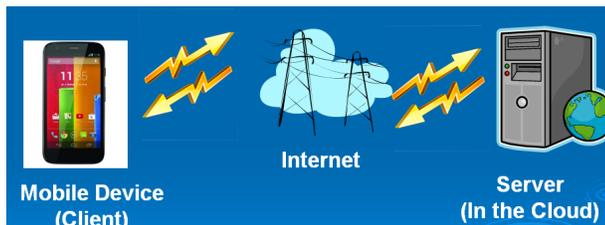
Wi-Fi 6 introduces some new technologies to help mitigate the issues that come from putting tens of Wi-Fi devices on a single network router. Wi-Fi 6 has been designed to handle many devices efficiently, by splitting up the available bandwidth so that many devices can be serviced simultaneously. Without getting into any technical detail, Wi-Fi 6 will let routers communicate with more devices at one time, let routers send data to multiple devices in the same broadcast, and let devices schedule check-ins with the router, all features that will allow more devices to be serviced. Where current routers might start to get overwhelmed by requests from a multitude of devices, Wi-Fi 6 routers will keep all those devices up to date with the data they need.

Without the improvements that Wi-Fi 6 will bring, the performance of your future network would slow down as you increased the number of devices on a given network. You may even want to use the fact that things may slow down with your old router to your benefit and wait till you notice your internet connection "seems to be a little slow" before you take the plunge into Wi-Fi 6.

To get Wi-Fi 6, you'll need to purchase a new Wi-Fi 6 router. Without a Wi-Fi 6 router, all the devices that may be Wi-Fi 6 compliant will not have any advantage. To take full advantage of Wi-Fi 6, all the devices connected to your Wi-Fi 6 router will have to be Wi-Fi 6 compliant. So, the improvements we get from having Wi-Fi 6 will probably only slowly be incorporated into our internet experience, but it eventually will be worthwhile. New devices will slowly appear with Wi-Fi 6 incorporated, but it will probably take a few years to get to the point where your whole network is compliant with the Wi-Fi 6 standard (and by that time we'll probably be talking about Wi-Fi 7).

Just a brief review of the new technologies. Two technologies are helping speed up Wi-Fi 6. One is “Multi-user, Multiple-input, Multiple-output” (MU-MIMO), which is already in use in some high-end routers and devices, which allows the router to communicate with multiple devices at the same time, rather than broadcasting to one device, and then the next, and then the next, etc. Current high-end MU-MIMO routers can communicate with four devices at a time, Wi-Fi 6 will increase this to 8. (You have probably seen routers that incorporate MIMO because it involves multiple antennas, which let the router talk to multiple devices at one time.)

The second technology is “Orthogonal Frequency Division Multiple Access” (OFDMA) which allows one transmission to deliver data to multiple devices at once. Both of these technologies are used to get more out of each transmission from your router to your devices. Most of the details of these technologies will probably never become too apparent to most of us, but we all will benefit from them in that we will be able to attach more and more devices to our router, without slowing it down, so we can enjoy the benefit of all the features provided by all of those wonderful internet servers.




---

## Casting, not in the theatrical sense – Cast your data to the screen

By Phil Sorrentino, Newsletter Contributor, Sarasota Technology Users Group  
 March 2021 issue, STUG Monitor — [www.thestug.org](http://www.thestug.org) — [philsorr \(at\) yahoo.com](mailto:philsorr@yahoo.com)

Most modern computers have HDMI outputs so it is easy to display your computer screen on a big-screen TV, but what about displaying your smartphone screen on that same big screen? Most phones do not have HDMI or more specifically micro-HDMI connectors. (Though I have seen some tablets with micro-HDMI connectors, in fact, I even had one that I used for teaching a smartphone/tablet class.) So, you have to find another way to get the smartphone screen displayed on the larger TV screen. Fortunately, Google has provided a solution with its Chromecast hardware device and Casting software that is becoming part of many Apps. (If your App supports Chromecast, you will see the Chromecast icon somewhere on the App’s opening screen). The Chromecast device gets plugged into an HDMI input port on the big screen TV, and power is provided to the device by a micro-USB connection. A Chromecast device and an App that supports casting can turn a dumb TV into a pretty smart TV, at least for those Apps that support casting.



Chromecast Device



Chromecast Icon

Besides the Chromecast device, the only other thing you need is Wi-Fi. Wi-Fi is the mechanism used to transfer the smartphone screen information to the Chromecast device which in turn provides the HDMI interface to the big screen TV. So, to make it work, both the smartphone and the Chromecast device have to be on the same Wi-Fi network. Many current Wi-Fi routers provide many networks. Usually, the main network is in the 2.4 GHz frequency band and there may be another network in the 5 GHz band. The 5 GHz network sometimes includes 5G in the network name which can possibly be confused with the 5G wide area network provided by companies like Verizon and AT&T. (Future Wi-Fi routers can even take advantage of a new 6 MHz band.) Also, some routers may provide a guest network in the 2.4 GHz or 5 GHz band. The trick here is to make sure that when you set up the Chromecast device you choose the

same network that your smartphone is using. You can see what network your smartphone is using by going into Settings on the smartphone and selecting “Network & internet” or “Wireless”, or something like that, where the network name will be shown. This is usually early in the list of settings. (When you select this screen, you will also see the other networks that are available but are not currently being used by your smartphone.)

Once you know the Wi-Fi network you will be using you can set up the Chromecast device. This will be done using your smartphone and usually the Google Home App.



### Google Home App Icon

You can download the Google Home App from the Google Play Store or the Apple App Store. Apps are updated regularly and screens may change so specific directions for this setup may be different by the time you need them but when you do need directions, Google something like “How to set up a Chromecast device using the Google Home app”. The results will probably be several tutorials or even better a few videos with up-to-date instructions. (The Google Home App provides control for many devices besides the Chromecast. Home automation lights, cameras, and switches are also set up using this App. Additionally, this App also provides control for Google’s “Google Home” assistant.) Once you have set up the Chromecast device you can cast your smartphone screen to your big screen TV. (And to see what else you can do with the Home App, just find the “Discover” icon which looks like two sheets of paper. This is really an advertisement for all the wonderful things Google can do for you once you have their products.) As well as Google Home their other Apps that can be used to set up the Chromecast device and that support Casting, such as LoCast for Chromecast, iMediashare, Cast to TV, Mirroring360 Sender, and Plex but I have not tried any of these.

With the Chromecast device setup, all we need to do is find Apps that can Cast. Some of the more popular Apps are YouTube, YouTube Music, Google Photos, Disney+, Prime Video, Hulu, Media Monkey, Movies Anywhere, Netflix, Crackle, Pluto TV, Tubi, Hoopla, and HBO Max. There are even a lot of Apps that appear to be cable channels like A&E, History, AMC, MTV, and TNT. Many more Apps may have this ability in the future. You may already have some of these apps on your smartphone like YouTube, but the other Apps are available at the Google Play Store or the Apple App Store. Once you’ve downloaded the App of interest, look for the Cast icon somewhere on the opening screen.



### Hoopla App

Hoopla is an App that supports casting. This means that you can now take advantage of all the video media at your local library; videos, TV shows, and feature-length movies. You can use your phone to access the media and then cast the media to your Chromecast device plugged into any TV that has an HDMI input. Using Wi-Fi to cast the media means you are also using Wi-Fi to access the media from the library, so there is no cost associated with the whole process. You can think of that as free movies for the whole family, at least if the big screen TV is big enough to satisfy the whole family. All you have to do is supply the popcorn. By the way, as was discussed in a previous article in September, Hoopla can also bring you E-books to read, audiobooks to listen to, and even music to listen to. What a bargain. If you haven’t gotten the Hoopla App yet, go to the Google Play Store, or the Apple App Store and download it and start taking advantage of this very useful, and did I mention, free App.

---