

# MC<sup>3</sup> Newsletter

February 2019

VOLUME 36 NUMBER 2

The February meeting of the McHenry County Computer Club is **February 9, 2019 at Salvation Army Building 290 W. Crystal Lake Ave., in Crystal Lake, IL.**

**NOTE:** *Enter the building on the parking lot level under the awning.*

## Meeting Agenda

- Introductions & Reports
- Q & A
- Using PassMark by Al Edlund

## Upcoming Demos - Subject to Change

March 2019 - Flash Drive Linux Install

## APCUG Virtual Technology Conference

The first Conference of 2019 will be held on February 9th.

You can register at [Eventbrite](#) for your login. The conference takes place on Zoom, which you will need to download to attend.

Here are the topics:

TRACK 1 — 12:00 PM CST

3 mini-presentations

Microsoft Security Center Windows 10

New Privacy Updates Windows 10

Password Managers for all devices

Jere Minich, Program Chair, Lake Sumter Computer Society

Jere is a member of APCUG's Speakers Bureau and, in addition to giving one-topic presentations, he also gives two or three mini-presentations that the requesting group chooses from a list he sends them. These are three of the mini-presentations he has given.

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Our membership is \$26.00 a year.

**NOTE:** This fee offsets the running of the club; membership benefits include help with computer problems. Please pay Lyle Giese, our treasurer, or the designated Board Member in his absence.

## **MC<sup>3</sup> OFFICIALS**

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John Katkus

### **Webmaster:**

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### **Board Members:**

Jack Luff, Al Edlund,

Ken Schuring

## TRACK 1 — 1:00 PM CST

### **Staying Connected While You Travel**

Ron Brown, Program Chair, Program Coordinator, Silvercom Computer & Technology Club

Ron and his wife, Gail, have two daughters, one lives in Adelaide, Australia and the other in Beijing, China. Their home is in Vancouver Island in Canada but they spend four months in Mesa, AZ then travel to Australia and China by cruise ship. Needless to say, Ron needs to stay connected and with their rigorous travel schedule it can be challenging.

He put this presentation together in October 2018 while on the MS Noordam from Vancouver, Canada to Sydney, Australia. The presentation looks at the options you have and specific challenges for staying connected with air-land-sea travel. Whether you purchase a local Sim Card at your travel destination or use your carrier's International plan can save you a lot of money. Planning ahead to stay connected is important and explained in this presentation.

## TRACK 2 — 12:00 PM CST

### **Genealogy**

Jeri Steele, President, BGAMUG Computer Club

The major commercial genealogy sites all have census records. Where else can you find information about your ancestors? This will be a talk about locating and using genealogical sources besides the Census. Included will be free access to archives, military records, school records, and published books all accessible on the Internet for free.

## TRACK 2 — 1:00 PM CST

### **The Future of Windows**

Michael Shalkey

Michael will discuss how Microsoft makes money because that's a good indication of what it's going to do. He will also go over the history of how we got to where we are today. A platform like Windows is only as good as the programs that run on it and if no programs will run on it, it's useless and Microsoft seems to care more about old programs and hardware than Apple does. As a developer, you don't develop for an OS anymore but for a browser. Moving to Chrome will work. The bottom line is what do we need to do to get ready for upcoming changes.

2:00 PM CST

### **ROUNDTABLE DISCUSSION**

Let's talk. We'll use Zoom and be able to see each other. Problems? How can APCUG help? We're all looking for new ideas for our groups. Share your successes, program ideas, etc. with other groups.

## Cell Phone Photography

**By Dick Maybach, Member, Brookdale Computer User Group, NJ**

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Most cell-phone camera photos have little lasting value, making their quality unimportant. However, these cameras are rapidly improving, and more people are using them on vacations and at important events. It now becomes important to take the care to make their pictures worth showing, meaning you must now better understand your camera and its software. The quality of your photos depends more on your photographic skills than on your camera. Good photographers take good pictures regardless of their equipment, and those with limited ability take poor ones regardless of how much money they spend or the tonnage of gear they carry. Dedicated cameras can take better pictures, but they are usually kept safe at home, while our cell phones are almost always with us.

The first step is to recognize the limitations of cell phone cameras.

Their shapes make them difficult to hold steady, especially while making adjustments.

They have tiny sensors, making low-light photography difficult at best.

They reside in pockets and purses, and their exposed lenses quickly become dirty.

Their lenses are simple with fixed apertures and focal lengths.

Taking good pictures requires learning to compensate for these limitations.

Cell phones' small display screens hide many sins. Develop the habit of transferring every image to a PC, whose large, high-resolution monitor allows you to see what you've captured, warts and all. Moving pictures to a PC also makes them available to image processing software and frees the limited storage space in your phone. Simple changes, such as cropping, exposure correction, and noise reduction, can make large differences.

You hold a conventional camera against your face with both hands. The viewfinder has optics that make the image appear to be about a meter from your eye, and there is an adjustment to compensate for aging vision. Compare this to a cell phone that you hold at arm's length where its screen is often in direct sunlight. Clearly, the latter is subject to a lot more twitching, and using a selfie-stick makes this worse, creating blurry photos, especially in dim light. To minimize this hold your phone with both hands and release the shutter with a dedicated button (often one that controls the volume) rather than jabbing at the screen. Bend your arms so that your elbows are pressed against your waist or are resting on a table if you are sitting. In dim light, rest the phone against a solid object if possible. If your near vision is limited, hold the camera at arm's length to make adjustments, but pull it closer to take the picture.

Tap the screen on the point where you want the camera to set its focus and exposure, otherwise it will make a choice. The result could be a sharply focused, well exposed shrub in the foreground and an overexposed blur in the background barely recognizable as the Leaning Tower of Pisa. If your subject is moving, set the camera to take a sequence of pictures; you'll throw most of them away, but you may capture the moment you want. Also consider a sequence when photographing a group; you'll have a better chance to catch everybody's eyes open. Always squeeze the shutter button rather than jab at it; the latter jerks the camera. Taking a photo sequence means the timing is not important, so even here you can be gentle with the shutter.

The best compensation for a small sensor is to have plenty of light when you take the picture. You can sometimes achieve this by moving so the light source is behind you; certainly try to avoid backlit subjects. Another approach is to limit the exposure sensitivity, which the camera sets by adjusting its ISO, although not all photo apps and phones allow this. For my phone, ISO values above a few hundred produce very noisy images, which even capable photo processing software can't correct. Once you limit the ISO, you will find you have long exposure times, which means you now must



place the camera on a solid support to reduce the shake. You probably also want to delay the exposure, so that it takes place a few seconds after you press the button, giving you time to ensure the camera is steady. Again, not all camera apps have this feature.

Carry a clean, soft cloth or a packet of lens cleaning paper and use it often to clean the lens. Also, keep in mind that the lens is right at the surface of the case and has no shade. You may have to use your hand to keep sunlight from striking it directly. Let's see now, you are holding the phone with one hand, operating the controls with another, and shading the lens with a third, while all the time trying to hold it steady. A shutter delay may help, but some thinking may be better. Perhaps you can stand in the shade or ask someone to cast a shadow on your camera.

The simple lens is always set for wide-angle pictures; it achieves a telephoto effect by throwing away the outer portions of the image. As a result, you should avoid using the camera's zoom feature, instead move closer to your subject. If you can't, then take the picture at wide angle and throw away the unwanted portion of the image with processing software after you move it to your PC. This gives you more flexibility on what you choose to include in the finished photo. Figure 1 shows a picture taken in normal (wide-angle) mode.



Figure 1. Image in Wide-angle Mode.

Figure 2 shows the same image taken using the zoom feature. The camera throws away the portion of shown in red; however it processes the image so that it has the same number of pixels before it stores the file. If you enlarge two images of the same scene, one wide-angle and one zoomed (you'll of course have to magnify the wide-angle one more), you will see that both have about the same

resolution, meaning the added pixels in the zoomed image have not improved its quality. Now do the same experiment, but instead of zooming, move closer to your subject, and you'll find that the latter image does have more detail.



Figure 2. A Zoomed Image.

Finally, be aware that unlike a dedicated camera, a cell phone camera has a fixed aperture; it controls exposure only by adjusting the ISO and exposure time. As a result, you have little control of the depth-of-field. However, because a cell-phone camera has a small sensor, its depth-of-field is large, making it a concern only when you are very close to your subject.

Most photo apps have features you can use to improve your pictures. Figure 3 shows the default display for Moto Camera, the photo app supplied with my Motorola phone. Note the rule-of-thirds guide lines, which help to compose your photo. A common technique is to locate the main subject at one of the intersections. Some apps give you a choice of several such composing aids. Note also the yellow icon around the subject, which appears because I tapped the screen there to create a focus and exposure point. This app also allows you to adjust the exposure by moving the white spot around the icon circle. The other visible controls are (on the left) set manual or automatic mode, set the delay, control the flash, take a high-dynamic-range photo, and (on the right) select movie, still, or panoramic mode, and switch between the front and back cameras. The large white button on the right is the on-screen shutter release.



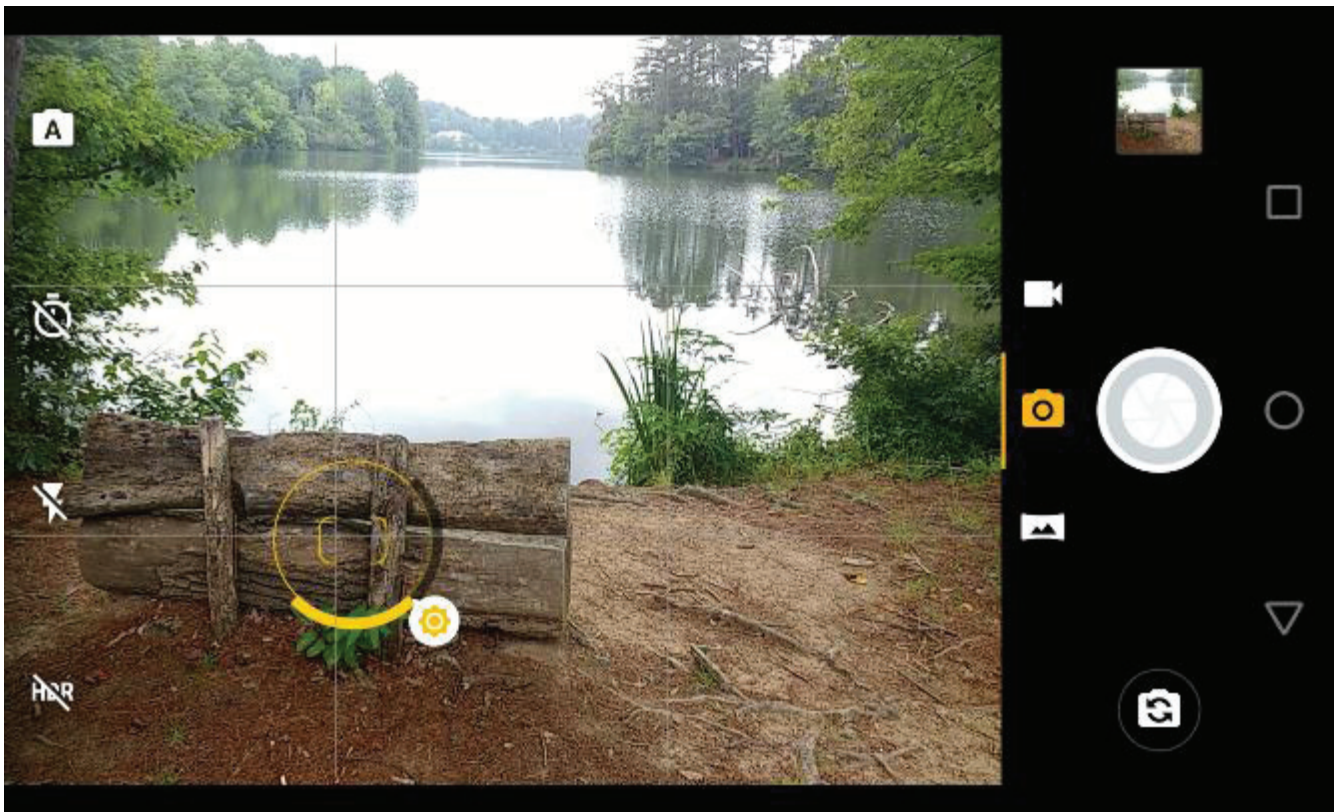


Figure 3. Moto Camera Display.

Surprisingly, I found the photo app supplied with my phone (available from the Play Store as Moto Camera) to be the one I use most often. It allows for adjusting the focus, white balance, shutter speed, ISO, and exposure, includes an exposure delay, high-dynamic-range (HDR), panoramas, and can disable the flash. It doesn't allow photo sequences, and I use Open Camera for this feature.

Figure 4 shows the manual mode of Moto Camera, which allows considerable flexibility. The controls are, from left to right: focus, white balance, shutter speed, ISO, and exposure compensation. You move the white circles to make adjustments. Except for exposure compensation, a white dot at the bottom of its arc means that adjustment is automatic.

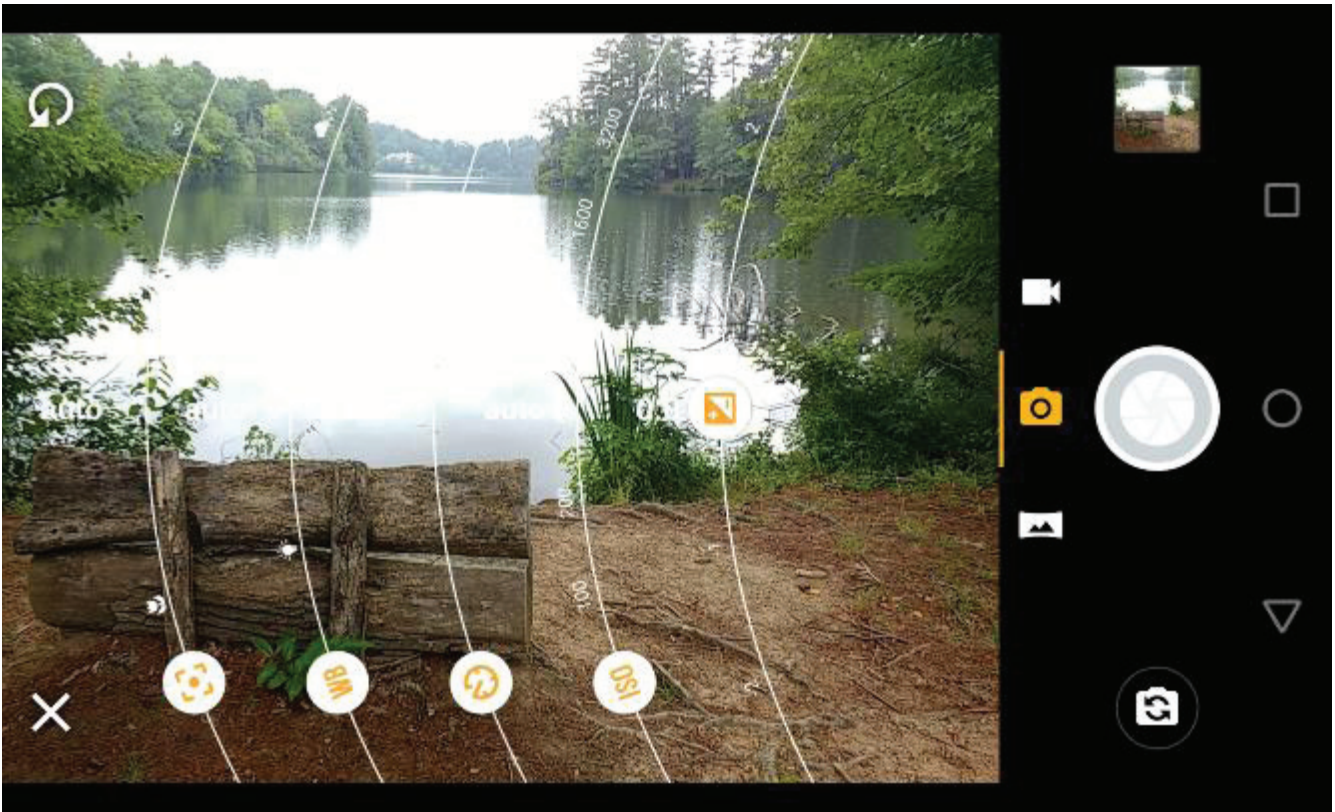


Figure 4. Moto Camera in Manual Mode.

Many apps offer high dynamic range (HDR) where they take several photos at different exposures and combine them with the goal of showing details in both the very bright and the very dim areas. In my experience, it is very difficult to obtain acceptable HDR results, even with a professional camera and high-quality photo processing software. The results with a phone camera and its app software are often disappointing, but you have nothing to lose by trying. The technique won't work on moving subjects; even leaves moving in the background will cause problems. Some apps, for example Open Camera (available from the Play Store), have a dynamic range optimization (DRO), which processes the shadow and highlight areas differently in a single image. This works for moving subjects and I've found the improvement often approaches that using HDR. Open Camera will also save the individual images it combines into an HDR one, which enables you to use your PC processing software and perhaps get better results than with the app's software.

The capabilities of a photo app depend on the version of Android under which it runs and on what features the vendor has enabled. To get everything you need, you will have to experiment and probably install more than one photo app.

We can summarize this discussion as follows.

- Hold the camera firmly with both hands and use a dedicated button to release the shutter and squeeze rather than jab at it.
- Brace your elbows and in low light rest the camera on a firm support. Consider using a shutter delay to reduce camera jiggle.
- Minimize using the zoom feature but take your pictures at wide angle.
- Always select the focus point.
- Keep your lens clean, and shade it from direct sunlight.
- Look at your images on a large, high-resolution monitor.
- Experiment with camera apps to find those that best suit you and your phone.

With a little care and practice you can take surprisingly high-quality photos with your cell-phone camera, often approaching those from dedicated cameras and far surpassing those from cameras of just a few years ago.

## **Interesting Internet Finds for January By Steve Costello, SEFCUG**

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

The following are some more items I found interesting during December 2018

### **The Real-World Guide to Using Google Drive**

<https://infolific.com/technology/software-worth-using/complete-guide-to-google-drive/>

If you have a Chromebook you will be working more with Google Drive, so check out this post.

### **How Does Bluetooth Work, and Why Is It So Terrible?**

<https://www.maketecheasier.com/how-does-bluetooth-work/>

Bluetooth is everywhere. Ever wonder how it works, or why it is so bad sometimes? This post answers both of those.

### **Is Your Charging Cable Killing Your Phone?**

[https://askbobbrankin.com/is\\_your\\_charging\\_cable\\_killing\\_your\\_phone.html](https://askbobbrankin.com/is_your_charging_cable_killing_your_phone.html)

Until USB-C becomes standard there is a lot to be aware of in this post.

### **4K HDMI Cables: How To Cut Through The Marketing Lingo And Figure Out What You Actually Need**

<https://www.techhive.com/article/3330376/gaming-gear/do-i-need-a-4k-hdmi-cable.html>

Get a new 4K TV over the holidays? If so, check out this post before getting new HDMI cables.

### **What Is Wi-Fi 6 and Do You Need a New Router?**

<https://www.makeuseof.com/tag/what-is-wifi-6/>

Have you heard about Wi-Fi 6 but want to know more? If your answer is yes this MakeUseOf post explains a lot.

### **Turning Your Mouse into a Laser Pointer**

<https://www.howtogeek.com/398980/turn-your-mouse-into-a-laser-pointer-in-powerpoint/>

I wish I had known about this the last time I forgot my laser pointer. If you do PowerPoint presenta-



tions, keep this information handy, in case you forget yours.

### **Simple Questions: What Is OLED? What Does OLED Mean?**

<https://www.digitalcitizen.life/what-is-oled-what-does-it-mean>

Do you know what OLED is? If not read this post from Digital Citizen. It explains what OLED is, as well as its advantages and disadvantages.