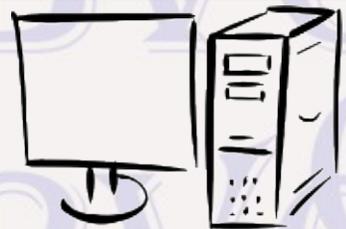


# Bits & Bytes

Arkansas' Premier Computer Club



## July 2020

**Bella Vista Computer Club - John Ruehle Center**

Highlands Crossing Center, 1801 Forest Hills Blvd Suite 208 (lower level), Bella Vista, AR 72715

Website: <http://BVComputerClub.org>

Email: [editor@bvcomputerclub.org](mailto:editor@bvcomputerclub.org)

### COVID-19 VIRUS ADJUSTMENTS

During normal times all meetings are on the lower level of the Highlands Crossing Center in Bella Vista. For the month of June we will continue to suspend in-person meetings and classes and conduct on-line meetings using Zoom over the Internet.

To attend a Zoom meeting or class, you need Internet access and a device with the Zoom application installed.

### MEETINGS

**(Online) Board Meeting:** July 13, 6pm, using Zoom

**(Online) General Meeting:** July 13, 7pm, "A Look At Google Docs" Zoom meeting access information will be emailed to membership the week before. Visitors or Guests may contact our Membership Chair for Zoom meeting details at [membership@bvcomputerclub.org](mailto:membership@bvcomputerclub.org)

**Genealogy SIG:** **CANCELED** for June. (3<sup>rd</sup> Saturday).

### HELP CLINICS

No July Help Clinics at John Ruehle center

Members may request Remote Help on our website at <https://bvcomputerclub.org> at menu path Member Benefits ► Remote Help .

### MEMBERSHIP

Single membership is \$25; \$10 for each additional family member in the same household. Join by mailing an application (from the web site) with check, or complete an application and pay at any meeting.

It is now also possible to Join or Renew membership on line on our website at <https://bvcomputerclub.org> at menu path Get Involved ► Join/Renew . Payment may be by Credit Card, or, if you have a PayPal account, by whatever means you have defined on PayPal.

### CLASSES

(none scheduled for July yet)

Advance sign up required for each listed class: Contact Grace: email to [edu@bvcomputerclub.org](mailto:edu@bvcomputerclub.org), text 469-733-8395, call 479-270-1643, or sign up at the General Meeting. Classes are **free to Computer Club members**. Class access information will be emailed to those signed up for the class the day before class.

**Check the monthly calendar and announcements for any last minute schedule changes at <http://bvcomputerclub.org> .**

## DIGITAL FOOTPRINTS AFTER DEATH

By Joel Ewing, President, Bella Vista Computer Club  
July 2020, Bits & Bytes  
president (at) bvcomputerclub.org  
<https://bvcomputerclub.org>



We have occasionally discussed in our meetings or classes various theoretical aspects of assuring that those dealing with your estate can access your digital legacy, but I am now forced to deal with the issue at a more personal level following the death of my sister "Cate" in Oklahoma last month (June). As her sole surviving sibling and most immediate relative, dealing with her final affairs has fallen upon me. Her physical files are too large to just move *en masse* and this year is not a good time for frequent travel or extended stays away from home; so I am trying to do as much as possible remotely by making selective digital copies of records judged most significant, taking physical possession of her computer and mobile devices, and where possible, on-line access to her accounts.

My sister was a highly intelligent individual (two careers with two doctorates). She used technology, but she was not a techie and had little interest in learning technical details of computers. She did not use a password manager, but kept a little address book with her that included digital account passwords, sometimes using unclear notations. She had on-line access to a few but not all of her financial accounts – understandable considering that her Internet access at home was pretty marginal in speed and reliability (but cheap). I fortunately had time to discuss some of her account details with her during her final weeks, or things could have been much more difficult.

**Absolutely essential** information to provide to those that follow:

- password to login to your computer (better be an administrative account); '
- user names and passwords for all your active email accounts
- PIN values to access your iPhone and iPad
- Master password for a password manager database or physical location of login information

If you have the above and can establish your access to those items, then you at least have the possibility of discovering other accounts and re-establishing access when you inevitably discover accounts you didn't know existed or accounts whose documented login credentials don't seem to function. Trying to re-gain access to an account invariably requires multi-factor authentication with either emails to the email address of record or text messages to the mobile phone number of record. Some sites allow specifying a land-line for messages via voice robo call, but those are rare.

Something should be said here about account security questions. Accessing an account from a different computer or a different browser or if it hasn't been accessed for a long time may require answering security questions, even if the correct login and password are known. I know some who advocate using bogus responses to security questions to make things even more difficult for hackers that can find much personal information on-line. ***Don't use bogus security question responses unless you are incredibly consistent and accurate about documenting those questions and responses and conveying to those that may follow where that information may be found.***

My sister did not document any security questions, but fortunately all those I've encountered so far were ones that both of her siblings could answer. If I had predeceased her, some of those questions from early childhood are ones that her nieces and nephews would not be able to answer, **so you really should document all security questions and responses somewhere even if you use correct responses.**

Now a word about legalities: Even if you will be the personal representative for the estate and have been able to get on-line access to some or most financial accounts, unless you were set up as an authorized signer for the account prior to the deceased death you don't have authority to dispense funds until the appropriate paper work is filed, and that can't happen until you have certified death certificates, which may take several weeks. During this interim period, you may have the physical ability to dispense estate funds on-line to pay pending estate bills, but should refrain from doing so until legally entitled. If there are bills that absolutely must be paid during this period, they should be paid from your personal accounts with later reimbursement.

I have found that just being able to view my sister's accounts on-line can be invaluable in learning what periodic bills must be paid, what bills may be set up for auto-pay and from which accounts, which bills have to be paid manually, and the kinds of profile information stored for each account. This is invaluable for planning the order in which accounts may be terminated: You don't want to terminate an Internet Service Provider account until all accounts dependent on that associated email address are changed; You don't want to terminate a land-line phone until all accounts that use that phone number as a contact number have been changed; you don't want to terminate a cellular service account until all accounts that use that phone number as a contact point have been changed; you don't want to close down a credit card account without arranging for periodic bills auto-paid on that account to use a different method of payment or canceling the service if no longer needed.

To do this kind of management remotely also requires that you have someone you can trust to pick up U.S. mail, alert you of and forward in some form things of importance, look for subscriptions that need to be canceled, and keep an eye on the property. Forwarding of U.S. mail should eventually be done, but that can only be done after you have official authority to act on behalf of the deceased.

This is still a work in progress, but one of the more interesting things I discovered is that if you have a financial account that allows on-line access, even if you don't want to access the account that way, you really should proceed to set up the account with a "good" password, and a valid email address, phone contact, etc. to make the account more secure. In checking out one financial web site where I thought my sister might have set up on-line access, I found she had not activated an on-line account but that it was easier than I would have hoped to set up on-line access for her account just using information to which a clever hacker might have had access, and that seemed to give me complete control over specifying an initial contact email and mobile phone number. I suspect a U.S. mail alert of the account setup will be sent to her street address of record, but if I had been a person with bad intent, that might have given me several days to act before the access was discovered. If she had set up the account with a "good" password, valid email address and phone contact number, it would have been impossible to get in without the password without immediate alerts being received, unless her email account or physical phone had also been hijacked.

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# BLUETOOTH 5.0 – IMPROVED WIRELESS TECHNOLOGY

By Phil Sorrentino, Contributing Writer, The Computer Club, FL  
March 2020  
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Bluetooth 5.0 is a noticeable improvement over the previous version and is finally finding its way into new devices. If you have had problems with Bluetooth pairing or staying connected in the past, Bluetooth 5.0 may improve or even fix the problem. But, both devices will probably have to be up to the new standard.



Bluetooth is a wireless technology standard used for exchanging data between fixed and mobile devices over short distances. Both Bluetooth and Wi-Fi are examples of wireless technology that use the unlicensed 2.4GHz frequency spectrum. Both have many applications in today's offices and homes such as: setting up networks, printing, connecting cooperating devices, and transferring data files among computers and smart devices.

## Wi-Fi vs. Bluetooth.

Wi-Fi is intended as a replacement for cabling in large work areas. Bluetooth is intended as a replacement for cabling among equipment in close proximity. Wi-Fi is intended for use as a local area network (LAN). Bluetooth is intended for use in a smaller, personal area network (PAN). (Just for completeness, a Wide Area Network (WAN) is a communications network that spans large geographic areas such as cities, states, or even countries – think Internet.)

Bluetooth, nowadays, can typically be found in smartphones, laptop computers, tablets, headphones, and almost all new cars. Seven years ago I explored Bluetooth and reassured everyone that it was not a dental diagnosis. At that time, it was at version 4.0 so it's probably time to take another look. Technology is always evolving and hopefully improving.

Here is a little history for you tech history buffs. Bluetooth has been around for quite a while. Work on Bluetooth was started in 1994 and the Bluetooth 1.0 specification was released in May 1998. The initial Version specified a data rate of fewer than 1 Mbps (Megabits per second). It had many problems, and manufacturers had difficulty making their products interoperable. Bluetooth 2.0 was released in November 2004 with a faster data rate (approx. 2 Mbps). Bluetooth 3.0 was released in April 2009. Bluetooth 4.0 was released in June 2010. Bluetooth 5.0 was released in June 2016 with increased range, speed and capacity, and is the current standard. Bluetooth 5.0 is improved in many categories as shown below:

Feature	Bluetooth 5.0	Bluetooth 4.0
Speed <sup>1</sup>	2 Mbps	1 Mbps
Range	40 Meters	10 Meters
Message Capacity	Larger	Small
Battery Life	Longer	Shorter
Reliability	Higher	Low
Security Control	Better	Less secure

Bluetooth was originally conceived as a wireless alternative to the old serial RS-232 data cables. Bluetooth is a network and thus can connect many devices, unlike RS-232 which was strictly serial point-to-point. Bluetooth is a wireless technology that uses short-range radio links and is intended to replace the cable(s) connecting portable and/or fixed electronic devices. The hope is that it will allow for the replacement of the many proprietary cables with one universal radio link. Bluetooth can provide a way to connect and exchange information between devices such as Smartphones, laptops, personal computers, printers, Global Positioning System (GPS) receivers, digital cameras, video games, et al.

So, Bluetooth is a communications standard for interconnecting electronic devices. To that end, it uses a form of data packet switching to transmit digital data via the wireless communications link. Bluetooth operates in the unlicensed ISM (Industrial, Scientific, and Medical) 2.4GHz frequency band, and avoids interference from other signals in that band by hopping to a new frequency after transmitting or receiving each packet. This radio technology is called frequency-hopping spread spectrum. It chops up the data being sent and transmits chunks of it on up to 79 different frequencies. (Guess who invented frequency hopping? Answer at the end of the article\*.)

Bluetooth is primarily designed for short-range communications with low power consumption. There are three power levels defined in the standard, 100 mW (Class 1), 2.5 mW (Class 2), and 1 mW (Class 3) where mW (milliwatt) is a measure of transmitter output power. The higher the power level, the further the data can possibly be transmitted. Class 1 suggests an operating range of up to 100 meters, Class 2 suggests 10 meters, and Class 3 suggests 1 meter. Most of the devices I've used have been Class 2.

Because Bluetooth devices use radio (broadcast) communications, they do not have to be in the line of sight of each other. Bluetooth makes it possible for these devices to communicate with each other and transfer the information as long as they are in range.

A PC uses a Bluetooth adapter to communicate with other Bluetooth devices. While some desktop computers and most recent laptops come with a built-in Bluetooth adapter, others require an external adapter, usually in the form of a Bluetooth Dongle. Bluetooth allows multiple devices to communicate with a computer over a single adapter. Microsoft Windows 10 supports Bluetooth 5.0, but your computer may have a Bluetooth device that was built to an earlier Bluetooth version. (Along with the Bluetooth version, there are Bluetooth Profiles, but we'll leave that as a subject for a future article.)

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1 [Editor comment] Note that the speed of even Bluetooth 5.0 is only fraction of that of a gigabit WiFi router. The usual usage is audio or slower devices. Video streaming over Bluetooth 5.0 could be marginal unless limited to lower resolution video or video with fewer frames per second.

Though you may not have thought about it, here are some of the more common applications of Bluetooth:

Wireless control of, and communications between, a mobile phone and a hands-free headset. This was one of the earliest applications.

Wireless communications with PC input and output devices, the most common being the mouse and keyboard.

Replacement of traditional wired serial communications used in test equipment, GPS receivers, medical equipment, Bar code scanners, and traffic control devices.

A link between game consoles such as the Nintendo Wii, and the Sony PlayStation and their respective controllers.

A link between a video camera and a remote Baby or Pet Monitor.

A link between a Garage Door Opener Motor and the Remote Garage Door Opener Controller.

An audio link between a Smartphone and speaker or headphones.



As you can see from this list, there are many reasons for computing devices to communicate with each other. And as more devices become smart, there will probably be more uses for the Bluetooth wireless technology.

(\*Hedy Lamarr)

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