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President's Corner

Tech in Unexpected Places

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We all know that technology is almost everywhere and plays a significant role in our lives. Because most of us use the Internet, the media, and social networks, we expect specific tech in certain places. We all recognize it in our smartphones, laptops, computers, and Chromebooks - the devices we use every day to connect to information and others. Some of us may be able to recognize it in some less obvious devices and systems that power our modern lives, such as automobiles, e-bikes, smart TVs, smart appliances, and smart homes, which are now often full of new capabilities provided by technology. But, if you look even closer, you may find technology in more unexpected places, where it is enhancing our lives while changing them to some degree as well.

Musical Tech

We all use technology to play music; we can now have our personal soundtrack wherever we go. Home music systems have been around for at least a hundred years; first radio, then phonographs, tape players, and now streaming. Car radios were first introduced in the 1930s; now, you can stream to your vehicle. Music became more portable and personal in the 1950s with the introduction of small transistor radios and then progressed further with tape players like the Sony Walkman in the 1980's and portable MP3 players in the 1990's. Today joggers often stream music or listen to podcasts on their smartphones while they exercise.

While technology has moved heavily into music delivery and the recording and mastering of audio, the actual making of music has not changed much. Although some high-tech instruments like electronic keyboards and music and percussion synthesizers, most music is still made in old-fashioned ways. Just as it was a thousand years ago, most humans' methods cause pressure waves in the air (sound) involve a mechanical vibration. These pressure waves can be produced by plucking, striking, or rubbing a bow across a string (guitar, piano, or violin), blowing on a reed (saxophone), or vibrating our lips (trumpet) or vocal cords (singing). While the instruments are often the same, it is in musical accessories where technology has taken hold. One such accessory is the electronic tuning aid.

Though I very much enjoy music, I've never felt musical. I grew up without any training on a musical instrument. I learned a little keyboard in an introduction to music class in junior college, but it never felt natural or easy. I'm an electrical engineer and feel I'm inherently more analytical and logical than artistic or creative. I can create accurate mechanical drawings with rulers and graph paper but have always envied my daughter's ability to draw wonderful pictures freehand, as my attempts appear stuck in kindergarten.

Most young males of my generation had dreams of playing guitar in a rock band; I was no different, just realistic. However, I liked Hawaiian music and thought perhaps playing the ukulele might be more of a possibility. Since it was smaller and had only four strings, it had to be more accessible, right? However, the prudent and conservative engineer in me never let on to this interest until my wife and I were on a Hawaiian vacation about six years ago. We wandered into a ukulele store in a seaside shopping center, and I mentioned that I was interested in playing the ukulele. My wise and sensitive wife remembered this and bought me a ukulele for a birthday present.

Even though I now had the instrument, it took me several years to even start to play. I initially tried to go through the training book I received but found I needed more personalized instruction. Poway Adult School offered a "Ukulele for Beginners" class that met for six weekly sessions for a modest cost; this seemed just what I needed. Unfortunately, this class was only offered on Wednesday nights for several school terms, which meant abandoning our group for about two months. I couldn't do that, and so I put the ukulele on a shelf.

This spring, the beginning ukulele class was finally offered on a non-Wednesday. Even though my life was hectic at the time, my wife pushed me to sign up, and I'm glad I did. So I took the class, and though I still can't play much (or well), I needed to get started and feel more comfortable with the instrument.

One thing my wife bought to go with the ukulele that proved to be very beneficial is a Snark tuner. This small electronic device helps tune stringed instruments. It identifies the note being played by the sound frequency and displays where your instrument is tuned relative to the standard notes. The class instructor used his Snark to tune our instruments before each class, so I was pleased to use mine to arrive already tuned. It clips on the instrument and makes tuning, which should be performed before each playing session, quick and easy. Without it, I don't know what I would do. I would have never expected the role that technology played in my musical interests.

The Snark is reasonably priced at $12-$40, depending on the model. However, it is powered by a small CR2032 coin cell battery, which I've found only lasts a few months in regular use. Because of this, the Costco pack of 12 batteries is a great value.

Electronic Traps

As I discussed in my presentation last month, high-tech has come to pest control. The Victor electronic rat trap is indeed a better mousetrap, killing pests with a high-voltage shock. It allows for simple disposal, is easy to clean (I've found so far that cleaning is unnecessary), and the Wi-Fi model I have sends a kill alert to my smartphone. Since installing one in my garage three months ago, it killed three mice right away and has been at the ready for more. In addition, it will alert me if it loses Wi-Fi or the battery gets low, so all I need to do is wait.

Remote Camera Control

Today when you think of a camera, it is a digital electronic camera. No one takes pictures with photographic film anymore. Stand-alone cameras are becoming less prevalent as more and more people use their phone cameras for all their photography.

I grew up with 35 mm film single-lens reflex cameras and prefer using a different camera to the lower-quality camera in my smartphone. My primary camera is a Panasonic Lumix "bridge" camera. This type of camera has the large body and lens of a DSLR (Digital Single-Lens Reflex) but with the smaller sensor (and lower price) of a point and shoot camera (it is a bridge between the point and shoot and DSLR). It also has a fixed (non-removable) lens like a point-and-shoot camera. I like this camera a lot, but it lacks one thing I miss - a bulb mode. This is a shutter setting that allows the shutter to stay open as long as you want. My camera shutter can be set for as short a duration as 1/16000 of a second, but the longest duration is 4 seconds.

I've searched the camera manual and on the web for a way to make longer exposures. With some limitations, I found a camera setting that can make a 60-second exposure, but no luck on a bulb mode. However, I found an unexpected capability in a Panasonic camera app in one of the web posts I read. The Panasonic Image App works with Panasonic cameras with Wi-Fi capabilities, which mine has. It can link to the camera and control it remotely. It can remotely change camera settings, take a picture, and even display what the camera is seeing on the phone. I installed the app on my phone but have not used it much so far. While I had hoped to find a solution to my problem, I was not expecting to be able to control my digital camera with my phone (which some would also consider a digital camera).

Temperature Camera for COVID

The COVID restrictions at my place of work have now been lifted for those employees that can prove full vaccination. Before that, I had to fill out an online health assessment before going to my workplace each day. When I arrived, I had to wear a mask and have my temperature checked in the building lobby. My employer had installed an electronic device on a tripod that each employee had to use. It looked like a large tablet, with the camera set to selfie mode. You first had to line your face up with a head silhouette on the screen, while a synthesized female voice said, "Please face the detector frame." It then measured your temperature with an infrared sensor. Unfortunately, it did not display the actual temperature measured. Instead, it spoke out "Normal temperature" and illuminated a green bar on the top of the device if your temperature was in the normal range. Fortunately, I never got to find out what it did when your temperature was not normal.

After over a year of using this device each workday, I can still hear that synthesized voice say, "Please face the detector frame" and "Normal temperature" in my mind. Another unexpected tech encounter that had a lasting impact.