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President's Corner

Tech Tales Three

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I have had a few issues with my technology recently. While temporarily subdued, some problems may still be lurking in my future, and at least one is very unlikely to go away. I hope that perhaps problems only come in threes, and I may get at least a brief respite.

The Refrigerator

Before modern refrigeration, it was much more challenging to keep food safe to eat for extended periods. Salting, drying, smoking, and canning preserved foods without the need for cooling, but they required a lot of work, and the items lost their freshness and some of their appeal. Storing certain foods in a cellar could extend their usefulness, but it was cool, not cold. When my grandfather was a young farmer in Nebraska, he helped cut blocks of ice from frozen lakes in the winter. The ice blocks were stored below ground in an icehouse. Packed with insulating straw, they were available throughout the year to put in an icebox in the house to keep foods cold and extend their usability. The insulated icebox held an ice block near the top, allowing cold air to flow down to the food stored in a lower compartment.

The early electric refrigerators worked in a similar way, with a refrigeration unit replacing the ice in the top. The addition of a separate freezer section at the top allowed storage of frozen foods and efficiently supplied cooling to the cold section below.

Today some home refrigerators have freezer sections on the side and even on the bottom; these are less efficient but satisfy some users' preferences. For example, my wife prefers a bottom-freezer model as she is shorter and has difficulty seeing higher items up close with her progressive-lens glasses. On the other hand, the bottom freezer models are more expensive, and I have found they are not as reliable, especially if they have an icemaker in the top.

Last November, my wife reported to me with dismay that the water in the door of our relatively new and somewhat expensive bottom-freezer fridge no longer worked. I looked online and unfortunately discovered this appeared to be a common problem for our brand and model and bottom-freezer models with ice and water in the door in general. I pulled the fridge away from the wall and found a large piece of ice had formed on the back, with the water hose embedded in it. Melting the ice fixed the water problem, but the ice reformed on the back in the same spot after a few weeks. It appeared the manufacturer had placed the refrigeration lines that run from the bottom freezer section to the icemaker too close to the back, with too little insulation.

Per repair advice from the internet, I fabricated an insulating blanket and installed it on the back after melting the ice away again. This low-tech solution appears to have fixed the problem, as the ice on the back has not returned. Unfortunately, in April, my wife reported another problem with her beloved fridge. She noticed that ice rings had formed around the bottoms of bottles at the back of the shelf below the ice maker in the refrigerator section. Removing all the items on that shelf, I noticed that ice had formed on some piping inside the fridge on the back wall below the icemaker. There was a small plastic cover over this piping, and enough ice had formed to push the cover away and deform it. During defrost cycles, this interior ice would melt a bit and drip on the shelf below. Later, the cold from the icemaker would refreeze the water on the shelf and add to the ice layer on the piping.

I turned the ice maker off and emptied the ice from it (we needed the ice for a Mother's Day celebration anyway). I then got out the hairdryer, put a towel under the plastic cover, and carefully melted the inside ice block away. Next, I replaced the removed fridge items and turned the icemaker back on. I expected the icemaker to start working again right away, but it did not. After three days with no ice made, I began to get really concerned. I turned the ice maker on and off a few times, but that did not help.

Not sure what else to do, I decided to try the old remedy for technology that often fixes computer problems - cycle the power. Though you can "turn off" the fridge from the front control panel on the door, I decided to pull it away from the wall and pull out the power plug. I let it sit for an hour with no power and then plugged it back in. The fridge ran again but still did not make ice. After a day, I finally heard the solenoid run water into the ice maker, and it has been making ice ever since.

I do not know if the ice on the inside will regrow; if it does, I will have to search the internet for a solution. However, I now know a hard reset can be a helpful way to get things running on many kinds of technology, and patience is useful.

The Hackings

This month has seen several hacks against our infrastructure and institutions. The Colonial Pipeline, which carries fuel from Texas to the Southeast United States, was hacked in a ransomware cyberattack, resulting in the shutdown of the pipeline. It did not take long for fuel supplies to run low and gas stations to go empty in the Southeast; the ripple effect increased gas prices here as well. It had a significant economic impact on lost operations despite the pipeline operators reporting that they paid the ransom.

Also, this month, the Scripps Health computer systems were shut down due to a cyberattack. Scripps has not acknowledged that it was a ransomware attack that caused them to shut down all their systems, including their patient web portal, or if any patient data was compromised. I use Scripps for my medical care and can confirm that their patient portal on the web is still down. I was able to go to an appointment last week that I had scheduled well before the attack; it was not long after they had resumed seeing non-emergency patients. I was able to get the care I was expecting, though everything was handled on paper forms rather than the computers there. I had a small bill that came due this week but could not pay it online as I usually do. Fortunately, I had downloaded the bill before the shutdown, so I could print the statement and mail in my payment (and I fortunately still remember how to pay by mail). I guess I will have to wait and see what happens next month and what is revealed later by Scripps. Meanwhile, I am thinking about how often I am making backups of my systems, how I store the backups offline, and wondering if Scripps had done the same.

The USB Port

Sometimes a seemingly simple, peripheral thing can be the cause of major grief.

This was the month of the postponed tax filing deadline; due to COVID, our Federal and state returns were due on Monday, May 17 this year. I completed and filed my returns using TurboTax just a few days after the regular April 15 deadline and then started working on my parent's three returns (they have income from another state). They are in their 80's and unable to deal with this themselves (I recently established a power of attorney over their finances). Fortunately, I filed their returns last year and knew what to expect, but their situation is a bit complicated, and I did not complete their returns until the evening of May 15th.

Unfortunately, I began noticing some instabilities in my computer's operation this month as well. I had issues printing at times. Occasionally a USB drive that was plugged in would suddenly become unrecognized and then come back. A few times, it seemed as if I had a degraded internet connection. With all the recent hacking incidents on my mind, I made sure to copy off the tax files periodically as I worked. The problems increased infrequency and seemed more like a computer hardware problem or perhaps a USB driver issue than an attack. A reboot seemed to fix things for a while, but occasionally the computer would not come back from a power cycle correctly and would have to be shut down again. I managed to hold things together until I was ready to push the button in TurboTax to transfer the data and electronically file all three of my parent's returns. At about 8 PM on the 15th (about 48 hours before the filing deadline), I clicked the button to file. TurboTax churned for a while, and then a window popped up that said it could not connect to the Intuit servers - try again later.

I instantly had visions of rushing around to install TurboTax on another computer, proving I had paid for the program upgrade and state electronic filings and getting their returns filed in the remaining 48 hours. Instead, I went away for 30 minutes, came back, and tried again - the same problem. I then closed the program, shut down the computer, and turned it back on. It took a few tries to boot successfully, but once I got back into TurboTax, it remembered my place, and this time the filing went through. When I received the text messages the next day that all three returns had been accepted, I felt greatly relieved.

I have performed a few more experiments since and have kind of isolated the problem. This desktop PC has four USB2 ports on the back (built into the motherboard), two USB2 ports on the front (with internal cables to the motherboard), and four USB3 ports (on a PCIe card that I bought and added when I built the PC). I usually like to use the USB3 ports, but a USB Flash or hard drive plugged into it now repeatedly disconnects and reconnects, making it impossible to use. I removed the PCIe card, and the same thing happened when plugging into the rear USB2 ports. Everything is stable when using the front USB2 ports, however. I know how to make it work; now, I need to figure out how to fix it.