

# Bits of Blue



Vol. 31 No.4

April, 2018

## Upcoming Meetings:

### **April Meeting: Wednesday, April 11 6:30PM**

Windows SIG, Windows 10 Q&A

"18650" – Merle Nicholson

### **April 11<sup>th</sup> Upcoming Meeting Presentation**

6:30 PM Windows SIG, Windows 10 Q&A

7:00-8:00 PM "18650" – Merle Nicholson

### **May Meeting: Wednesday, May 9 6:30 PM**

6:30-7:00 PM Windows SIG – Dave Palmer

7:00 PM Presentation by Dave Palmer

"Tech in the News - The Good, the Bad & the Ugly"

"Privacy, Tracking, Crime, Facial Recognition, Etc."

by Dave Palmer

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## COAX A WEAK LINK?

*Prepare Now!* You may not be as safe as you think!

By Ron Weinberg, TPCUG, March 2018

We all know about Tampa's notorious May to October Lightning season, (not to be confused with our Hockey team) which has been known to last over 80 days. Electronic equipment is dependent on the smooth and regulated flow of electricity. Uncontrolled variations from whatever cause can inflict serious damage. Nothing can protect you from the power of a direct lightning strike. The best protection you can take is to unplug everything which is totally impractical.

For many years my equipment (power plugs) have been protected by high quality surge protectors from Tripp Lite and APC which had high joule ratings. I thought I was safe.

Last June, an expensive High Definition television set suddenly failed for no apparent reason. At the time of the TV failure there was no discernable lightning. House lights did not drop or even flicker and no other TV, electrical device, or equipment seemed to experience any difficulty.

The HDMI port and the circuit board of the TV was damaged beyond repair. The TV repair technician said the fault was caused by Brighthouse equipment and that they would compensate me, which I doubted. A claim was filed with Spectrum-Brighthouse. An inspector came and made a report but was not optimistic. I replaced the TV at my expense. While trying to set up the new TV it was determined that the set top box and my HDMI connected ROKU Box also had failed, and had to be replaced. Not surprisingly, Spectrum declined my claim for responsibility.

It is possible that the Roku failed as it was connected to the damaged circuit board of the TV.

The likely path of the destruction was ISP's COAX to set top box and HDMI from box to TV. The problem may have been caused by an electrical issue on the COAX or the failure of the set top box, which itself could have been caused by the COAX line.

What can be said for certain is that some surge or power variation entered my system. Damage was limited to the one area. Since all wiring is vulnerable, the least protected closest to the damage was the COAX.

### COAX (Coaxial Cable)

Coaxial cable is a type of electrical cable that has an inner conductor surrounded by a tubular insulating layer, surrounded by a tubular conducting shield.

COAX is omnipresent, a basic part of every installation. You are connected by COAX cable at your ISP's input to the structure and by COAX to Modem or Router and set top boxes. A Satellite Dish also enters through a COAX cable. Antennas too, generally have adapters to connect to the COAX port.

Modern television sets receive input through COAX via set top box to HDMI or to an out COAX cable.

Even old component video or RCA type stereo/composite cables, if still used, can originate from your set top box. In some cases, where there is no set top box, COAX cable is directly connected to the TV.

The ISP reportedly protects the COAX by grounding but is that sufficient? Some surges can even bypass ISP equipment and directly affect electronics. Any type of wire or cable in the home or office,

including COAX is susceptible.

I am not an Electrical Engineer. Research indicates this subject is controversial, pro and con. Some articles say that it is not necessary to further protect COAX beyond the ISP's grounding or even not to. When protectors are used some signal degradation can result but if the signal is strong would be minor. This should not be an issue with better quality protectors. Were it not that we are in such a lightning prone area and that I have already sustained a loss I would tend to heed that advice, but we are. Bighthouse does not encourage or discourage use but rather indicates specific specs required for the device. The fact remains that we are in an extremely vulnerable area.

Expensive stereo equipment and Televisions are better protected when COAX is monitored. This extra protection, a belt and suspenders approach, is readily available at a reasonable cost. I am in the process of replacing the surge protector at each television, closest to the endangered device rather than at the incoming modem router, with a more adequate model containing coaxial protection.

There are many choices of protective devices with various numbers of ports, most available from Amazon. Here are just two examples: Tripp Lite Isobar 10 HT10DBS and APC 11 PV11VNT3. Both include Equipment Protection Insurance which pays if they fail to protect and you sustain a loss. If specific specifications are required check before purchase. Bear in mind that you must pay more for quality and reliability. Very low priced items from lesser known manufacturers may not do the job.



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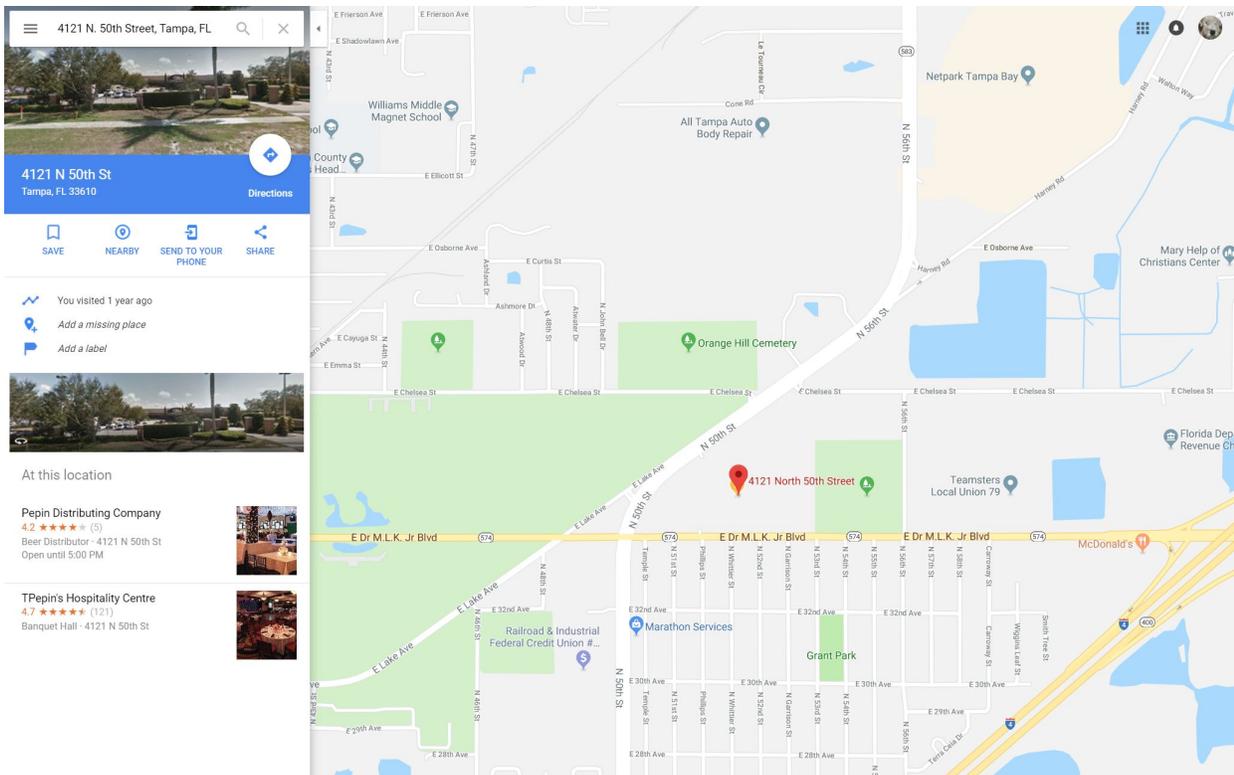
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**Meeting Location: Pepin Distributing Company, 4121 North 50TH ST, Tampa FL 33610**