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The Latest

In the last newsletter I wrote about travel, and tips based on my experience. Since then I had to take a trip where I violated one of my own rules - I bought a ticket on an ultra cheap airline (Frontier). I had to make a trip where I had no decent budget for travel, and the difference in airfare was just too great to ignore. Here's a couple of things I found:

1. The add ons added up - fast. I had to bring a bag carrying some necessary items, a laser level, and hard hat in particular. It cost me \$68 each way. I paid about as much for my carry on bag as I did for myself in airfare. I paid another \$40 or so to reserve a seat - each way. I realized just now the cost of a carry on bag for that laser level and hard hat were more than they cost at Home Depot. I should have shoved the laser level in my backpack and borrowed a hard hat.
2. The plane leaving Atlanta was late, like an hour and a half. I found out later that Frontier has really **bad on-time performance**, and this is not an unusual situation. I ended up at my destination at quite a late arrival time, and ended up sitting in an uncomfortable seat for a long time too.
3. The seat didn't recline at all. That is not an insignificant problem if you want to sleep any on the plane.
4. Forget about working on a laptop at all. There is no space, and no wi-fi. No outlets.
5. They charge you for drinks and snacks, BUT there is at least a variety of overpriced stuff you can choose from .
6. Although you have to pay for a reserved seat, you can pay for priority boarding, which is convenient.
7. The seat got uncomfortable after about an hour, it was pretty hard. I imagine a long flight

would be painful.

So, would I take the discount airline again? In the same situation, yes. Even with the add ons, I paid less than half of what a Delta flight would cost. If I had more money in the budget, and more time for the reservation, I'd go ahead and take Delta.

Now this coming week we're off to Cleveland to visit [Guardian Structural Technologies](#). They are a structural panel manufacturer, and we want to examine their product. I'm taking all of us, and there is 0 budget for travel. So, we're going Spirit Airways. I was able to get tickets for about \$40 a piece round trip, which was a price I couldn't resist. It's only a one night trip, so there will be no carry on bags or luggage. The trip will probably be agonizing, but the low air fare makes it affordable, and it's only an hour and a half air time.

My thoughts? In general it's a little too painful to take the discount carriers given the lack of comfort, the add on costs, and the on-time performance. However, in some situations it just doesn't make sense not to take advantage of what could be an extreme discount in price.

Cybersecurity - A Concern For All Of Us



A couple of years ago I spoke to a colleague that works for a large engineering firm who told me the ultimate horror story. They got hit by a ransomware attack. Someone hacked into their company server, locked up the files, and demanded an enormous amount of money in ransom. It brought their company operations to a standstill. The way it occurred is that someone in the company got a "phishing" email, which looked realistic enough that they gave up their login and password to the company server. The hacker logged in, set loose the ransomware program that encrypted all the files on the company server, and held the company hostage.

The problem got worse, there was no way to use backup files, because those files got encrypted also. It was also at the start of the Covid epidemic, so it completely stopped the ability of staff to work remotely. The ultimate solution to the problem was they had to pay the ransom and convert to a system where they do backups daily where the backup media is disconnected from the computer.

Over the same period, I personally have watched my cyber liability insurance skyrocket in cost. Originally it was a minor amount of money, and my main concern was protecting myself from lawsuits that might get thrown at me for content on the company's website. Now I'm more concerned about what happens if a malicious actor gets into my company files.

In addition to malware attacks, there are internal problems that can go wrong too. Another firm I

know lost critical information when one of the employees kept key information on the hard drive on his personal computer instead of the server, and his drive crashed. All the information was lost. I had a crash of a hard drive and I lost data for about 10 years from the early 2000's, but I had backups on CD ROM's and I was able to restore everything.

I also had an employee that left that I discovered after he was gone that he put nothing on our drive, all his files were paper. He put all his files in a box on his last day and told me it was trash that I could throw away. I did, which was a big mistake.

There of course is the danger from a disgruntled employee destroying everything. **This one caught my eye years ago.** An employee working for an architectural firm saw a want ad with her boss's number on it, and thought the ad was for her job. She thought she was going to get fired (she wasn't, the ad was for her boss's wife's company), and she went in on a Sunday night and deleted all the company's files. The company was able to restore the files using an expensive file recovery service, and you can imagine they were probably knocked down for days, which would be expensive too.

So, what are the solutions?

In our case, we don't have a server. Years ago, prior to the Great Recession we had a company server, and it took a fair amount of time to maintain it. It required more expensive internet access with a static IP address, and you couldn't access the files in that time remotely from the server without quite a bit of delay (the internet speed wasn't so hot). The advantage of the system that time was that we had a tape backup system where the tapes got switched out on a daily basis. It put an air gap between the backups and the server, so a malicious actor had no way to get to our back up files. It also meant in the worst case scenario all we'd lose was a day's worth of work.

Today we use Google Drive rather than a server. Google Drive has several advantages. The files can't get corrupted by a malware attack, and you don't have to worry about hardware failure killing all your files. The speed of getting into the files is good. The main thing is we don't have to maintain a server and all the infrastructure it needs. Google Drive isn't perfect though, it does present several issues.

The main issue is that a disgruntled employee or a hacker can get in and delete your files. However, you have up to 30 days to restore deleted files. Hopefully if someone gets in and deletes files, you notice it before the 30 days is up. The second issue is there is no one to call at Google for help. If you have problems, you are on your own trying to solve them. Finally, I've found Google Drive to do odd stuff that there is no explanation for. It started putting up random files on one of our Google Drives for some reason. It stopped synchronizing my files on one of my computers. I've had it start randomly deleting stuff. None of this is good, and there is no one to call for help.

So, in our case I make regular backups from Google Drive onto a removable hard drive. I use **Acronis** software, and an external hard drive to backup the system every 24 hours. We also periodically copy everything on a hard drive that is removed completely and just sets on a shelf. It's not the perfect system, but it is the best workable system we could think of. Ultimately, we may go back to a server as the company expands, but there are so many headaches with maintaining a server I don't know if we'll ever go away from cloud storage, although it may not be Google.

So, from my experience and what I've seen, this is my advice:

1. Management. Make sure employees have good passwords (an amazing amount of people will choose "Password" or "1234567" as a password). A good policy where all the files are kept on the server and not local PCs has to be implemented. File policy is important anyway, every office should have a file plan on how files are kept and adhered to.

2. All PCs should have the appropriate anti-virus software. I found out an employee was using a computer for nearly a year that had no such software on it. You can't assume it's been done; you have to check.

3. Backups are critical. A system of backups should be created. There are online services like **Carbonite** that provide backup services that are done automatically. Also, have another system where a regular backup is done to removable media. If all else fails, you have something to

restore from.

4. Have Cyber Risk Insurance. It's expensive, but you can't afford not to have it. How would you deal with the cost if you had to do a restore like the architecture firm I mentioned that had their files wiped out by a disgruntled employee? Can you afford a ransomware attack? What if someone takes something out of context on your website and throws a nuisance suit at you?

It's obvious that there is a lot to worry about with computer systems. However, reasonable actions can be taken to secure the computers, and not disturb your operations.

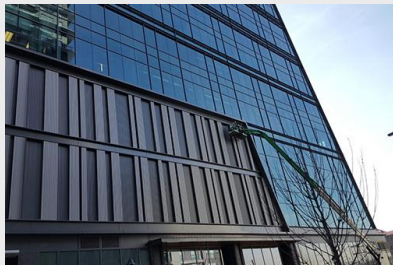


Structural Engineers

Runkle Consulting was founded in 2000 by George W. Runkle III, PE, SE. We provide structural design for structures fabricated from shipping containers, the structural design for building cladding, and forensic engineering services.

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Shipping Container Buildings

We provide design services for the design of buildings fabricated from repurposed shipping containers. Our services include the complete design package, architectural, structural, and MEP. Depending on the area, we may be able to help you find a fabricator to provide the containers.



Cold Formed Steel Design

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