The Local Oscillator

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Complacency

Recently I was reading one of my aviation magazines and the writer was talking about his bout with COVID-19. He had, like most of us, been very careful last spring and into the summer, but as time went on, like many of us, he began to let his guard down, right up to the point where he boarded a commercial flight to make a trip that he could have flown in his own personal airplane for a few hundred dollars more. He said he was stuck near the rear of the plane, all seats filled (including the middle), and at times there was a line of coughing, sniffling people waiting for the rear lavatories in the aisle next to him. Shortly after that trip, he got sick, and he had no doubt that he contracted COVID on that flight.

His point was that after a year of this stuff, a lot of folks really are getting complacent. They begin to think that they are somehow immune. I can attest to that personally. After all, I made it a full year without any COVID issues at all. But then…

In retrospect, I don't think I got complacent. I was still following protocols. Wearing a mask, hand washing, social distancing and all that. I think I had been very careful, as best as I reasonably could, anyway. I certainly didn't take any chances or cut any corners. But then… two weeks ago today as I write this, I felt a little sniffle coming on. Great. I remember thinking that with all the hand washing, staying masked up and socially distanced, how could I possibly catch a cold? But it wasn't a cold. Oh no, no indeed. It was something much worse.

I made it through most of the first week with just fatigue and cold-like symptoms plus the loss of the sense of smell. I told several people that if I hadn't tested positive, I would very likely have been at work that first week. I just didn't feel that bad. I was thinking that I would sail right through it and be good to go in a few days. Well… *I thought wrong*. Starting that second week, the really nasty stuff hit. Fever, the worst body aches *ever*, chills, headache and overall misery. Thankfully it never got a beachhead established in my lungs, and my pulse-ox numbers stayed in the mid- to high-90s.

My dear bride was a few days behind me, and she suffered the same things I did. Amanda, on the other hand, evidently contracted it the same time I did (she tested positive right along with me), and she sailed right through it with nothing more than fatigue and a few sniffles. Her husband Jordon never did show any symptoms.

So here I am, hopefully on the back side of this thing at day 14. I don't feel great, but neither do I feel awful, so we'll take that as a big improvement. The fever has pretty much left me, although I am a couple of tenths of a degree above my normal. I pray that my wife and I will continue to improve going forward.

My point in all this is that you can still catch this thing even if you do all the right stuff. I did, and I did. For some, it's a glorified cold or flu. For others, it's way, way beyond that. Keep your guard up, avoid all unnecessary contact, wash your hands until they're raw, and keep that mask on. If you can get vaccinated, do so. Trust me, you don't want any part of COVID-19.

KLDC Project Update

Last month, the FCC granted the CP application to move KLDC to the KLZ site. Readers may recall that our landlord at the existing Ruby Hill tower site told us they do not intend to renew the lease at the end of 2022 when it expires and the tower will be coming down, so we have less than two years to find a new home for the station.

The obvious choice from an economic standpoint is the KLZ-KLVZ site, which we own outright and which has room for an additional tower

that we will need to produce the correct directional pattern.

Operation of three stations from that one site will, however, present some technical challenges, and one such challenge appeared as I was running some antenna models earlier this year to determine the effectiveness of detuning the tall KLZ towers on the new 1220 kHz frequency. Not surprisingly, I found that there will be some residual reradiation, which will cause some minor pattern distortion that nonetheless will have to be accounted for.

Rather than waiting until we're in the middle of tuning up the three collocated directional arrays and trying to make them all work, I opted to jump ahead and file an augmentation application to modify the CP directional pattern of KLDC to allow for the pattern distortion based on the model prediction. That has been filed and we await grant, which should be routine.

Our modification of use permit application is making its way though the county, and so far, we have not run into any serious obstacles. We have to do a resubmittal early this month to answer a few things the county asked for, and that's just about ready to go.

After that… well, we've got to make it all work, and I'm working with the good folks at Kintronics Laboratories in that regard. There are two aspects – RF and physical. The RF aspects are fairly straightforward, with filters and detuning added at all the tower bases, and of course we will need a phasor cabinet and matching networks for the two-tower KLDC array.

The physical aspects may be a bit more of a challenge. We don't have much room in the transmitter building for a phasor, so that's got to be kept as small as possible. And we have to rearrange things at each of the tower bases to allow for additional filter/detuning cabinets. That will involve new slabs, changes in cable routing and more. I really won't know how all this will need to lay out until the RF design is completed.

It's going to be a project, that's for certain. I'm just glad that we have some time to get it all worked out.

Don't Forget the Details

In the midst of the pandemic and all the projects, it would be easy to lose track of the small but important things that we are required to attend to.

AM stations are required to make occupied bandwidth measurements annually (with no more than 14 months between measurements). I presume that each of our markets have taken care of those, but I mention it here because it's an easy thing to overlook. Contact me if you need help with this.

Quarterly tower inspections must be made, and these must include a check for proper operation of lighting, control systems and monitoring. Do the lights come on or change modes at the proper time? Are all arrays at all levels lit and flashing properly at the proper time? If there is a problem, will you be notified immediately so that you can call in a NOTAM?

Tower inspections should also include paint on those structures for which paint is required (over 200 feet and without daytime white lights). And while you're at it, check the signage – are antenna structure registration numbers posted and visible at the tower bases and the property entrance?

Are tower base fences in good condition and locked? Are visible grounding and ground system components present and in good condition? The time to find out that some dirtbag stole the ground leads at a tower base is not when lightning hits the tower and, with no place to jump off to ground, follows the transmission line into the transmitter.

Weekly log checks are required of chief operators. In some markets, our chief operator is also the chief engineer, but in others, particularly where we have contract engineers, the designated chief operator is an employee, usually an operations manager. Still, we rely on our engineers to look over the shoulders of these non-technical people to make certain that EAS logs are being reviewed, that tower light outages and NOTAM numbers are being logged as well as anything else that's required (such as EAS units or antenna monitors out of service). Are you doing this on a regular basis?

Not specifically required by the FCC but required by this company are weekly delay dump tests. Are you doing this and logging it? We require the delay dump test to be noted in the operating log to provide a written record of the proper functioning of the profanity delay equipment as an affirmative defense should we get dinged with an indecency complaint wherein for whatever reason the dump function did not work.

The devil really is in the details. Don't let those things slide. Pay attention and stay on top of things.

The New York Minutes
By
Brian Cunningham, CBRE
Chief Engineer, CBC – Western New York

Hello to all from Western New York!

The one thing I have always enjoyed about broadcast engineering is the fact that no two days are the same. When you wake each morning, you just never know what the day will throw at you. It could be a quiet, uneventful day, or all hell could break loose and you find yourself swamped with multiple problems.

March was a mixture of both extremes, and throw in some weather-related issues, and you have a month that tests your skills, and patience.

In February, I reported on some gremlins that seemed to pop up at every turn, and March was a continuation of the same. Just as last month's report went out, we lost our FIOS services at the WDCZ transmitter site. It was not long ago that we had to replace the FIOS terminal at this site, but in this case, the modem and NAT were the cause of the failure.

I phoned Verizon support and arranged to have a new modem shipped overnight. They were supposed to ship to our studio address, but somehow it got addressed to the transmitter site. Knowing UPS would not leave the package without signing for it, I spent the entire day waiting for a package that was "Out for Delivery." I arrived at the transmitter site about 8:30 am and as of 6:45 pm, no sign of a UPS delivery truck. I left a note on the door for the driver to leave the package in a secure area of the building, hoping that it would be there when I arrived the next morning.

Fast forward to the next day, I arrived at the site and checked the area I requested the package be left, but no package! There also was no notice left on the door that the delivery had even been attempted, so I got on the UPS website and it showed delivery at 7:45 pm! Either the package was left and someone walked off with it or it was not left where I expected to find it.

I walked around the building and saw a box thrown over the fence around the generator. Sure enough, the driver had thrown it over the fence! Glad we did not have any rain/snow overnight, or we could have gone through this episode all over again.

I installed the new modem, programmed it and was able to once again access the internet, but was unable to gain entry into the Burk remote control. Nothing I tried worked; the Burk would not allow access into the unit. I could ping all IP addresses with 100% results, but still no access.

So I opened up the Burk AutoLoad program and began poking around the operating parameters to see if anything there was amiss. All was good until I looked at the opened port for remote access and found that it had changed from port 80 to port 1954! I have no clue as to how this could have changed, no-one else has access to the configuration menus, so I guess I need to chalk this one up to those nasty 'gremlins'!

Late on Monday the 8th, we experienced yet another bout of high winds which knocked power out at the WDCX-FM transmitter site. The standby generator immediately came up, so lost airtime was only seconds.

The outage only lasted less than an hour, but what I found in its wake was disheartening. One of our surge-suppressor modules was blown, along with several pieces of gear in the racks. The composite DA was down, along with the Inovonics RBDS unit, Day Sequerra tuner, Fostex rack mount monitor and the Nautel HD-2 exporter. Most only had blown fuses or other minor issues that were fixed quickly, but the Inovonics RBDS unit was fried.

In order to get our main channel metadata back up, I replaced the Inovonics 703 unit with the Inovonics 730 unit that was running on our FM translator 94.1 for WDCZ. A check with Inovonics

proved what I suspected, this unit is no longer supported and chances are there are no parts available for repair.

On Friday the 19th, I had scheduled Patriot Towers to come and replace the beacon bulbs on tower #2 at the WDCZ transmitter site. Early that morning, our neighbor who keeps a look out over the site for us, sent me a text that now the beacon was out on tower #3, it had failed at some point overnight. I phoned the office at Patriot Tower and asked that they bring along a set of beacon bulbs for the additional tower, as I only had one set on hand. Talk about timing! At least we avoided another trip charge to replace the second set of lamps!

In Rochester, I received a call from Earl Schillinger that the audio on WDCX(AM) was scratchy and distorted. As it was late in the day, I elected to make the trip over first thing the next morning to evaluate the problem. On Wednesday the 24th, I arrived at the site early and began troubleshooting the issue.

The strange thing was, when the array was in night mode, everything sounded fine, but when it switched to day mode, the audio level dropped almost 50%. The carrier level remained unchanged, only the audio level was affected! To make a long story short, the RF level being sent to the modulation monitor was too low (don't know why, it had been running at this level for years) and simply turning up the pot on the high level signal satisfied the mod monitor. As far as the audio distortion, somehow the preset I was using got switched to another preset (gremlins at work again), and once switched back, we were sounding as good as ever.

That about wraps up another month here in the great northeast, and until we meet again here in the pages of *The Local Oscillator*, stay safe, social distance, and happy engineering!

The Motown Update
by
Mike Kernen
Chief Engineer, CBC–Detroit

LXE 3

Three spanking new LXE consoles have now found their homes within Crawford's Detroit studios. I must say, I'm thrilled with them and so are the staff. Not only do they replace tired fifteen-year-old Wheatstone G6 TDM-based consoles, erasing their wear and grime, they also complete WheatNet IP integration throughout the building.

AOIP systems are not especially new, but they sure do transform a radio station into a cohesive and flexible unit, and that's a wonderful thing, however it's accomplished.

EAS and WNIP

I'm nearly done relocating our EAS encoders, and naturally, leveraging the features of the newly completed WheatNet AOIP network.

The purpose is to remove the super long wires coming from the monitoring receivers. These long input leads are essentially H-field antennae, and I'm getting annoyed with sending the units back to Sage for lightning damage repairs.

I'm also moving to an air chain that only inserts EAS when necessary rather than passing the audio through the units all the time. This is much more convenient for maintenance and allows an engineer to patch around the EAS unit in an emergency without interrupting audio. I recall more than once not receiving the EOM and needing to manually remove the P1s audio from our station.

It turns out this is a little tricky and requires a bit of noodling around, since the WNIP system won't natively let you make a temporary audio insert at multiple destinations based upon one contact closure. It's one for one. Presumably you can write scripts for this sort of thing, but I've not yet ventured that far into WheatNet.

For now, a simple insert for EAS prior to a leveling DSP, which feeds PPM encoders, will suffice. The PPM output can then be cross pointed to multiple destinations. This also allows the final mix to be snagged pre-PPM for recording of shows that may need to be re-aired. That's important for the skimmer, where producers may find content for future programs and so avoids accidental double PPM encoding.

Out with the Old

Forever bonded to "in with the new," tearing out the old is not easy, especially if you're not the

person who put it there. What does this do? Where does it go? Are we somehow still using it? What the heck was this!!?? WHERE ARE THE STINKIN' LABELS!!?? You get the point -there's a lot of questions to ask prior to cutting and pulling.

Theoretically, now the whole place should rely only on WNIP, but what if there's something you didn't count on downstream of WNIP – you surely don't want to cut that stuff out! I've found STL CODECs buried in the phone room (?? so they'd be closer to the ISP ??)! I've found and pulled out twisted and taped together wires in the air chain!

I've removed scads of equipment that is unneeded unused and, in some cases, disconnected from everything but power – in all cases it was still turned on. I can see wanting to keep something at the ready, but saving a kilowatt-hour here and there is good for us all. If it's not in use, shut it off!

The WCHB control room sporting the new LXE surface.

There's a long way to go with the "out," so I'm anticipating many more hours of sleuthing, tracing, investigating, and pulling.

News from the South
by
Stephen Poole, CBRE, AMD
Chief Engineer, CBC–Alabama

Wow, what a month! It wasn't as bad as the severe weather that we had in April 2011, but it was plenty bad enough to keep us hopping. Scenes like those in Figures 1 and 2 have appeared on the national news. It has become depressingly familiar here in the deep South.

I'll (roughly and briefly) describe the events of the past month in chronological order. First, continuing some items from the previous issue, the data link from the WDJC-FM site on Red Mountain to WXJC(AM) in Tarrant kept dropping out. We piddled with it for a while, but it just wasn't reliable. We called in Southern Tower to replace a bunch of stuff on the Red Mountain side, and they found what you see in Figure 3: corrosion on one of the RJ45 jacks. Since replacing the power injector and surge protection, the link has been solid as a rock. In fact ...

Birmingham Area Stations

Not much to report here, not after we got the WXJC-FM link working reliably. During all of the March storms, 850 AM just motored on and ignored wind, rain, and everything else. The only issue was a failure to switch to the day pattern one morning; we discovered that an RF contactor at tower #1 was sluggish. That probably wasn't directly caused by storms, but we do suspect that the high humidity might have gummed up the contacts on the contactor.

We also had a gummed contactor at the 1260 AM site in downtown Birmingham. Once again, some cleaning and a little tweaking took care of the issue. This contactor is mounted inside an air-conditioned building, so it's hard to see how humidity could have caused that. But then again, the humidity here in Alabama is ridiculously soupy at times, so I'm not prepared to say otherwise.

Figure 1 - One of many homes destroyed by tornadoes.

Red Mountain (WDJC-FM) also motored on. We never even lost power in any of the storms. The generator still has plenty of fuel, ready for yet still more storm activity to come (as I write this, we're expecting severe weather again on Wednesday, March 31st).

92.5 (WYDE-FM) in Pumpkin Center

This site has also done pretty well through the storms. Due to some program changes that we're working on, we want to get high speed Internet access to all of our sites, but especially to this one.

Figure 2 - We also had flooding: this is the road to my home.

We currently have no real backup, should we lose the old 950 MHz Moseley STL that's taking care of things now.

I mentioned last time that it appears that fiber is being run through that area. No telling how long it will take for it to reach that transmitter site, but we're anxiously waiting.

101.1 (WXJC-FM) in Cullman

This site has had problems. This isn't surprising, given that Cullman seems to be a storm magnet. The data link for 101.1 is actually a double-hop: it leaves the WDJC-FM site on Red Mountain in Birmingham, heads to a relay point near my home in Warrior, AL, and from there, shoots on up to the 1,330-foot tower in Cullman. Everything was fine during the March 16-18th severe weather, but the second round of storms in late March managed to take out the relay site in Warrior. The business that owns the old AT&T Long Lines tower that we're using was hit by lightning; we're still working on that as I write this. For now, WXJC-FM in Cullman is pulling audio from WDJC-FM's HD2 feed. We've already had a tech from Spectrum come survey the site for possible high-speed Internet access, which ill be quite welcome.

And ... Off Air

Sunday morning, March 28th, 101.1 went off the air entirely. Like most of you, while driving in, I'm pondering on things and trying to guess what the problem might be. My first clue came when I rounded a familiar curve on I-65 and spied the tower, about 10 miles away. The lights were out, so that told me that (a), we had lost utility power, and (b), the generator hadn't come on. I sent texts to Todd and Jack: I wanted Todd to report the power outage, and I asked Jack to obtain a NOTAM on that dark tower. Both were accomplished in short order.

When I arrived at the site, there was a big tree down in the middle of the road up to the tower. Fortunately, the fellow who lives in a little trailer at the bottom of the hill has his own driveway that loops past the tree; I was able to drive through his yard to get up to the site. When I got there, sure enough, everything was dark and cold, including the generator. I switched the generator to "Manual," and it still wouldn't crank. (We've had trouble with that old transfer/control panel in the past.)

"Dead battery," I thought. I moved around to the side of the unit, pulled off the access panel ... and realized that the battery wasn't dead, it was missing. Someone had stolen it. The thieves had even cut the cables, so I had a bit of work to do. I ran to the Tractor Supply Company in Cullman, bought a battery and some cables, and headed back to the site.

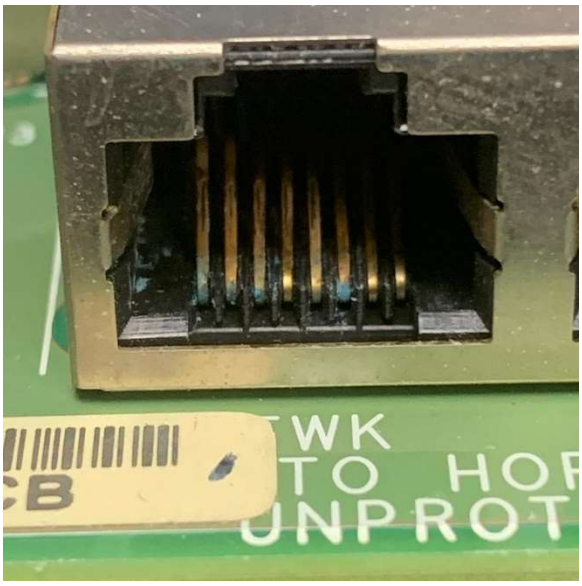

Figure 3 - Hidden corrosion was causing an intermittent link.

Figure 4 - It ain't perfect, it ain't pretty, but it'll discourage thieves.

As is usually the case, as soon as I arrived and began working on the generator, the utility power came back on. I went ahead and mounted the new battery, then gave the generator a test. It cranked and ran fine.

Figure 4 shows what I've done to make it a bit more difficult to liberate the battery. The image only shows one lock; in fact, there are two, one on either side of the removable access panel. It's not foolproof (what is?), but at least it won't be a simple matter of pulling the panel and yanking the battery.

The bad news is, we lost most of our Sunday AM programming. That hurt. The good news, such as it might be, is that the battery was about due for replacement, anyway. I'm not a particularly vindictive person, but it wouldn't bother me if it dies on the thieves in the near future. (Heh.)

PTRG -- Monitoring Via SNMP

This is Todd's baby, so I'll let him talk about it. He, Jack and I all have the PTRG monitoring software on our smartphones, which accesses a server at our studios. I've already gotten into the habit of checking it repeatedly during severe storms, especially when I'm keeping an eye on our links whenever the weather turns bad. It's worth its weight in gold.

And now, I'll turn it over to Todd. Until next time, keep praying for this nation!

Monitoring your Network with PRTG
Todd Dixon, CBRE

One of the great things about having equipment that has network capability is the ease with which you can get to them, configure them, and in general, increase the amount of diagnostic data you can receive from them.

For the past year or so, I've been trying to wrap my head around SNMP (Simple Network Management Protocol). I tried several instances that involved a Raspberry Pi or a full blown Linux server without much success, but I knew that there would be some real power to aggregating data like forward and reflected power on our Nautel transmitters, ping times to different devices, and even our Cambium/Dragonwave IP radio links and their receive levels that would help with troubleshooting our network.

About four months ago, I stumbled onto the Paessler PRTG network monitoring solution. One of the things I really liked about it is that I could install up to 100 sensors (device monitors) without paying anything. Currently, for our needs, I cannot see exceeding that upper limit.

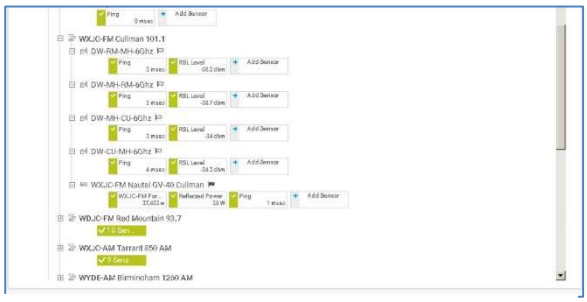

Figure 5 – I'm setting up the PTRG SNMP server in this image.

The setup is pretty straightforward. You can download the executable file from Paessler.com onto any Windows workstation on your network that might have internet access. It installs a basic web server on the machine that serves up the site that you'll soon fill with data. After choosing a strong password, you can immediately begin putting in device information.

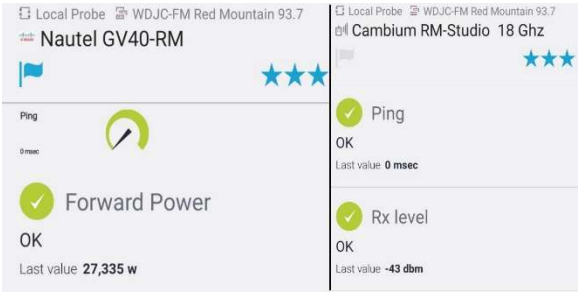

Figure 6

- On my smartphone, checking some parameters at the WDJC site on Red Mountain.

For instance, even sending a network ping lets you know the network is functioning all the way to your transmitter, so simply choose to add a device, fill in the appropriate name, IP information, and choose an icon that makes sense to you. Once that is done, you'll see it show up in your "Network Infrastructure" list under the name you gave it.

Now choose to add a "sensor," like a network ping. It might seem daunting, but once you add a device, besides adding a sensor, you can also enable "auto discovery" on the device you added. Of course, it will find a number of things that you may not want to monitor, and you'll quickly come against your 100-sensor limit. Any sensors that you don't find useful can be removed with a right click of the mouse and choosing to delete that monitor information.

Obviously, you can devote a whole lot of time to this, and you might begin to question if it is worth the effort.

There are two really powerful aspects to installing something like this that you might consider. The first is that I have port forwarded through our firewall to the web page that PRTG establishes so that I can have web access to the page from anywhere and can evaluate the data in that way. PRTG also has Android and IOS apps (including Apple watch) that allow me to get notifications when any sensor that I have set up doesn't respond. At a glance, I can see a load of valuable information about network speed via pings, where the failure point is in a STL path via receive dBm levels, a transmitter's forward or reflected power readings, and graphical histories as well.

Speaking about the last two types of information, you don't get those from pings. They are gathered through adding sensors in PRTG called "SNMP custom." This is where the water gets a little deeper, but with each piece of equipment with network accessibility, the manufacturer creates a Management Information base (MIB). Nautel, Cambium, Dragonwave and others have all created MIB files that you can download from their support pages that contain every piece of data that you could possibly mine form the device. You can download the iReasoning MIB browser, download and import those MIB files and then search to your heart's content for the information you want to monitor.

With that software, you can also enter the IP address of the device and do an "SNMP Walk" where it will pull everything. The alternative, fortunately for CBC engineering groups, is that since we all pretty much use a lot of identical equipment, you can ask me what the custom number is for the data that you really want and I can shoot it to you.

So far, here in Birmingham, we're only using about 45 sensors to monitor four of our five transmitter sites and their associated IP radio STL paths (one doesn't have data access yet). I plan to add our audio codecs into the system as well, which will put me at around 65 sensors.

I've included a couple of screenshots above from the actual PRTG page and from my phone and hopefully that will convince you to begin investigating using this powerful information that is available with a small investment of time.

The Chicago Chronicles
by
Rick Sewell, CSRE, CBNT, AMD
Engineering Manager, CBC–Chicago

Over the last six months there have been many changes in regard to our phones and networks. Most of this has been spurred on by the increasing cost the carriers have been passing along to customers from the local providers.

First off, we changed phone providers for our office and studio phones in November. At the same time, the lease on our downtown Chicago sales office was not renewed and we went with an off-campus VPN approach in as a short-term plan as we look for a long-term place to house our management and sales staff. This meant we had to absorb those phone numbers into our Hammond, Indiana, phone system at the same time we were switching carriers.

It sounded like a good idea to make all the changes at once. Hindsight is always clearer than foresight, and the two events actually didn't time out to being a couple of weeks apart. So, we ended up having a few vagabond phone numbers for about 10 days. In the end, we did eventually get all the details worked out and all the numbers are getting to the intended staff members.

In early December we got notice that our two T1 lines, redundant data lines over the phone company networks that we used for STL/TSL from our Hammond studio to our Kirkland transmitter site, would be facing a huge rate increase. That was an understatement as they would be increasing to almost five times as much.

This caused us to make a move to dual internet providers at each site approach to our audio and data. We already had an Internet provider at each site, so we needed to add a second provider at each site. For both sites we added a fixed wireless internet provider.

Using this approach, we were not only able to avoid the greatly increased cost of the T1 lines but were able to reduce the costs to less than the original rates of the T1 lines.

Now our operations are becoming more and more Internet dependent; not just for the Kirkland site, but in the fact that we had more remote workers.

Combine this with the fact that the cable internet provider was not reliable in our area. We often lost internet for long time periods a couple of times per month.

We decided to take some of that savings and upgraded the main Hammond internet service to fiber. This installation took place in the middle of March, and we moved our operations to it at the end of the month. We definitely see the VPN and remote desktop applications working smoother now. Time will tell if we have greater reliability.

Needless to say, all of these changes have caused us to adjust our network schemes as we have new external IP addresses. For the most part, this has all gone smoothly and the transition difficulties were mainly in changing the shortcuts on all my devices. I spent a good day getting that all straightened out.

Finally, the last of our changes came at our Rockford, Illinois, office and studios. Again, price changes caused us to change phone and internet providers. We're still in the process of getting the inter-studio link working there again as we use it for voice tracking when our station talent is in Rockford.

We are also looking for ways to use the second internet provider at the Hammond studios and offices. We want to create failover connections for all computers, devices, and remote workers so that there hopefully is never any down time.

The Portland Report
by
John White, CBRE
Chief Engineer, CBC–Portland

The theme this month is an RV burning down. During the recent storms, KKPZ experienced several power outages. With each outage we also lost cable internet service, apparently as cable booster amplifiers also lost power.

Following the most recent power outage, we had an additional cable internet outage that seemed unexplained. The initial report early on a Saturday morning extended beyond any transient repairs that might have temporarily taken down the cable service, and the event was large scale enough that many outage reports had likely been placed with Comcast.

The normal route to Mt. Scott climbs the north slope via 112th Avenue. The most convenient access to 112th is Foster Road, a major Portland east-west street. Years ago, the Portland Traction Company ran a railroad from Gresham to the river, and the right-of-way intersects Foster at 109th. Foster and the traction corridor are popular locations for long-term "roadside campers." Fires are common in the area.

So it was that I was on my way to the station a few hours later to report the outage. (It's almost impossible to report an outage from an unrelated phone number.) My intent was to make a confirming outage report and attempt to obtain a projected service restoration estimate.

Well, turns out I didn't need to make the call. Turning on to 112th, I was stopped behind a line of vehicles held by a traffic control person. Closer examination revealed ladder trucks from Portland General Electric, our local telco and two bucket trucks from Comcast. They were on each side of a burned-out RV which had roasted the telephone cable, the Comcast cables and the power lines. So right away I knew the cause of the internet outage.

The theme of last year is an old story called "The Tale of Two Cities." A modern translation might be called "Getting an Act Together." In this ongoing COVID environment, the impact on small business, including local broadcasting, runs both hot and cold.

No better illustration exists than the local rollout of vaccinations in the Portland tri-county area.

The initial step, getting signed up, was a total mess. Centered on a required internet connection, the application process included pages and pages of data, every little thing any bureaucrat would like to know.

Many people did not have the resources or ability to navigate the maze that was the signup process. The signup was operated by the Oregon Health Authority using a complicated and custom computerized signup application.

The convention center inoculation facility is operated by the Oregon National Guard and a group of health care volunteers. That facility is running smoothly with a well-organized process that is well thought out. The contrast is quite striking.

Oregon's lockdown has been particularly hard on small business. Church and religious meetings are essentially canceled. Taxes continue with new taxes piled upon old taxes. Probably most damaging is the new Oregon CAT tax.

Oregon's construction prohibits a sales tax, so our legislature found the next worst thing. That tax works in an insidious way to tax the equivalent of sales by taxing the "economic activity" of business. The result is that businesses that make small margins and are struggling under COVID lockdowns are required to pay tax bills that are larger than any small profits. Even firms that lose money during COVID receive tax bills that are due in spite of loses.

Rocky Mountain Ramblings
The Denver Report
by
Amanda Hopp, CBRE
Chief Engineer, CBC - Denver

SNOW!

It seems in Colorado, when the weather people say we are going to get tons of snow, we get an inch or two. When they say we are going to get a little bit of snow, we get tons. It's the one job where they can constantly blow the forecast and keep their jobs.

We had a forecast over the weekend of March 12 of a winter storm. The week before, I watched the forecast closely from my Weather Underground app and watched the snow total predictions s go from close to 30 inches by Monday to less than 20 inches. But all the forecasts did say one thing, we were going to get dumped on.

Sure enough, for once, the forecast was right. The storm came a bit later than originally anticipated, but by Sunday, the snow was flying. It didn't seem like much, but we quickly watched it accumulate on the grass and back deck.

My husband went out once on Sunday to clear the driveway so he wouldn't have the full amount to do on Monday. That was a huge help, as Monday I had to get out of the house and drive to get a COVID test.

We had over 20 inches of snow, and it stopped the city for quite a while. The main roads were mostly unplowed. Out where I am, the roads were closed due to several abandoned/wrecked cars. Even the toll road near us had vehicles just abandoned in the middle of the road.

By Tuesday, things were getting back to normal. The neighborhood roads were still difficult to pass, but with the work of the sun and other vehicles driving on the roads, they cleared up by midweek.

All our stations rode through all this with no issues. Actually, the only real issue was the satellite receiver at the KLZ transmitter site. Monday afternoon, I was asked about it when some shows quit coming through. I thought it was snow in the dish, but it was the receiver itself. I did a reboot and it came right up. I saw no signs of a power bump, but also no issues since, either.

COVID

You did read above that I had to go get a COVID test. My dad had begun feeling a bit under the weather the week of the 8th. Nothing major, allergy-type stuff. By Thursday night, he texted me that he was staying home Friday. I ran into him at lunchtime and he informed me he had just gone to get a COVID test. He found out Saturday he was indeed positive and told me to get tested.

This was in the middle of the winter storm, but I looked online and found The Little Clinic at King Soopers (supermarket) was open, and I made an appointment for that Monday (15th). They had a 15-minute rapid test, and sure enough, I was positive.

The thing is, I had, on and off for months, had days where I felt like a mild head-cold coming on. It would last a day or two, then go away. So, I had that the same week my dad started feeling sick as well. I thought nothing of it. The day he tested positive, I noticed my symptoms getting a bit worse.

I'm glad to be mostly through it though. I'm still tired all the time, but I'm able to go to work. I just end up going home and napping for an hour or two.

Attempted Truck Theft

We got the registration renewal for the work truck, and with it the requirement for an emissions test. I went down to the truck, planning to go get it done on the 26th, and found the ignition punched. Someone had also punched the lock on the driver door, something I couldn't see in the parking garage.

We keep the truck parked in a reserved spot on the first level of the multilevel parking garage at the office. We can see it any time we enter or exit the parking garage. It's under a bright LED light, too. We thought this would keep us safe.

A would-be thief punched the ignition in the company truck. Too bad (for him!) that the battery was dead!

I had last driven the truck two weeks prior, before my COVID diagnosis, so attempted theft happened sometime in that time period. The battery was dead as it often is in the winter when the truck sits for weeks at a time, which was good news for us as this is most likely what kept the thieves from taking it.

I was able to get a tow truck out and the driver was able to get the truck into neutral, a good thing since it would not fit through the exit door up on the dolly. We pushed it out of the garage, and he loaded it.

We were expecting a couple thousand-dollar fix, but all told, to tow and get the ignition/door handle repaired, was less than $500. They even got the work done fast. I was able to pick it up the next day.

We will now begin storing it at the KLZ transmitter site. We have a three-bay garage that is alarmed, along with cameras that look at the front of the building. Truth is, this is where we'd need it the most anyway, as the trailer and tractor are out there as well.

Coming Up

Spring is here at long last! Now if the weather would just follow. I know in many other places, spring storms are happening in full force. We still have snow in the forecast, with higher temps a day later. I am ready for rain rather than snow.

With spring comes growth. The last two years, we have been blessed with very little growth at the three sites we maintain. This also means the tractor hasn't been used much. I hope we get to use it some at the sites this year.

If nothing else, I want to be able to knock down some prairie dog mounds. The prairie dogs dig and build these big mounds and they get in the way and make driving to towers a pain. I know some of the mounds will get rebuilt, others are dormant and won't. It gives me a satisfied feeling to destroy the mounds.

I look forward to doing some outside work this year. I have some projects of my own I would like to do at some of the sites. It will be nice to schedule some time away from the office and get some vitamin D while I work at the transmitter sites.

That about covers it for this edition. I pray you all stay safe and well.

KBRT • Costa Mesa - Los Angeles, CA
740 kHz/100.7 MHz, 50 kW-D/0.2 kW-N, DA-1
KNSN • San Diego, CA
1240 kHz/103.3 MHz, 550W-U
KCBC • Manteca - San Francisco, CA
770 kHz/94.7 MHz, 50 kW-D/4.3 kW-N, DA-2
KKPZ • Portland, OR
1330 kHz/97.5 MHz, 5 kW-U, DA-1
KLZ • Denver, CO
560 kHz/100.3 MHz, 5 kW-U, DA-1
KLDC • Brighton - Denver, CO
1220 kHz, 660 W-D/11 W-N, ND
KLTT • Commerce City - Denver, CO
670 kHz/95.1 MHz, 50 kW-D/1.4 kW-N, DA-2
KLVZ • Denver, CO
810 kHz/94.3 MHz/95.3 MHz, 2.2 kW-D/430 W-N, DA-2
WDCX • Rochester, NY
990 kHz/107.1 MHz, 5 kW-D/2.5 kW-N, DA-2
WDCX-FM • Buffalo, NY
99.5 MHz, 110 kW/195m AAT
WDCZ • Buffalo, NY
950 kHz/94.1 MHz, 5 kW-U, DA-1
WDJC-FM • Birmingham, AL
93.7 MHz, 100 kW/307m AAT
WCHB • Royal Oak - Detroit, MI
1340 kHz/96.7 MHz, 1 kW-U, DA-D
WRDT • Monroe - Detroit, MI
560 kHz/107.1 MHz, 500 W-D/14 W-N, DA-D
WMUZ-FM • Detroit, MI
103.5 MHz, 50 kW/150m AAT
WMUZ • Taylor - Detroit, MI
1200 kHz, 50 kW-D/15 kW-N, DA-2
WPWX • Hammond - Chicago, IL
92.3 MHz, 50 kW/150m AAT
WSRB • Lansing - Chicago, IL
106.3 MHz, 4.1 kW/120m AAT
WYRB • Genoa - Rockford, IL
106.3 MHz, 3.8 kW/126m AAT
WYCA • Crete - Chicago, IL
102.3 MHz, 1.05 kW/150m AAT
WYDE • Birmingham, AL
1260 kHz/95.3 MHz, 5 kW-D/41W-N, ND
WYDE-FM • Cullman - Birmingham, AL
101.1 MHz, 100 kW/410m AAT
WXJC • Birmingham, AL
850 kHz/96.9 MHz, 50 kW-D/1 kW-N, DA-2
WXJC-FM • Cordova-Birmingham, AL
92.5 MHz, 2.2 kW/167m AAT

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