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Lessons learned from COVID-19

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This COVID-19 pandemic has been something. A year ago, when businesses started to close, we were told to confine ourselves to our homes, and there was a huge surge in demand for toilet paper. We as a country had no idea what to expect. For some of us, it was a flashback to September 12, 2001, the day after 9/11. We had just been attacked by a seemingly “invisible” enemy that we did not anticipate, and we were forced to halt our regular lives and ponder our existence. Like the days and months that followed 9/11, we grew to accept a “new normal” that encompassed no-fly zones and heightened TSA security. Now again faced with a new invisible enemy across the world, we have grappled with the gravest public health crisis since 1918, when the world faced the Spanish flu epidemic.



COVID and connectivity

Last October, my youngest son’s high school football team had a member test positive for COVID, a development that cancelled their season just prior to the state playoffs. Though he was disappointed, my son wanted to get tested to see if he was positive. I scheduled him to get tested with our doctor on a Friday and decided to get myself tested as well. I had developed a slight cough and felt like my normal seasonal allergies were hanging on a bit too long this year. I received a text from our doctor that Saturday evening that went like this: “Hey James. We have your test results. Trevor was negative. You were positive. How are you feeling?”

So now I was officially afflicted with the Great Plague of 2020. Wonderful. My doctor taught me very quickly the guidelines for survival:

- Monitor your temperature daily and report it to the doctor’s office. Take Tylenol to control a fever.
- Pay attention to your breathing – be aware of wheezing or shortness of breath. Take Robitussin DM and Mucinex to combat any chest congestion.
- Take Vitamin C and zinc.
- Drink lots of fluids.
- Physically separate yourself from other family members
- Rest – get the sleep to help you recover.

My youngest son (age 17) was already under quarantine and precluded from attending high school, so we sent him to live with our oldest son (24) across town. The enticement of Google Fiber was a welcoming factor for his virtual classroom interactions—to the point it was hard to get him to come back home. We gave my older son some money and beef to feed his younger brother so both these large young men were well-fed during that time. I say “beef” because my wife’s family farms and raises cattle in central Nebraska, so our freezer is usually well-stocked thanks to my father-in-law and brother-in-law.

My middle son is a senior-year mechanical engineering major at the University of Missouri. He was impacted by COVID this summer, when his internship with a major engineering firm in Kansas City was cancelled. After returning to campus, one of his friends contracted COVID. My son tested negative but was now enduring the same challenge we had at home of distancing himself from others within the same living quarters. Fortunately, being in Columbia, he has access to adequate Internet to enable him to attend his classes virtually. His only in-person class this semester has been a lab, which is difficult to do virtually.

I vacated our bedroom to keep my COVID to myself in a spare bedroom. My wife tested negative. She stayed in our bedroom, and probably got some of the best sleep of her life during that time without my usual sleep patterns to disturb her.

I was already working from home, so work was not going to be a great challenge. I had hip replacement surgery in early October, tested negative for COVID at that time, and had already been home recovering from surgery. I was going to physical therapy three times a week and was enjoying pain-free freedom with the new hip. That was now over, and I was confined to the house. My apologies to the staff at Summit Rehab, who were subsequently quarantined by virtue of reporting my misfortune to them.

My excursions back to the office for “real” Internet were over as well. Our home is in a rural subdivision between Lee’s Summit and Blue Springs, MO, served with the wonderful 6 Mb DSL service that so many Americans are familiar with. When you work for a communications company that has a 10 Gb connection to the Internet at your office, you become spoiled to say the least. No more quick trips to the office to sync up or download files. If you do not have the luxury of experiencing 6 Mb DSL yourself, let me share that video calls are a challenge. I sometimes augment my home Internet usage with my hotspot on my wireless phone to provide some performance relief for key interactions with customers. This only works when no one else is trying

to use the home Internet at the same time. We quickly adopted a “no Netflix during the day” rule as our COVID mantra.

Now, if this is my Internet experience living in rural-suburban Kansas City, what is the experience of people in more remote areas of Missouri? Kansas? Arkansas? Iowa? Nebraska?

Inadequate Internet in rural America

The reality of the situation today is that Internet access is vastly inadequate in rural America. It is a great challenge to serve every citizen with the level of service that is necessary to operate in today’s society.

Many members of my family in Nebraska farm and ranch for a living and live in a typical rural environment. Thanksgiving is always a big gathering, where they would let me know during my time at ALLTEL about where they needed wireless coverage or would offer a corner of their land for a new tower. Many of them utilize the cutting-edge technology that drives their tractor for them and tells them their yields when they are harvesting crops. When I talk to them about “precision agriculture,” many of them are skeptical. “You guys can create more stuff than we can pay for” is a typical response, which is true.

In conversations I am having with major universities, one of the major obstacles is their budget. Who budgeted for “precision agriculture development?” In most cases, line items like this would likely be included under a technology and innovation budget, which is a rather large pot with many hands in it. Times are tough for universities right now, with most providing classes in a virtual environment and hearing from parents complaining about their kids not getting the education they are paying for.

Precision agriculture, and rural broadband for that matter, will only become a reality when we in the communications industry realize we cannot individually solve this issue. We must have partnerships between the various technology segments to efficiently bring products and services to market that farmers and ranchers can afford and will make them more efficient and productive. “Spend money to save money” is an infamous phrase that marketing people love to expound upon. It is the right mantra if it makes me more efficient and saves me money at the end of the day.

At Bluebird Network, we have embarked on a “fiber to the farm” initiative to spur broadband growth in rural America, starting with Missouri and Illinois. In the initial phase, we are taking a measured approach to develop a cohesive service offering:

1. Utilizing our existing partnerships and relationships with wireless providers and IoT companies promoting precision agriculture.
2. Identifying medium-to-large farm and ranch operations within two miles of our existing fiber routes.
3. Working with colleges and universities to connect their various research facilities (Mizzou has 12) via a hybrid solution including fiber, wireless network and IoT devices.

Prioritizing rural broadband

Back to COVID. As adverse as the impact of this virus has been on our society and world, we need to take a step back to identify our current technology shortcomings and improve our infrastructure now for the sake of future generations. Rural broadband must be a priority in 2021—not just for the sake of precision agriculture but also for the people who live in rural areas, and their kids that need to access school resources to virtually attend class and do their homework. There are countless efficiencies that can be realized, from smart water systems to control this precious resource, to drones that fly over fields and use sensors to apply the appropriate amount of fertilizer, and to security cameras that ensure that substantial resources and equipment are not stolen in these remote locations.

In closing, I encourage each of you to please take COVID seriously. Wear a mask. Limit your close interactions with people, but love your family, especially parents and grandparents. Take care of yourselves and take care of each other. I've fully recovered and gained some perspective from my experience. Despite the current political environment, we are all Americans and will always share common ground. Let's agree to make our world more enjoyable and more efficient for future generations. If we don't do it now, we are missing a great opportunity to accelerate the promise of evolving science and technology to make our lives better.