

FOR AUGUST 2020

Clay's Corner

Providing news and views from a broadcast engineers perspective since September 1986

July started out, early in the morning of the 1st with another Capital Hill media event as the City moved in to clear away what was known as the CHOP. I just happened to tune in at 5 a.m. to catch the action. I'm not sure if the local stations got clued in as to what was coming down or not, but all four local TV news departments appeared to be ready for the event. This 6 block area of Seattle has gathered it's share of national attention, helped by the coverage of all the news operations. Too bad it was not raining hard, many may be getting their image of Seattle altered.

Many of those arrested in the process of clearing the CHOP were soon back on the street confronting Police and vowing to continue their revolution and demanding that funding for the Police be cut by 50%. According to reports, the City has vowed to not let this happen again, as protesters indicated they may target other locations. Thankfully, unlike other places in the world, they have not taken over a broadcast station to be used to broadcast their demands. Not sure what a broadcaster would do in Seattle if that were to take place. The fact that the studios of all of our stations are located away from their transmitters would likely cut short their ability to actually be used to broadcast, nonetheless, I would hope that local stations have hired extra security and are being watchful.

To the south, in Portland, things have gotten ugly. When the word 'riot' is used to describe the situation it's a sad day for not only that city but our country. Because I am from what one would call 'The Old School', our idea of the place to make changes is at the ballot box, not by destroying property and hurting people. The idea of intentionally trying to injure police is amazing. I keep hoping that there are those with much cooler heads will prevail before the very fabric of our country unravels completely.

As if this were not enough bad news....COVID-19 numbers are getting worse. Political leaders are reversing course with announcements that the hoped-for 'opening up' are on hold, or, are going to be more restrictive.

It's become increasingly clear that the wearing of masks is going to help with the spread of the virus. Unfortunately, too many are not in agreement, which further complicates matters.

Everyone was hoping that schools, at all levels, would be able to open this fall. It's become clear that this is not going to happen with remote learning to be, at least for a while, the new normal.

Our State, at this writing, is well over 50,000 cases and 1500 deaths. Now that we are six months into this mess, instead of the curve being flattened, it's going the other way. Dr. Fauci recently stated that we are not quite half way through this situation. Just north of Seattle is the Canadian Border where their approach to dealing with the virus appears to be better, leading one to believe that the U.S. has, and is, doing something wrong. BTW – the Border is still closed if you were thinking of heading north.

To help get a handle on when this might get better, look at the events that are being cancelled list. Appears that any large gathering between now and ??? are cancelled. The big headline in that department is the announcement that CES 2021 will NOT be taking place in Vegas. On that front, some interesting news recently with a Seattle connection. The University of Washington is reporting encouraging news on the vaccine front, at the same time reporting grim numbers regarding the number of cases to come.

So who is doing well in all of this? How about Zoom?

The Seattle and Portland SBE Chapters have been using the system with great success. Recently our SECC/EAS Meeting gave it a try. I suspect that our attendance was greater than it would have been had we met in-person.

As the COVID situation drags on, with perhaps no end until there is a vaccine, so do the 'work-from-home' restrictions. For those who are on TV, this means continued casual dress, making me wonder when the day comes that the anchors are back in the studio, will they be wearing historic business attire? On the Radio side – I suspect that T-shirts and sweats are pretty much standard. Likely this change in dress code is prevalent in all industries. I recently read that this is having a negative impact on dry cleaners, as casual dress does not require their services.

Another thought. Can you imagine what it would have been like to have all these Radio and TV operations in homes in the days before high-speed Internet? TV would have required a microwave shot for every anchor. Radio would have required an 'Equalized Radio Loop" or Marti system. Perhaps this Pandemic was waiting until broadcasting was ready?

Looking at the ups and downs during these historic times:

- Home prices are climbing rapidly. Granted the historic low interest rates had something to do with this, but who would have thought?
- The Stock Market got over it's initial jitters and has climbed back. Many portfolios bottom lines continue to grow.
- Then, of course, Pot and Alcohol sales are up.



It's not a big ask to wear a mask!

Another segment to be hit by COVID – Broadcast Station sales. The number of Radio and TV transactions is at historic lows.

Recent data from Nielsen is showing the percentages of the population that is either Black or Hispanic in some of the U.S. Markets. Very interesting. Population figures are for those over 12 years of age. The number in brackets is the market rank, followed by the market population.

New York (#1) 16,110,500 Black: 16.65% Hispanic: 25.40%

Los Angeles (#2) 11,469,700 Black: 6.92% Hispanic: 43.54%

Chicago (#3) 7,952,400 Black: 16.63% Hispanic: 21.36%

San Francisco (#4) 6,764,400 Black: 6.48% Hispanic: 22.29%

Dallas-Ft. Worth (#5) 6,339,800 Black: 16.59% Hispanic: 27.48%

Houston-Galveston (#6) 5,979,700 Black: 17.41% Hispanic: 35.75%

Atlanta (#8) 4,971,100 Black: 35.41% Hispanic: 10.26%

Philadelphia (#9) 4,627,200 Black: 20.73% Hispanic: 9.34%

Spokane (#96) 590,200 Black: 2.30% Hispanic: 5.25%

Boise (#92) 601,600 Black: 1.46% Hispanic: 12.80%

So, what about us?

Seattle-Tacoma (#12) 3,932,400 Black: 6.5% Hispanic: 8.7%

The early July, 12+ Radio Ratings have some interesting results.

- KIRO-FM continues to be #1

- KZOK keeps climbing...Now #2
- The big surprise is the #3 rated station...KING-FM! Proving there really is an audience for Classical Music.
- #4 is KUOW. Interesting to note how half of the top four stations don't plan music.
- Highest Rated AM – KOMO
- In the Country Music race, it looks like *The Bull* is beating *The Wolf* by a good measure.
- KNKX must of changed something as they have been sliding downward.
- As you would expect – The three Sports-Talk stations are all doing poorly.

While on the subject of Radio Ratings and Nielsen, the ratings gathering company has announced a cost cutting move that will eliminate a number of smaller markets, including the following in the PNW: Bend, Oregon, Tri-Cities and Yakima, Washington. I presume this will represent an opportunity for others in the rating business?

According to 'The Commish' the TV Repack is largely completed...a 39-month process. Now for the next repack...C-Band.

According to sources, McClatchy is being taken over by a 'Hedge Fund' Chatham Asset Management. They are the same one that is the parent company for the National Enquirer. McClatchy, based in California was, at one time, a major newspaper operation, owning papers in several markets...including Tacoma, where they purchased the Tacoma News Tribune at the same time as the former company spun off their Cable and Broadcast divisions to Viacom. McClatchy also owns a piece of the Seattle Times...Not much has been said about that connection.

Meanwhile, in a much more peaceful place....West Tiger Mountain - the first of the Month saw the tower project be 'topped out'. If you look closely you will find a tree, and what's left of a flag attached to the top. This is a long, and interesting, tradition. For more about it, here are some links:

<https://www.questia.com/library/journal/1P3-252595321/the-topping-out-traditions-of-the-high-steel-ironworkers>

https://en.wikipedia.org/wiki/Topping_out

https://www.aisc.org/globalassets/modern-steel/archives/2000/12/2000v12_christmas.pdf



The 'rods' on the left and bent toward the tree are devices designed to deal with lightning. Yes, West Tiger's towers do, indeed, get struck frequently. The round object is the new LED Tower light for the top of the tower. This replaces the old incandescent fixture what was there before. It had not been working for over a year because the wiring was burned in the Antenna Fire.



This is the way the tower looked a couple of years ago, before the Antenna Fire. On the pole at the top was the antenna for KUNS-TV (Now at Queen Anne Hill). Below it was the FM Antenna that burned (Black looking objects)

Everything above the arrow was removed and replaced.



As of July 1, things look a lot different with now 7 sections of new, much smaller tower in place.

Next up, the installation of the new 16 bay ERI Axiom Antenna that will occupy the lower 4 sections of the newly installed tower.

The wires you see on the left are the hoisting cables used to haul the antenna sections up on the tower.

And, of course, you can see the 'Tree' on the left side at the top.

Looking up from under the tower the new 'Top' looks most impressive.



Putting these things together requires some really BIG bolts. This is me holding one of them.



Here you can see the newly 'remodeled' tower on the right. On the left is the other tower at the site with it's TV Antennas on the top.



The new Antenna consists of 16 of these black looking critters. Here they are assembled in groups of four prior to being hoisted up on the tower. The long pieces of pipe you see extending from the mounting brackets (Red Arrows), are called 'Stiff-Arms',

to provide additional support for the antenna in dealing with the very strong winds that are common up on the tower.



The 16 Antenna 'Bays' or elements are shown here, on the ground. They are all connected together with a lot of 'plumbing', all made of copper and brass.



When it's time to hoist them up the tower, each section will be attached to what you see here.



The top of the tower is approximately 3150 feet above sea-level. That's 2100 feet higher than the beacon lights on the towers on Queen Ann and Capital Hill in Seattle. Here you can see the new master FM Antenna installed. For those of you who are not

familiar with FM transmitting antennas, they are generally made up of many 'elements' or individual antennas together in what's call an 'Array'. In this case, the new Antenna has 16 of them. The old one that burned, had 32 (Eight high on four sides).



The top of the new Tower is empty at this time.

Perhaps, one-day, we will see antennas mounted there?

This picture, taken from the South, shows the two towers with two new antennas.

- On the left (Green Arrow) is the new antenna for KUSE-TV
- On the right (Red Arrow) is the new FM Master Antenna



All the Antenna Removal, tower modifications and new FM antenna on the right was handled by Seacomm Communications based in Sulton. The Tower components and FM Antenna were supplied by Electronic Research (ERI).

The new KUSE TV Antenna, on the left, was supplied by Kathrein-Scala and installed by Harrington Tower of Seattle.

The following picture shows a close-up of the new TV antenna.



The good news is that the five FM stations that had been operating on their auxiliary facilities are all back on their main site with their new antenna. Preliminary reports are the system is working well.

The site was a 'bee-hive' of activity for several weeks. With the site's FM's shut down, many changes and upgrades were accomplished.

Here are some pictures of some of the many folks involved with the project.



Jeff White – iHeart Media



Phil VanLiew - Entercom



Daniel Sipe – iHeart Media



Bob and Dalton – Midpoint Electric



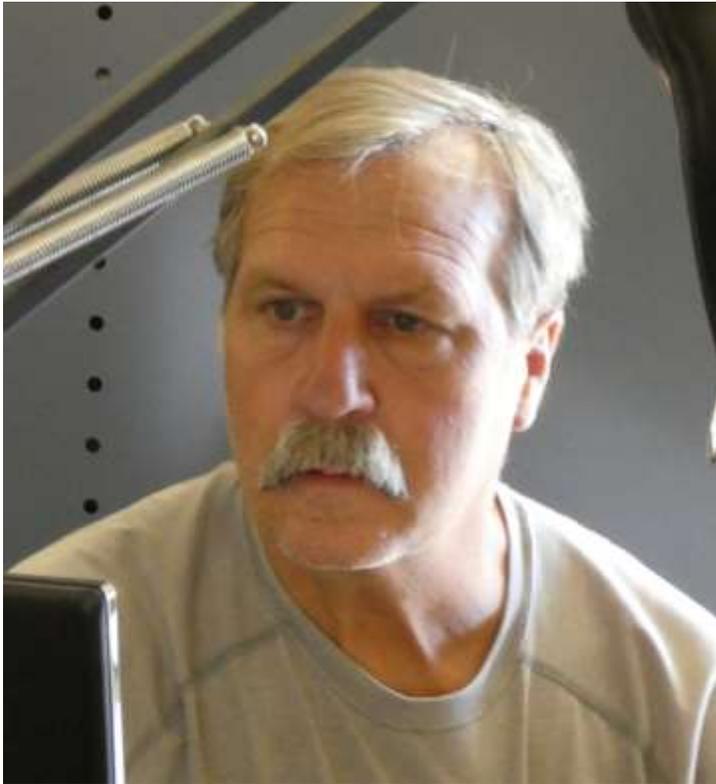
Paul Shulins – Shulins Solutions
Supplier of the new Antenna Monitor System



Alex Brewster- Hubbard



American Tower Site Manager – Joe Taylor



Keith Unfried – Electronics Research (ERL)– Supplier of the Antenna and Tower



James Boyd – Boyd Broadcast Services (Portland)

Immediately after wrapping up this big project, three folks from ERI and three from Seacom make the ½ trip to the original West Tiger FM Site to rebuild portions of that site's 32 year old Master Antenna. Here you can see several of the eight Antennas on the ground.



Much of the coordination of this project was handled by Lowell Kiesow from KNKX



Assisting Lowell with another project was Greg Ristau



Probably no surprise...there was a big increase in the number of FM Translators and Boosters in the first half of this year. The Commish says there are now 8,303 of them. Just try and find an open frequency on the FM band these days! Perhaps the Swiss look at us as a bit backward, as they are planning on shutting down all FM radio in 2024 as they move completely to all digital systems.

I 'borrowed' the following picture from Barry Mishkind for the simple fact that it brought back a flood of memories of equipment that I have used. Let me share a few of them.



- The Transmitter (the big thing in the background with KSCO in the middle).

This is an RCA BTA-1L. Perhaps one of the biggest 1,000 watt transmitters available at the time. On the left was, basically a 250 watt transmitter, on the right, the 1,000 watt amplifier. I recall seeing these rigs at KAYE in Puyallup and KELA in Centralia. Interestingly, a similar construction method was used by Collins with their 5 and 10 kW AM transmitters. (21E and 21F). In their case, they had a 1,000 watt transmitter on the left, power supplies in the middle and 5,000 watt power amplifier on the right. KOL, at one time, had two of these.

- In the equipment rack, left of the transmitter

On the top was the General Radio Frequency Monitor. Back then, an external monitor was required to make sure that the operating frequency of the station was within 20 Hz. Additionally, stations would employ an external service that would check their frequencies on a monthly basis.

Below (with the two meters) was a General Radio Modulation Monitor. The Meter on the left measured 'Carrier Shift', on the right Percentage of Modulation.

- On the surface

On the left, standing on its side, is a 16 inch record (called ET's back then). Stations in that era would often have a 'cutting lathe', whereby they would record commercials and programs for later playing on the air. When I first started in Radio (in the middle of the last century), I would play commercials on these things using these rather large turntables. Most were mounted in a separate cabinet. Inside was an electric motor and a transmission that enabled speed changes (looked like it could have been made by Maytag). Yes, later came Tape Recorders.

We've come a long long way since then. Nothing underscores this as much as the message I received from Kent Randles in Portland on the 28th.

At noon, ATSC 3.0, "Next Gen TV," debuts in Portland.

At noon, some of the channels get rearranged, and a couple disappear RF-wise from the current ATSC 1.0 channel lineup.

If you watch TV off of the air with an antenna, like me, you'll need to rescan after noon.

Chart at <http://www.sbe124.org/news-and-links-you-can-use/>

Thanks!

Kent

Congratulations to John Price, N7MWV, on passing his Extra Class Ham exam. The question several have asked is "Will John apply for a 1x2 Call"? Amateur Extra Class license holders can apply for an available call letter change to one with One letter (Number) Two Letters, such as my call sign, K7CR.

We all know that American Tower has towers all over. Interesting to note how many they employ....5,454 according to a recently published report.

There's an impact from the COVID-19 lockdowns that you probably did not think about. Seismic Noise are the ambient vibrations caused from such things are wind, rivers, ocean waves...and 'Human Activity'. According to a recent study, the Earth Seismic Noise dropped by 50% between March and May of this year.

That's about it for this month, my friends. Lord willing, I will be back next month to most of the usual locations.

Until then, stay safe as you carefully venture out with your facial coverings!

Clay, K7CR, CPBE

SBE Member #714 since February 5th, 1968