CAARA NEWS

PRESIDENT'S COLUMN
by Jon- K1TP

Another enjoyable month at CAARA, a Christmas luncheon, a general class upgrade taught by Gardi, a VE Session by Rick, Tuesday afternoon informal meetings, providing communications for local road races Emergency Management meetings, etc. Membership in CAARA is the best bargain in ham radio, even cheaper than a ARRL/QST membership!

This time of the year I try to think of ways to improve the club and I have come to the conclusion the only way to improve the club is to get more members to utilize our club facility. We need more members to come and see what we have going on! How do we do that?

That is a question the board has been struggling with for years. We have over 100 paying members and without them the club would not be financially viable. I find only about 20 of the members actually show up and use the club facility. I understand many of the members pay dues and expect nothing in return, they are supporting the club from afar and we really appreciate that. Many members are a good distance away or elderly and cannot make it to the club, we sure understand that.

Tony carving up a storm at the club Xmas Party

But I think we have another 15-20 members who are able to get to the club that just have not made it here…..yet! I am hoping this is the year you are going to come to just one of our events and meet the friendly gang at the club.

In January we have three "food events" being cooked in our immaculate kitchen. The kitchen that just scored 100 percent in the annual city Health Department inspection and cooking by our very own ServSafe approved Chef Bill- W1WMM.

Two scholarship breakfasts on Sunday mornings, January 7 and 21 from 9-11am helps fund a local scholarship and provide improvements to the club facility. Please stop by!

The member meeting on Saturday, January 13th at noon will include a free lunch and the topic will be building a J-pole antenna. This is a hands on meeting building antennas by Chris- W1TAT.

I hope to see you at one of the events, come on down and see what we have cooking!

INFORMATION DESK
By Dean- KB1PGH

Are you shopping around for a new HF rig or do you want to know if the rig you want will be able to perform under crowded band conditions and if it can "Hear" well. Then you should look into the rigs receive performance specifications. For this month I will cover the" Reciprocal Mixing Dynamic Range" or RMDR specification of an HF receiver. Basically what we are measuring in your rig with the RMDR index is how well your rigs receiver circuitry can handle hearing two SSB or CW signals that are 2 KHZ apart. Especially when one signal is particularly stronger than the other weak one next to it. What happens is this. If your HF rig has low RMDR rating in dB then lets say your hearing a strong station, what happens is your receivers reception sensitivity deteriorates and thus "Blocks" your radio from hearing the weak station 2 KHZ away from it. This is especially important when

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Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2
meter W1GLO repeater on 145.130 MHz with
antennas located on the ATT cell tower in the
Blackburn Industrial Complex in Gloucester
Massachusetts. It has an average effective radius
of 60 miles, and serves Eastern Massachusetts,
Cape Cod, Rhode Island, Southern New
Hampshire, and maritime mobile stations.

CAARA also operates the W1GLO repeater on
224.900 located at the CAARA clubhouse.

The former W1RK 443.700 repeater is
now on the ATT cell tower in the Blackburn
Industrial Complex with greatly enhanced
performance.

The Association is one of the few amateur radio
clubs that has its own clubhouse. Located at 6
Stanwood Street in Gloucester, it includes a
permanent HF station with beam, vertical/wire
antennas along with an operating 2 meter packet
station as well as 2/440 meter voice and 220 MHz
Transceivers.

Amateur radio exams are held on the second
Sunday of each month at 10:00 AM at the
CAARA clubhouse. Anyone who is considering
a new license or an upgrade, is welcome to test
with us. There is no pre-registration necessary.
Contact the head of our VE team Rick Maybury
if you have any questions about monthly testing.

Monthly member meetings are held on the first
Wednesday of each month at 7:30 PM except for
July and August.

Each Sunday evening at 9:00 PM, the club
operates a 2 meter net on 145.130. This is an
open and informal net which disseminates club
news and prepares operators for emergency
communications work. All are invited to check
into the net as club membership is not a
requirement.

New! The club is open every Tuesday from 5-
8PM for CAARA members to stop by and
socialize, as well as use the extensive collection
of ham radio gear.

contesting or trying to hear the "Weak ones" when dxing. In todays rigs should be looking for an RMDR of at least 80 dB for SSB and 90 dB for CW. For example,my Icom 7300 software defined radio has a RMDR of 97 dB which is pretty good. If you want to know what the RMDR of your rig is look up Rob Sherwoods receiver specs page on Google. For next month I will cover another receiver spec called "Phase Noise".

On a different topic I will let you know what contests are going on in January so will know about opportunities to get on the radio.

On January 8th there will be the ARRL`s "Kids Day" on the bands as well as the RTTY Round up if you into that mode.

On January 13th there will be the ARRL North American CW QSO party and the weekend after that on the 20th there will be the ARRL SSB North American QSO Party. On Saturday January 20th it`s the ARRL VHF Contest and last but not least on January 27th there is the winter field day event.

Those are just a few events going on this month. For the prepper tip of the month make January the time to go through all your prepper gear and inspect it. Especially all the first aid medications and any storage food you may have to make sure nothing is beyond the expiration dates.Make sure all your batteries are fresh too in your flashlights.

That`s it for now and we`ll see you in February.

FCC Penalizes Marketer of Ham-Band Drone Audio-Visual Transmitters

The FCC has imposed a $180,000 civil penalty on a Sarasota, Florida, company that had been marketing noncompliant audio-visual transmitters intended for use on drones in violation of the Commission's Amateur Service and marketing rules. In an *Order* released on December 19, the FCC explained that Lumenier Holdco LLC (formerly known as FPV Manuals LLC) was advertising and marketing uncertified AV transmitters capable of operating on both amateur and non-amateur

frequencies, including bands reserved for federal government use. Some of the transmitters also exceeded the 1-W power limit for Amateur Radio transmitters used on model craft, the FCC said.

"Moreover, entities that rely on amateur frequencies in operating compliant AV transmitters must have an amateur license and otherwise comply with all applicable laws for such operation," the FCC said in the *Order*. The FCC said that while it generally has not required amateur equipment to be certified if it operates solely on Amateur Radio frequencies, certification is required if a device can operate outside of the ham bands.

Last January, in what it called an "extremely urgent complaint" to the FCC, ARRL targeted the interference potential of a series of audio/video transmitters used on unmanned aircraft and marketed as Amateur Radio equipment. ARRL General Counsel Chris Imlay, W3KD, said those transmitters used frequencies intended for navigational aids, air traffic control radar, air route surveillance radars, and global positioning systems.

In addition to paying a civil penalty, Lumenier, which has admitted to marketing the noncompliant AV transmitters, will enter into a *Consent Decree* with the FCC to settle the enforcement proceeding and terminate the investigation.

The case stemmed from complaints received by the Wireless Telecommunications Bureau's Spectrum Enforcement Division. "The investigation revealed that some of the AV transmitters marketed by Lumenier were capable of being operated outside of the authorized Amateur Radio Service bands, including on frequencies reserved in whole or in part for federal agencies, but were not certified or otherwise compliant with the rules," the FCC said in its *Order*. "These AV transmitters are considered intentional radiators and must comply with the Commission's Equipment Authorization and Marketing rules.

The FCC said that Lumenier ceased marketing the noncompliant transmitters after receiving a *Letter of Inquiry* from the FCC last April. The *Consent Decree* accompanying the FCC *Order* requires Lumenier to admit that it violated equipment authorization and marketing rules and establish a compliance plan to ensure that the company complies with FCC rules in the future.

CAARA DECEMBER CHRISTMAS PARTY

Tony- AB1XK and Dave-N1CDL doing a little carving activity while our main cook in charge, Bill-W1WMM, was preparing vegetables, etc away in the background and directing activities. The meal was superb, the club looked great, and a good time was had by all.

A.Marks photo

A Marks photo

Chef Bill- W1WMM
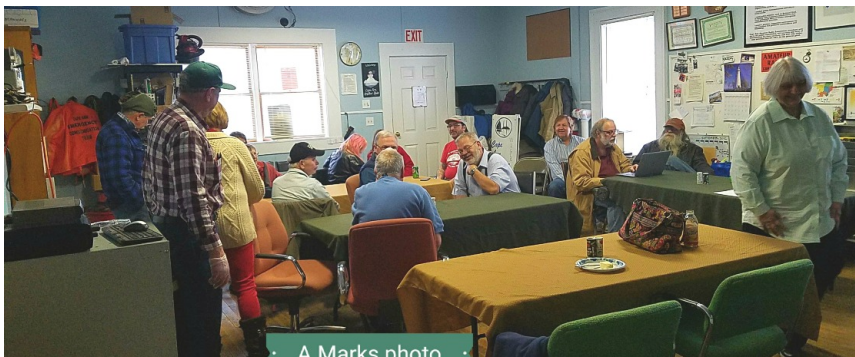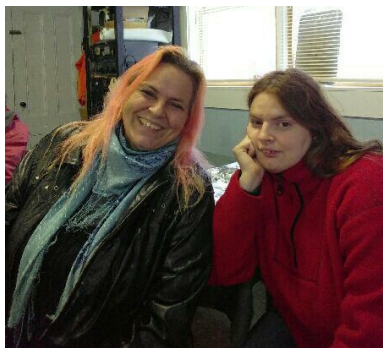
The member get together before the food was put out on the serving tables. It was nice to use the first floor of the club for the luncheon, we used to rent a hall at a local church for this event.

Cognitive Lag

By Curtis- AA3JE

I am fascinated by the digital modes. From the first time I fired up at 10 watts, and connected to Tierra Del Fuego, I was hooked. It was fascinating, it was powerful, and it confused the heck out of me.

The reason had nothing to do with Ham Radio.

It had to do with "features".

Now I have to confess, my ideal radio was the old "All American Five", which had five tubes, and usually four knobs. BAND, ON/OFF VOLUME, TUNING, and BAND SPREAD. I could use those, they were friendly, and part of my heart.

But you can't do digital on a radio like that.

So I bought Tiger Tronics neat little interface, painfully worked my way through the instructions for how to set the jumpers, got the right audio plugs, and connected it up. That was the easy part.

The hard part was my computer.

For everyday use I use a Mac. It's simple, works, and easy.

But for much Ham Software, you need to fire up the PC. So I did.

"I AM VERY UNHAPPY," came on the screen.

"Suck it up! Man up! Just boot up, fella!" I said.

"YOU HAVE NOT TURNED ME ON IN MONTHS!"

"Sorry about that."

"I NEED TO UPDATE."

"Feel free."

Four hours later, after hitting "Proceed" fifty times, it had updated.

"YOU ARE WIDE OPEN TO MALICIOUS MALWARE AND HACKERS! UPDATE MY DEFENSIVE PROGRAMS."

I sighed, and pressed the button.

"WELCOME TO MALARKEY SOFTWARE, THE BEST ANTI-VIRUS SOFTWARE IN THE WORLD. WE SEE YOU NEED TO UPDATE. PLEASE BE ADVISED THAT YOUR SOFTWARE IS OBSOLETE! YOU NEED MALARKEY GOLD, THE COMPLETE 24/7, 360 DEGREE, IRON CLAD PROTECTION THAT KEEPS OUT ALL NON-AUTHORIZED USERS, AND OCCASIONALLY YOU. PRESS ANY KEY TO CONTINUE."

I got out my credit card.

"TOO PROCEED, YOU NEED ONLY PAY $99.95 FOR THE BEST PROTECTION ANYONE CAN GET!"

I paid.

"PLEASE WAIT WHILE WE SCAN YOUR HARD DRIVE FOR ANYTHING THAT LOOKS SUSPICIOUS. BIT BY BIT."

Two hours later it was ready to go.

"READY."

I clicked on the ham website that had the Digital Software.

"OH MY GOD! YOU WANT TO DOWNLOAD SOFTWARE FROM THE INTERNET!"

"Yes."

"DON'T DO THAT! I FORBID IT!"

"Why?"

"I AM SPANKY CLEAN, VIRUS FREE, AND HAPPY. YOU WANT TO POISON ME."

"No I don't."

"YOU HATE ME, I CAN TELL."

The computer had a point, I was getting pretty annoyed. But after two days of fooling around I got the software downloaded.

Then I faced the second problem. No manual. Free software. Free software with a thousand extra features. Screw up one, it stops working.

After a week of fooling around, I got an input screen.

And for a week, it worked perfectly! I made a bundle of contacts.

Then I clicked something wrong. The headphones went dead, the rig went dead, and I never got it working again.

That was five years ago.

Then I pick up this month's QST. Seems there is a new digital mode called FT8.

I have a plan. I will buy a big bottle of gin, and turn on the PC again………

From the Board of Directors

STATION OF THE MONTH- Dean- KB1PGH AND SON-Cliffy

PRODUCT REVIEW BY JON- K1TP

RF Applications VFD (vacuum fluorescent display) wattmeter, no longer in production. I purchased this about ten years ago for $249.00.

What I have enjoyed about this rf wattmeter is it still works after ten years and hundreds of hours of use. It is capable of reading up to 3kw forward power and reads the SWR at the same time. A 5kw model was available as well at the time. I paid a few dollars extra and had my call sign programmed into the display. I have never liked the cross needle type of meters, I like looking at the display and getting the info without putting on my reading glasses and trying to read the intersection point of two needles….I guess I am a little lazy!

One of the reasons I bought this display unit was the built in safety feature which protected my amplifier in case of sudden high antenna SWR conditions. You could set the unit for any maximum SWR you wanted which in turn would trip out the amplifier keying circuit out and save the amplifier and tubes.

At the time, I had an Alpha 99, a 1.5 kw amplifier with very expensive tubes, about $700 worth. I would set the power meter for 1.5 to 1 maximum SWR and if it went over that it instantly shut down the keying circuit to the amplifier.

I currently have an Acom 1010 amplifier which runs about 700-800 watts output. This new amplifier was designed to withstand up to a 3 to 1 SWR without any harm to the tube and if it goes over that SWR, it automatically shuts down.

I still plan on hooking up the old VFD wattmeter to the keying circuit as an added measure of safety….it is possible while you are operating for the SWR to go crazy high, believe me, I have been there when an antenna trap shorts out or a leg of a dipole breaks….it's scary when running high power! It has been my experience, smoke and crackling sounds emitting from your tuner or amplifier are not a good omen of things to come..

Hard Questions: Is Spending Time on Social Media Bad for Us?

By David Ginsberg, Director of Research, and Moira Burke, Research Scientist at Facebook

With people spending more time on social media, many rightly wonder whether that time is good for us. Do people connect in meaningful ways online? Or are they simply consuming trivial updates and polarizing memes at the expense of time with loved ones?

These are critical questions for Silicon Valley — and for both of us. Moira is a social psychologist who has studied the impact of the internet on people's lives for more than a decade, and I lead the research team for the Facebook app. As parents, each of us worries about our kids' screen time and what "connection" will mean in 15 years. We also worry about spending too much time on our phones when we should be paying attention to our families. One of the ways we combat our inner struggles is with research — reviewing what others have found, conducting our own, and asking questions when we need to learn more.

A lot of smart people are looking at different aspects of this important issue. Psychologist Sherry Turkle asserts that mobile phones redefine modern relationships, making us "alone together." In her generational analyses of teens, psychologist Jean Twenge notes an increase in teen depression corresponding with technology use. Both offer compelling research.

But it's not the whole story. Sociologist Claude Fischer argues that claims that technology drives us apart are largely supported by anecdotes and ignore the benefits. Sociologist Keith Hampton's study of public spaces suggests that people spend more time in public now — and that cell phones in public are more often used by people passing time on their own, rather than ignoring friends in person.

We want Facebook to be a place for meaningful interactions with your friends and family — enhancing your relationships offline, not detracting from them. After all, that's what Facebook has always been about. This is important as we know that a person's health and happiness relies heavily on the strength of their relationships.

In this post, we want to give you some insights into how the research team at Facebook works with our product teams to incorporate well-being principles, and review some of the top scientific research on well-being and social media that informs our work. Of course, this isn't just a Facebook issue — it's an internet issue — so we collaborate with leading experts and publish in the top peer-reviewed journals. We work with scientists like Robert Kraut at Carnegie Mellon; Sonja Lyubomirsky at UC Riverside; Dacher Keltner, Emiliana Simon-Thomas, and Matt Killingsworth from the Greater Good Science Center at UC Berkeley, and have partnered closely with mental health clinicians and organizations like Save.org and the National Suicide Prevention Lifeline.

What Do Academics Say? Is Social Media Good or Bad for Well-Being?

According to the research, it really comes down to how you use the technology. For example, on social media, you can passively scroll through posts, much like watching TV, or actively interact with friends — messaging and commenting on each other's posts. Just like in person, interacting with people you care about can be beneficial, while simply watching others from the sidelines may make you feel worse.

The bad: In general, when people spend a lot of time passively consuming information — reading but not interacting with people — they report feeling worse afterward. In one experiment, University of Michigan students randomly assigned to read Facebook for 10 minutes were in a worse mood at the end of the day than students assigned to post or talk to friends on Facebook. A study from UC San Diego and Yale found that people who clicked on about four times as many links as the average person, or who liked twice as many posts, reported worse mental health than average in a survey. Though the causes aren't clear, researchers hypothesize that reading about others online might lead to negative social comparison — and perhaps even more so than offline, since people's posts are often more curated and flattering. Another theory is that the internet takes people away from social engagement in person.

The good: On the other hand, actively interacting with people — especially sharing messages, posts and comments with close friends and reminiscing about past interactions — is linked to improvements in well-being. This ability to connect with relatives, classmates, and colleagues is what drew many of us to Facebook in the first place, and it's no surprise that staying in touch with these friends and loved ones brings us joy and strengthens our sense of community.

A study we conducted with Robert Kraut at Carnegie Mellon University found that people who sent or received more messages, comments and Timeline posts reported improvements in social support, depression and loneliness. The positive effects were even stronger when people talked with their close friends online. Simply broadcasting status updates wasn't enough; people had to interact one-on-one with others in their network. Other peer-reviewed longitudinal research and experiments have found similar positive benefits between well-being and active engagement on Facebook.

In an experiment at Cornell, stressed college students randomly assigned to scroll through their own Facebook profiles for five minutes experienced boosts in self-affirmation compared to students who looked at a stranger's Facebook profile. The researchers believe self-affirmation comes from reminiscing on past meaningful interactions — seeing photos they had been tagged in and comments their friends had left — as well as reflecting on one's own past posts, where a person chooses how to present themselves to the world.

In a follow-up study, the Cornell researchers put other students under stress by giving them negative feedback on a test and then gave them a choice of websites to visit afterward, including Facebook, YouTube, online music and online video games. They found that stressed students were twice as likely to choose Facebook to make themselves feel better as compared with students who hadn't been put under stress.

In sum, our research and other academic literature suggests that it's about how you use social media that matters when it comes to your well-being.

Is the Internet Destroying Amateur Radio?

How many times do you hear the comment "ham radio…do people still do that?" followed by the statement that "surely the internet has made ham radio obsolete." For the most part, that misses the point about the use and attractiveness of amateur radio.

And yes, that is a click bait headline.

I've written before that Amateur Radio Is Not for Talking and that the Universal Purpose of Ham Radio is *to have fun messing around with radios*. One significant statistic is that the number of FCC amateur radio licensees remain at an all time high. Eventually, the demographics will likely catch up with us and this number will start to decline, but it hasn't happened yet.

The internet has become a tool that is used to complement amateur radio, often in ways that we may not have predicted. Although there are plenty of "keep the internet out of amateur radio" folks in the hobby, there are many more that have found clever ways to make use of the internet. I view emerging technologies and technological innovation as unstoppable forces that will impact us whether we try to ignore them or not. Using that lens, let's examine the impact of the internet on amateur radio.

Here are a few broad categories of impact:

1. Communication Pipe

The internet is often used to provide an additional mechanism for transporting ham radio communications. Obvious examples are VoIP systems such as EchoLink and IRLP. Also included in this category are digital voice systems that use the internet to connect radios together: D-STAR, Yaesu System Fusion, Brandmeister Network, DMR-MARC Network. WinLink is a global email system using ham radio. The core transport technology is the Internet Protocol Suite (TCP/IP) which is not limited to the public internet. Some ham radio organizations are implementing IP links using microwave gear on the amateur radio bands so they are independent of the internet.

Another application in this category is remote operation of ham stations. That is, use an internet connection to control a ham station at another location. Sometimes people refer to this as *Long Microphone Cord Model* (or maybe just made that up). Hams do this with their own private stations but there are also shared stations established by radio clubs and commercial vendors (see Remote Ham Radio). With community restrictions on external antennas being very common, having a remote station available is very attractive.

This has turned out to be quite disruptive because so much of ham radio operating depends on your location, which is generally determined by the location of the transmitter. But now you can have a person sitting in downtown Denver operating a transmitter that is in Fiji. Kind of confuses things a bit. Regulatory issues also come into play: that transmitter in Fiji is going to fall under Fiji regulation which usually means needing an amateur radio license issued by the local government. The day is coming when a DXpedition to a remote island will consist of a helicopter delivery of a remote radio box (with satellite link and self-deploying HF antenna) that is operated by someone sitting at home using their smartphone.
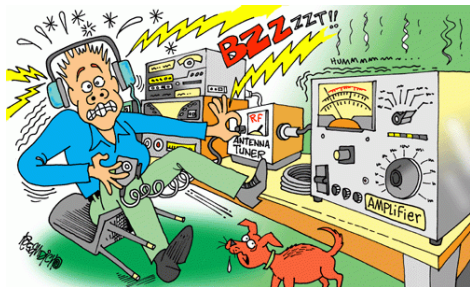
2. Reporting and Coordination

Ham radio operators also use the internet for spotting and reporting purposes. *Spotting* has been around for a long time, which basically means letting other hams know that a particular station is on the air and can be worked from a particular location. Hams have done this without the internet but the internet certainly allows for

more efficiency. Or at least a lot more spots. DX Maps is a good example of a spotting web site that supports lists and mapping of spots.

Radio hams also use the internet for coordinating radio contacts. One of the most extreme examples is the use of pingjockey for arranging meteor scatter communications. Typically, two hams will connect on pingjockey and agree to try a meteor contact on a specific frequency, with specific timing, etc. This technique is easy to abuse, either intentionally or via sloppy operating habits, because you can inadvertently share the radio contact information via the internet. However, properly used, pingjockey is a wonderful tool that promotes meteor scatter operating. ON4KST operates an amateur radio chat website that enables a wide variety of online communication and coordination between hams.

The Reverse Beacon Network (RBN) is a network of radio receivers listening to the amateur bands and reporting what stations they hear. These stations are often referred to as *CW Skimmers* because they skim the CW information from the received signals. RBN began with decoding CW but now also supports RTTY. There's no fundamental reason it couldn't be extended to other modes, even voice modes, with sufficient computing power.

PSK Reporter is a similar reporting system which accumulates signal reports from HF digital stations. As the name implies, it was first focused on PSK31 but has expanded to include other digital modes. Weak Signal Propagation Reporter (WSPR) is more advanced propagation reporting system that uses transceivers and advanced DSP techniques. The compressed protocol sends the transmitting station's callsign, Maidenhead grid locator, and transmitter power in dBm. WSPR lights up the world with low power transmitters and measures HF propagation on all bands in real time. Very clever system.

These worldwide networks produce a very complete picture of available propagation and stations on the air. Some hams complain that "nobody tunes the dial" anymore because they just rely on the station of interest to be spotted. DX stations often have the experience of huge pileup as soon as they are spotted on one of the networks.

3. Logging and Confirmations

For decades, hams have been keeping their radio logs using a wide range of software that is available. This is a handy way of keeping track of radio contacts and tracking progress towards operating awards. More recently, online systems have been developed to allow radio contacts to be confirmed electronically. That is, instead of exchanging QSL cards as confirmation of a radio contact, both hams submit their log information to a central server that records the radio contact. The ARRL offers the Logbook of The World (LoTW) which supports these awards: DXCC, WAS, VUCC and CQ WPX. The eQSL web site was the first online QSL site, offering electronic QSL card delivery and its own set of ope
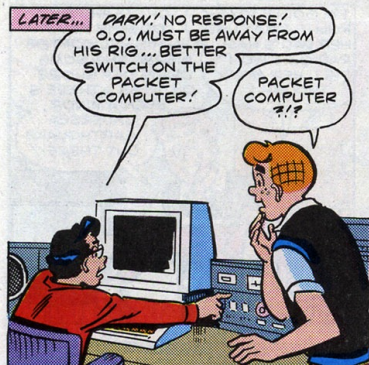
rating awards. Club Log is another online electronic logging system. The popular qrz.com web site has added a logbook feature to its set of features.

Electronic confirmation of radio contacts is a huge improvement for ham radio. While many of us still enjoy getting a paper QSL card, collecting QSLs for awards is a royal pain. Mailing QSL cards is expensive, takes time and often involves long delays.

Impact on Amateur Radio

Here's my analysis of the situation: Categories 2 and 3 mostly represent a net positive influence on amateur radio. These are straight up information age applications that provide useful and quick updates about radio propagation and radio contacts. Yes, there is some downside in that many hams become dependent on them instead of doing it the old fashioned way: *turn the big knob on the radio and listen*. Not a big deal given the benefits.

Category 1 is more of an issue for me. The major effect is that it enables worldwide communication a lot easier while using ham radio. This is what causes many hams to say That's Not Real Ham Radio when the internet is used to do so much of the work. Focusing on the actual radio wave propagation, there is really no comparison between working DX on the 15m band and making the same QSO with a UHF DMR handheld piped through the internet. At this point, *I try not to overthink* the issue, dropping back to *The Universal Purpose of Amateur Radio is to Have Fun Messing Around with Radios*. So if chasing DX on 15m floats your boat, keep on doing it. If the DMR handheld provides enjoyment for you, I'm OK with that, too.

Perhaps more importantly, we can't really stop the impact of new technology. Oh, I suppose the amateur radio community could petition the FCC to restrict Category 1 use of ham radio. There could be regulations that limit the use of the internet being interconnected with Part 97 radio operation. However, that would have an even bigger negative impact on the hobby by arbitrarily restricting innovation. Imagine if we had to tell technically-minded newbies in the hobby that "well, we have this rule that says you can't actually use the biggest technology shift in the 21st century" while using ham radio. We do have some rules concerning awards and contests such as you can't use a VoIP network to qualify for DXCC. There will probably be more of that kind of restriction occurring as technology moves forward, which is fine by me.

What's Next?

When it comes to technological change, it's often difficult to predict the future. Some of it is obvious: we'll see higher bandwidths and more wireless coverage on the planet as 5G and other future technologies roll out. Figuring out how this affects ham radio is a bit more difficult. Right now, there are still remote locations that aren't on the network but that will change. I expect even remote DXpeditions to eventually have excellent connectivity which could lead to *instant check QSLs*. (That's kind of happening already but it could become more of a realtime event.)

As systems become smarter (e.g., machine learning, artificial intelligence), distributed systems will become more automated. We can expect more automation of ham radio activity which will certainly be controversial. Did you really work that other station if the software in your home ham station made the contact while you were away at work?

To wrap up, I don't think the internet is destroying amateur radio but it is certainly changing it. The key is to keep having fun and enjoying the hobby. If you aren't having fun, you probably aren't doing it right.

What do you think?

73, Bob K0NR

BITCOIN

What the hell is it?

In the most general sense, bitcoin is software that forms a decentralized, peer-to-peer payment system with no central authority like the Federal Reserve or U.S. Treasury. It's fair to call it a digital currency or cryptocurrency, but at the moment, most investors aren't really using it as currency to pay for things. Instead, they're using it as a speculative investment to buy in the hope of turning a profit. Maybe a big profit. (And maybe a big loss).

What backs or supports it?

Bitcoin runs on something called blockchain, which is a software system often described as an immutable digital "ledger." It resides on thousands of computers, all over the world, maintained by a mix of ordinary people and more sophisticated computer experts, known collectively as miners. Yahoo Finance's Jared Blikre dabbles as a bitcoin miner, running mining software in the background on his laptop. Here's how much bitcoin he has generated so far: 0.000000071589. At the current rate, it would take him about 1,200 years to mine one complete bitcoin. That gives you a sense of how complex it is to mine bitcoin, and how much processing power it takes: These computerized mining rigs throw off so much energy that they can heat your home.

All bitcoin transactions are permanently recorded by miners, who upload bundles of transactions, or "blocks," to the chain, maintained on all those computers. Blockchain as a technology has become popular among banks and other big financial institutions, who want to use it to settle payments on their back-end systems. But they're mostly interested in blockchain without bitcoin.

Who's running the show?

Bitcoin is decentralized, which means there isn't one arbiter, central party or institution in charge. Blocks of transactions are validated on the blockchain network through computing "consensus," which is a feature of the software. Bitcoin was created by someone in 2009 using the pseudonym Satoshi Nakamoto, but it isn't known who that was, and that person or group doesn't have control over bitcoin today.

What is there to value?

The price of bitcoin fluctuates based on buying and selling, just like a stock, but there's a ton of debate over what the price represents. In theory, the value of bitcoin should reflect investors' faith in bitcoin as a technology. But in reality, investors mostly see bitcoin as a commodity because of its finite supply. Under Satoshi's blueprint, the total supply of bitcoin will eventually be capped at 21 million coins. At the moment, 16.7 million bitcoins have been created. A fractional amount of new coins gets created every time a miner uploads a block to the blockchain, which is a reward for mining.

Is this a scam?

It's not a scam, in the sense of somebody marketing a bogus product. Bitcoin is a legitimate technology. The question is how useful and valuable it will become.

FUN FACTS: Seven years ago, the value of a single bitcoin was worth a quarter-of-a-cent. Today, that single bitcoin is worth upwards of $2,200.

Monday marked the seventh anniversary of what is said to be the first recorded instance of bitcoin used in a real world transaction. Over the course of seven years, bitcoin's value has multiplied 879,999 times over since 2010. If an investor had decided to spend five dollars back then on about 2,000 bitcoins, that stake would be worth $4.4 million today. With $1,200 spent on some 480,000 bitcoins, the investor would be worth at least $1.1

ARES Emergency Communications Workshop

An Emergency Communications Workshop will be held on Saturday, 20 January 2018 from 9:00 am to 4:00 pm at the Walpole Council on Aging at 135 School St., Walpole, MA.

This workshop is for active hams and is produced by the EMA ARES Section Staff.

This Emergency Communications Workshop will provide the background and information to support Amateur Radio operators when needed to respond to a communications emergency or when supplemental communications via Amateur Radio is required. It will feature an Introduction and Conclusion to Emergency Communications, and five one-hour training sessions on topics including:

* Overview of Eastern Massachusetts ARES-RACES-SKYWARN Programs

* Net Operations

* NTS Traffic Message Handling

* Basic Overview of the Incident Command System (ICS)

* Go Kits

This Workshop will also provide a one-hour lunch at no coerced cost to any Amateur Radio operator who attends the session. The presentations will be given by hams well versed in the topics listed above. The training will be a worthwhile experience not just for emergency communicators but for any ham who wants to learn more about our service and hobby.

Even if you have taken the basic class in the past, it is good to take it again as a refresher and some items have been changed and revised.

Preregistration is requested, but is not required in case anyone decides to attend at the last minute. Please try to preregister by Monday, 15 January 2018 to assure the meeting location is set up properly and we have enough refreshments for breaks between lectures and for the lunch break. We will, however, accept any late registrations after that day or any walk-ins provided space permits.

Pre-registration, or if you have questions, can be done by emailing kb1ncg@arrl.net or at the EMA ARRL

 Facebook event at https://www.facebook.com/events/334677393676467/.
-EMA ARES Staff

Common Mode Chokes Part 2

Last month I discussed how common mode chokes can reduce RFI and EMI by inserting them before your rigs power cord gets into your HF rig. I did have success with destroying the switching noise from my power supply but it came back once I hooked up the antenna. Well this month here is another way on how to eliminate RFI and EMI from getting into your shack and your rigs receiver as switching noise and general RFI and EMI which raises the noise in your HF rigs receiver.
You can also call these passive devices as noise suppressors,line isolators and RFI eliminators.

For this month we will be looking at the model CMC 330 5K common mode choke for $69.95 from www.myantennas.com .

As you can see form both photos this choke is built to be all weather proof with a sealed metal housing and you can also see how the choke would be placed in line between the dipole I have and the coaxial feed line going to my Icom 7300. There are two large 2.4 Inch ferrite cores in the metal case and there is coax wrapped around these two cores several times to create an impedance of between 4600 and 680 ohms. These type of chokes work both ways to eliminate RFI and EMI in your receiver part of your rig and can also eliminate your rig from transmitting RFI and EMI into your own equipment and house hold electronics. What happens is that your antenna feedline coax can become part of the problem where they emit "Common Modes" that come from your antenna. One other big advantage to CMC`s is that they can lower the noise floor in your rigs receiver by 1 to as much as 4 S units so you will be able to hear more stations more clearly. I tried this CMC out on my Buddipole on 20 meters SSB during the day at my house and I could no longer hear the switching noise on my Icom 7300 so for now it seems to have worked. I hooked it up between the antenna and the coax going to the rig with just a couple connectors.

I would recommend looking a CMC such as this to cure that noise problem.

Yearly Club Front Door Code Change

Starting last year, the board voted to change the outside key lockbox combination every January 15th. The board no longer issues front door keys, only a combination for the lock box which contains the key needed to gain entrance to the first floor.

This privilege is granted to members in good standing who have been members for over one year and have been checked out by completing a form which states your responsibilities on closing down before you leave the building. The check out process is administered Tuesday evenings by Jake - W1LDL, or Jon- K1TP. Other times can be scheduled by appointment if needed, just contact us. A GENTLE REMINDER, IF YOU HAVE BEEN GIVEN THE KEY CODE, YOU MAY NOT GIVE IT TO ANYONE ELSE….OR YOU WILL LOSE YOUR PRIVILEGE.

This privilege can be rescinded if you fail to leave the club in the way you found it, leave heat on, leave radios on, steal equipment, leaving food out on tables, etc.

To get the new code, contact Jon- K1TP by phone at 978-853-2233 or see Jake- W1LDL at the club at the weekly Tuesday open house.

JANUARY AT THE CLUB

Every Tuesday around 5 pm the club is open until the last member locks up….sometimes around 9 pm

Sunday mornings the club can be open but attendance is sporadic, call on the repeater before you drive over.

Saturday, January 6 at 10 am- Board Meeting for about one hour, all welcome.

Sunday, January 7, Scholarship Breakfast from 9-11 am

Saturday, January 13, Noon Member Lunch and Meeting- Topic J-Pole construction

Sunday, January 21, Building Fund Breakfast from 9-11 am

Sunday, January 14, VE Test session by appointment, 10-12 am