Minutes of the November 2017 KCRC Meeting,
November 1st, 2017

Our November "Pre-Meeting Question and Answer Session" was a very lively affair this month. It was so lively that during usual Q&A, there was a "Satellite Q &A Session" at the opposite corner of the meeting between a newcomer and a member of the Club. The subject of the primary Q & A Session were Radio Frequency Interference, Antennas, Antenna Tuners, Propagation, and Amateur Radio Clinics like Ham University as well as the TAPR DCC Meetings.

The monthly meeting was called to order at 8:00 PM, by our President, Mitch N2RGA. Also present at tonight's meeting were Vice President Howard N2GOT, Treasurer Richard KA2KDQ, General Secretary Roy AC2GS, Executive Board Member At Large Milen KG2C, Dan KC2TRX, Lloyd K2JVX, John WB2LFU, Joe AC2AE, Sam KC2LJC, Laura KB2VDV, Simon KS2LQE, and a new visitor János .

Treasurer Report—Richard KA2KDQ, reported that our Treasury currently has $411.07 in assets in our bank account, with $0 in our Club PayPal account, for a total of 441.07. Since last month Julius KD2NSG has joined our Club—our Club presently has 60 members in good standing.

2 Meter Report—Richard KA2KDQ reports a range of 9 to 10 participants for the Net recently. Technical issues persist—our Net Control Operator was operating inside his car during recent Nets, but has returned to his home station during recent inclement weather and that has lead to a return in his poor signal. This was addressed during the meeting, with no final solution found. Our Net Control Operator will endeavor to operate in his car as much as possible until some final resolution can be found.

10 Meter Report—Our Net Control operator, Milen KG2C reported that his new QTH and limited antenna options would make it difficult for him to operate as the Net's Control Operator. Joe AC2AE has generously offered to serve in this position, and suggested that "relay" stations be designated for the Net. Joe also has time limitations and will not be able to operate as Net Control Operator this coming Sunday and may not be able to operate during the entire course of the Net (sometimes the Net has been known to run for three hours!). Roy AC2GS and Howard N2GOT have volunteered to assist as needed. If anyone is interested in assisting with the operation of the weekly Sunday 10 Meter Net, please let us know.

KCRC TechNet —Our Net Control Operator and Host, Roy AC2GS, reported that the TechNet is doing well—In addition to "plugs" on the KCRC Nets, and the LIMARC eLog Newsletter, we will also benefit from mentions on the LIMARC TechNet, which Roy AC2GS is now co-hosting as well.

KC2RC FusionNet—Our Net Control Operator Jason KD2LRX is a bit under the weather, reporting tonight is Joe AC2AE, who was Net Control of last week's Net. He reports that last week was a relatively short Net, consisting of 4-5 participants. The audio Internet stream has been down for the past month, and Joe AC2AE plans to do some work to return this feature. Our plans to offer an analog FM access point to our Fusion Net via KB2NGU's Repeater have not worked out due to latency delay issues that would require Joe AC2AE to operate two Wires(-X) devices in his station—a digital one for KC2RC's frequency and an analog one set to

KB2NGU's frequency. The cost-to-benefit ratio of the time and expense for something that would be operational only for an hour a week was discussed and tabled for a later date.

Field Day 2018 Committee Report—James KB2FMH reported in absentia that nothing definitively new had been decided since last month's report. The members present at tonight's meeting discussed a new option that has developed. Lloyd K2JVX has access to an unused building in the Greenpoint area of Brooklyn. Club members will evaluate it and report back on our December meeting.

Old News: Our 2018 VE Schedule was proposed and approved. Our VE Sessions will be held: January 21st, March 18th, May 27th, July 22nd, September 16th, November 18th of 2018, pending approval from New York-Presbyterian Brooklyn Methodist Hospital, which provides space for our Club functions. The Club is always looking for new VE's to join our VE Sessions. For ANY interested individuals, please contact any Executive Member of the Club, or the return email address for these emails of our Club Meeting's minutes. People took time out of their busy lives to help get you licensed – pass on the favor!

Howard was not able to discuss our planned meeting place's location in 2018 yet with Damian NY2P, but he will try to iron out the details at some point in the future.

Repeater status was reported by Mitch N2RGA—Our Yaesu DR-2X is away for modification to operate with our Arcom controller board. It should be shipped back to us by next week after a new firmware version will be flashed into ROM by Yaesu. We are awaiting delivery of a new controller voice memory chip which will allow us to store more pre-recorded announcements onto our Arcom controller board.

Our semi-annual mail membership drive was mailed out recently, and we have received one new member due to this mailing already!

Our new Club Bylaws have been posted on our Club website, and the final vote as well as nominations and elections for Club Officers for the 2018 year is scheduled for our December meeting.

We will begin immediately to promote paying $30 dues for 2018 Club Membership. A page has been set up for this dues payment at: https://www.kingscountyradioclub.com/2018-membership-dues/ .

Our Year End 2018 Holiday/Merry Christmas/Happy Channukah Party will be held December 6th at 8 PM. For all members that have paid up their 2018 dues, attendance is free! All others will be required either pay their 2018 dues or to pay $5 per person. We hope that many of our members will join us for this celebration!

At 9:30 PM the meeting was adjourned.

See ya' all in December for the Party!

These minutes were respectfully recorded and submitted by Roy AC2GS on this day, November 1st, in the two thousandth and seventeenth year of our Lord of Propagation…

The Kings County Radio Club is at www.KC2RC.com or
www.KingsCountyRadioClub.com
KCRC is an ARRL affiliated club (see: www.ARRL.org)

Why Do Hams Get a Bad 'Rep'?
Or
FRACK YOU CBS!

Ever wonder why, although most people don't have a clue what Amateur Radio actually is ("so, you, like play music, like a DJ, like?) there are a few that look a bit strange at you and start to tell you about an uncle of theirs that sat around in his underwear in his basement "talking" to strangers until the nice people in the white suits collected him????

Well, I offer you Exhibit A on why Hams get such an awful "rep". Lazy, dim witted writers on lame ass TV shows.

In this case NCIS's 6th episode in its 15th season????? "Trapped"!

At least there was no sign of "ageism" in this episode—all the socially retarded, weird and "dorky" Amateur Radio Operators were in their 30's and younger...

This episode's opening scene features two amiable golfers in CBS' current demographics (between the ages 100 and 110 years of age), and has nothing nasty to say about golfing as a pastime.

Inevitably they find a murdered body on the golf course and the plot begins.

The victim? Why that would be Navy Petty Officer, Second Class Jake Miller. A part time grounds keeper at a local golf course (do they let Naval officers to take part time civilian jobs?), when his part time employer is asked about Petty Officer Miller, his description off the top of his head is "he's too shy to make enemies, or friends... great employee though". Oh well, at least we learn later that he owns a dog.

And so the stereotype begins...

When the regular cast of "Agents" investigate the residence of the murder victim, they find a curiously sparsely furnished set of empty rooms. The in the rear of the murder victims home they find a room described by one agent as: "Miller was into something *weird*". What, you might ask was something *weird*? Well, apparently a Kenwood TS200, and LDG AT-1000ProII Autotuner, and an Alinco power supply and a few other pieces of radio gear on a table (no sign of an antenna, though)!!! Call Bellevue STAT!

Apparently mentioned for the first time in its 15 seasons, Agent Timothy McGee, the resident computer nerd, and played by the show's creator's stepson Sean Murray (ain't nepotism great!?) was a Ham when he was younger, with the call? Of A54J04 ????? And don't rationalize that they didn't want to use a real active call sign, that's why Tim Allen's character, Mike Baxter on "Last Man Standing" used the call "KA0XTT" suffixes usually don't exist that begin with "X" those are meant for *experimental station* call signs. The guys at NCIS just couldn't be bothered—it would interrupt time for their "beer pong" games in the writing room.

Anyway Agent McGee advises his fellow agent that "this is not weird, this is a "Ham Shack"! And then Agent McGee relates his childhood where his father introduced him to Ham Radio and Agent McGee talked to radio friends as far as Denmark...

Like I said, the character McGee is the token "Nerd" character that usually explains absurd 5 second computer hacks that push the unlikely plots along.

They show the murder victim's callbook listing contacts made as well as ?contacts not made?, as well as operator names like "Easy Breezy", Blaster, Taco Bingo, Swiftee, Black Cloud, Ring Game, and Splat? Were these writers frightened by a Citizen Band Operator while they were *In Utero*? Some contacts are missing even made up call signs?

When the technicians back at NCIS Headquarters install the murder victim's radios in their basement (I guess in NICIS's Universe radios much be in basements if available), the non-Nerd Agent says: "Your Dork machine is ready for action". After the token Nerd describes some benefits of Amateur Radio, the non-Nerd responds that "it got less Dorky". Thanks (and your mother doesn't sweat too much for a fat person).

One second later after the Nerd Agent throws out a "CQ" the non-Nerd remarks "And we're back at full dork!"

Our intrepid Nerd Agent throws his ?call? A45J04?????????? On the well-known Ham frequency of 10.01240 MHz (right below the 30 Meter band?), and tells his non-Nerd Agent colleague that "everybody in Ham Radio has a "handle"?????

This Nerd-Agent character used as his Ham handle, "The Timinator"…

Attempting to identify another radio operator, all that he can get out of him is his Ham Radio handle "Ricochet" (apparently in the Universe that NCIS exists in the FCC does not require ID-ing every 10 minutes with a call sign that is published on thousands of lists in the world), who refuses to offer a legitimate identification.

There gonna use this "trick" called "direction finding, to find "Ricochet, but "there are ways to block it"…

But "Ricochet" will probably know how to "block direction finding", so instead our Nerd-Agent uses this incredible database he has access to as a Government agent to list all licensed Hams in an "80-mile radius".

Why 80 miles? Why because our murder victim's antenna only had an 80-mile range???????
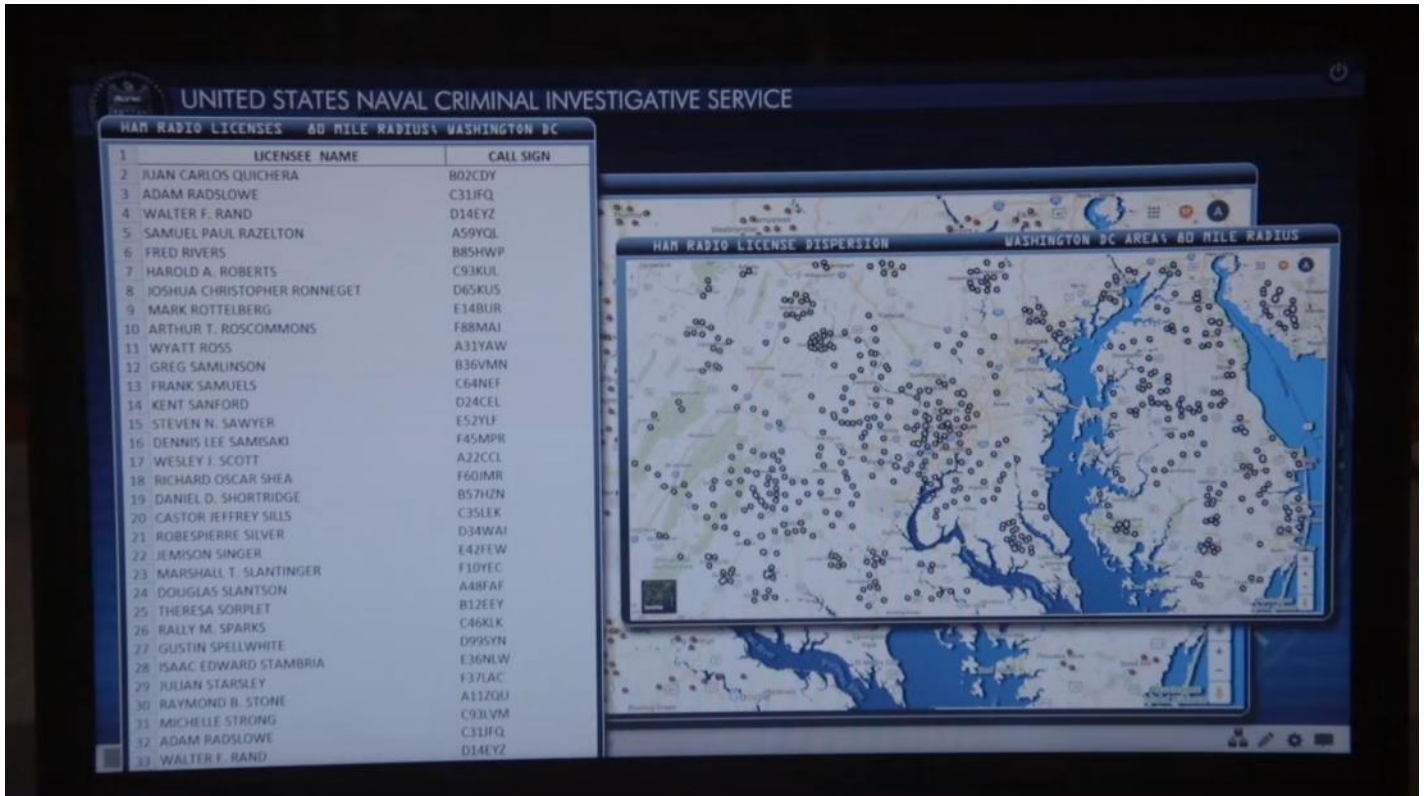
And that incredible database is the FCC ULS site, that I used to Geolocate Hams a week ago, when I was bored.

Well, we've heard from the Nerd-Agent and the Macho-Agent (literally—he is Hispanic), but what about the smart woman, the "Profiler" the "Shrink" the one that can see into everyone's soul…

"I know a little bit about it. Hams are a unique breed. For some it is their only conduit to society."

And how does the "Profile" profile Ricochet's recorded voice? "He 45, chubby and lives with his mother."

Then the "Profiler" rifles through the murder victims High School Year Book (really?) and finds only three people signed it! "More than unpopular, almost invisible!" "He took anxiety medication to get through the day"! A social cripple hiding behind a microphone…

When "Ricochet" is finally hunted down (his name id Rick O. Shea, get it Rick O. Shea = Ricochet, your tax dollars in action!) they knock on the door of his house in the middle of the day and he yells out "I gotta put some clothes on" through the door!

And how does our Nerd-Agent describe this suspect to our "Profiler"?

"This guy has no Driver's License, no home phone, no cell phone, no reportable income since 2007. This guy's going to be exactly what you picture when you think of Ham Radio weirdo."

Well, "Ricochet" is certainly a weirdo. But at least this loser likes dogs as well (but then they've said that about

Adolf Hitler).

Cutting to the chase, all the Hams were innocent, just incredibly broken, sad clichés that would make autistic people feel much better about themselves by comparison.

Yeah autism!

The moral of the story? I don't know. Perhaps it is that if Nerd-Agent McGee hadn't outgrown his Ham Radio childhood, he would be locked in his mother's basement to this day?

So, if you are worried that, in this age of identity politics, this politically correct era where no one can make fun of any difference whatsoever, they all still feel free to kick Amateur Radio around.

So, frack you CBS, so very, very much!

And by the way CBS, your new Star Trek: Discovery (lovingly called 'STD'), 'stinks on ice'.

73,

Roy AC2GS

No, No, That's Not an SDR Either!

Software Defined Radio (SDR) is a *sexy* new thing! (It's not *really* that new, but that is another story.) Look at the success of the Icom 7300. It seems like every other Ham on the HF bands is using his own shiny new 7300! Great specs, good price point, and for those adverse to computers, it is disguised to look like any other legacy analog RF radio from the previous century!

By the way, when I use SDR keep in mind that the last letter "R" stands for Radio, otherwise we will get into that strange world where people talk about ATM *Machines*, when the "M" in ATM already stands for Machine.

Unfortunately, when an acronym like SDR becomes famous it's definition is stretched to the point of absurdity. These days most of the devices that people have decided to call SDR's are absolutely, positively nothing like SDR's.

Manufacturers have not been guilty of outright lies in their ad copy, but their marketing department has at times blurred the lines of what is and what isn't an SDR.

First off, let's properly define Software Defined Radio so that we can better compare. Here's a nice one, courtesy of Google©:

"Software-defined radio (SDR) is a radio communication system where components that have been traditionally implemented in hardware (e.g. mixers, filters, amplifiers, modulators/demodulators, detectors, etc.) are instead implemented by means of software on a personal computer or embedded system."

In its ultimate form, it would be a wire antenna, directly tied into a *Digital to Analog Converter* (DAC), or in this case, an analog to digital converter, with all aspects of the signal operated on as digital bits and bytes on slabs of high tech silicon solid state devices. The current state of the art does not yet allow for this purist approach. We still need to use analog circuits at the antenna feed for some analog pass bands and pre-amp circuits, and then on to the DAC!

SDR's aren't *Superheterodyning*, they aren't *Superregenerating*, there are no mechanical filters, no LC circuits, no mixers, no demodulators, not an analog signal manipulation anywhere to be seen…

In all those analog RF circuit's places, you will find things that seem to belong in a computer – DACs, Central Processing Units (CPU's), Reduced Instruction Set Computer (RISC) chips (a CPU whose operation commands have been decreased to do less things more efficiently), Field Programmable Gate Arrays (FPGA) (a kind of software configurable CPU that can be optimized for a specialized series of algorithms). SDR's use their silicon to run strange, unfamiliar algorithms like *Finite Impulse Response* (FIR) filters, and *Infinite Impulse Response* (IIR) filters, anti-aliasing filters and all manner of computational mumbo jumbo. Done well that will mean you can say "bye-bye" to the *ringing* of sharp filters.

Just a bunch of *bits*!

Well, at least until we get to **US,** analog human beings – to interface with us, all those bits have to be turned into something that we can directly deal with (until we go *digital* as well).

What about these other kinds of good olde legacy analog radios that some people think are SDR's?

The biggest misconception is the category Software **Controlled** Radios – those relatively new radios with Universal Serial Bus (USB) or (*shudder*) RS-232 interfaces for those guys running Windows95 on their 20th Century PCs. Controlling your radio using software on a personal computer, a tablet, or a cell phone isn't an SDR. It's a whole 'nother thing entirely.

Then there are those radio simulators on PCs – these have nothing inherently to do with SDR's as well. They operate on something called *Voice-Over-Internet Protocol* (VOIP), like Skype. Sometimes the user's audio feeds an actual radio transceiver/antenna system, that may be an SDR, or more likely is an older legacy radio design, but often it is connected to another guy with a computer hooked up to a wired Internet connection. Is it *Amateur Radio* if no RF is involved? I'll leave that thought for the philosophers among us.

Another thing confused with SDR's are radios that incorporate digital electronics in one particular stage in a common legacy analog radio, like noise reduction. These days it is very common to stick a *Digital Signal Processor*

(DSP) chip to do its magic in the digital domain to improve noise reduction in the output audio. But there are *many* stages in the average radio block diagram, and one digital stage is not the same as all the stages being done in the digital domain.

But why should I care about lazy classifications of the SDR label. What difference does it make?

SDR's hold a lot of promise that just doesn't exist in legacy analog radio designs. Once your Electrical Engineer has finished designing the circuitry inside your legacy analog radio, all of its capabilities are locked down – even its *specs* are limited to a narrow range, depending upon components chosen for these circuit designs.

SDR's depend upon their hardware constraints, but also depend upon the skill and the imagination of their software engineers. When Single Side Band first became popular, you needed a new radio with new circuits to use this new mode. The difference between demodulating Amplitude Modulation, or Frequency Modulation, or Single Side Band Modulation is just a matter of rewriting some lines of computer code. Hardware doesn't care what those bits started as, they just need to know what you want to do with them.

And so, SDR's are a great hedge on future advancement. In our present disposable culture SDR's will probably be treated like any disposable item and updated with the newest, shiniest thing, BUT people will be able to *Gerry rig* SDR's to handle modulation schemes not yet dreamt of in some engineer's fevered imagination. SDR's can operate as time machines for traveling in the best direction – the future!

The fabled Icom IC-7610 is said to be an SDR. In its case, though, it is all analog up until its last IF stage, at which point its *Intermediate Frequency* signal is fed into a DAC and then the radio deals with the digital stream like most SDR's. Is this a *pure SDR*? Is this a *second generation SDR*, when *third generation SDR's* that feed into their DAC's right after their antenna's passband and pre-amps, have existed, and are being very successfully used for the past four years? You be the judge!

So, every newfangled radio model is called an SDR by someone – most aren't, some are *sorta* SDR, a few are the latest iteration of SDR technology being produced, but give the industry time and the only reason to keep using *Intermediate Frequency* (IF) stages, and Super regenerative circuits will be sheer nostalgia…

73,

Roy AC2GS