

The Nugget



Mother Lode DX/Contest Club

The Newsletter of the Mother Lode DX/Contest Club

MEETING DATE, LOCATION & PROGRAM

Our next meeting is at Mountain Mike's Pizza in Martell CA, on June 21st at Noon. This is our annual "Awards Meeting".

See the club website or contact Verne, W6VMT w6vmt@arrl.net for location and map.

MLDXCC 2014 DUES

Our dues are voluntary; however you must pay dues, \$15/yr, to be eligible for any club awards. Dues can be paid at our meetings, or send them to me at the following address:

Ms. Carolyn Wilson
P.O. Box 273

Somerset, CA 95684

Thank you. 73, Carolyn, K6TKD – Treasurer.

-MLDXCC Meeting Dates:

June 21-Awards Meeting

July 26-CW for the no-code SSB Operator

August 23-TBD

September 20-HAM Radio Propagation

October 18-TBD

November 22-SO2R RTTY

December (no meeting)

2014-Officers

President – Bob, W1RH

Vice President – Verne, W6VMT

Secretary – Dick, K6LRN

Treasurer – Carolyn, K6TKD

Director – Rick, W6RKC

Director – Shirl, AA6K

July Meeting Announcement

The Mother Lode DX & Contest Club is proud to announce that we will have Rick, N6RNO, give his presentation **CW for SSB Operator (You can do it without knowing code)** on July 26, 2014 at:

The Old Spaghetti Factory
2702 West March Lane
Stockton CA

General club meeting starts at 11:30am with the presentation to follow.

The restaurant requires us to pre-order the meals from the selection below so they will be able to efficiently serve us. The meal prices include: Coffee or Tea, small dessert, tax and gratuity. Soda, Beer, Wine, etc. may be individually ordered from the bar.

1. Chicken Caesar Salad: Chicken breast strips atop crisp romaine lettuce tossed with classic Caesar dressing, shredded Romano cheese, garlic herb croutons and Roma tomatoes. (\$14.00)

2. Our Famous Baked Lasagna: Made from scratch in our own kitchen – layers of noodles, Marinara Sauce, ground beef and pork, and four kinds of cheese. (\$16.00)

3. Chicken Marsala: Seasoned breast of chicken with a fresh mushroom and Marsala wine sauce, served alongside spaghetti with Browned Butter & Mizithra Cheese. (\$15.00)

4. Spinach and Cheese Ravioli: Tender pillows of pasta stuffed with spinach and two kinds of cheese, topped with savory Marinara Sauce. (\$14.00)

Vegetarians may order item #1 less the chicken for \$11.00

If you plan to attend please send an email with your name, call, number of persons, and menu selection to Verne, W6VMT, at w6vmt@arrl.net by July 21st. We will collect funds and issue meal tickets at the event.

Below is group shot while we are dining at Denny's in Cameron Park in May. A good program always fills the room.



K6OK presenting our programs.



(Photos by Norm N6JV and W6DE)

FROM THE PREZ

Hello MLDXCC'ers!

Field Day is in a couple of weeks but right now I can't seem to think of anything other than another CQP win. I'll get there in a minute, but I may as well mention Field Day. I haven't done an overnight Field Day in several years. I think the most fun Field Days for me were with the Framingham Amateur Radio Association (FARA). Field Days were absolutely awesome, with multiple towers and stations spread out in a field and all within a 20 minute drive for just about all who participated. We had a method of raising towers, using an A-Frame that made it quick and safe. The club owned several hundred feet of Rohn 25 and several beams, so maintaining multiple stations was never a problem. Several of us were also YCCC members and the whole thing was generally set up as if we were on a dxpedition. It wasn't unusual for K5ZD, K1EA, and others to show up and operate for a few hours. Oh, and we would always say that FARA stood for Food and Radio Association. We had a kitchen and dining area set up every year at Field Day, and the food was fabulous.

How things have changed since then. The Framingham club no longer does much of anything on Field Day. And, for that matter, our club doesn't either. I guess we're all getting older, but I also tend to blame myself for not encouraging our club to do Field Day. Perhaps the next president will start the tradition again for MLDXCC.

The El Dorado Club, with several younger members, is still extremely active with Field Day. The group will be up around the 7,500 foot level off of Mormon Emigrant Trail again. It's a fantastic site, with good fall-off in all directions. Good for HF and VHF. The scores are never that great, but this year, K6JRN, the organizer, is pushing for a higher score. I'm going to do some CW to help the club's score. I've got to remind myself that Field Day is where most contesters start out and while it would be

great, I suppose, if we had members who wanted to do our own MLDXCC Field Day operation, it's probably better if we participate in the efforts of our local clubs, as mentors, always keeping an eye out for potential contesting recruits. So, back to CQP...

I keep thinking about CQP and how the competition will be this year. REDXA can be a sleeping giant or a roaring giant. They have fantastic potential if they can get their members pumped up. They also have more members than we do. As we so well know, if everyone submits a log, no matter how big, the potential to win goes way up.



On the other hand, I was very impressed with the way CCCP rallied their small troops to beat us in our effort to thank the VE3's for working us on CQP, by working them in the Ontario QSO Party. Despite their small membership, these guys showed that they are capable of being a serious contender by recruiting big-time contesters and their stations. They also showed how effected multi-multi operations, from a world class station, can be for a small club. I haven't discussed CQP with Stu and his group. I'm guessing that they will be players this year and I very much expect them to seriously try for a win.

I'm talking about CQP early in the year because a club that wins year after year can't just assume they're going to win the next one. I've tried hard each year to pump up the troops and to recruit from the local clubs, as have some of our other officers and members. I'm already setting up talks to some of the local clubs, as I have been doing every year, promoting CQP and recruiting new members for our club.

I don't think our game plan is going to change this year for CQP. We want to get as many of our members on the air as possible. The number of logs will make the difference. If our big guns can come up with the big scores and our little pistols can come up with their 50 or 100 Q logs, I have no doubt that we can again beat the sleeping giant in the redwoods or the hungry few on the Peninsula.

By the way, thanks to K6DGW for picking up our MLDXCC CQP plaque at the last NCCC meeting.

I have not been active on the bands at all over the past few months. This is the time of year when defensible space and wine making seem to get the bulk of my spare time. I did spend an afternoon with W6SR and my sick AL-1200 a few weeks ago. I admire Rick's patience and troubleshooting skills. The AL-1200 is a terrific amp, with a very robust tube. I have done 48 hour contests at AA1ON's, using his two AL-1200's and they will just go and go at full power hour after hour, without trouble...until the operator does something stupid. I have made far too many mistakes when fatigue sets in during a contest. When I switch bands, for instance, I'll dial the amp up to marked settings for the particular band and just start transmitting at full power. For the AL-1200, this works out fine because the tuning is fairly broad...unless you try to do it on 20 meters, with the antenna switch on the 40 meter sloper. That's all it took for me. There was a quick sizzle and bye-bye RF choke, parasitic choke and even the solder lug between the pi-net output coil and the antenna. Now, I know why so many of the serious contesters like the Alpha's, Acom's, etc. Protection circuits can save a tired contester from blowing up the amp.

The AL-1200 is, again, putting out a solid 1.5 KW, thanks to Rick, but it's seen it's last contest at my QTH. For now, I'll continue to use my Henry 3KD backup amp, while waiting to purchase a more serious amplifier. The AL-1200 is up for sale.

Can't say much about DX'ing. I haven't work anything of significance. There's just a handful of entities that I still need. If you hear the Monk on, let me know. Likewise, if you hear a P5, you can wake me up at 3 AM.

In the, "this has nothing to do with ham radio department", I'd like to congratulate Verne, W6VMT, and Carolyn, K6TKD, for winning awards at the El Dorado County Fair.

It seems that Carolyn is quite the quilt maker. Likewise, Verne makes some award winning cookies!
This month's meeting will be a business meeting, in Martel. Dick, K6LRN, will discuss the awards program. I hope to see you there.

73, Bob, W1RH

THE VP SEZ

I hope everyone enjoyed the May meeting. We had 33 attendees including 14 guests that heard Jim, K6OK, give a "twofer" presentation. The first part was: "How One No Code Ham Survives in CW Contests" and the second part is: "Getting a Permit for an Old Tower with Modern Methods". Thanks to Jim for taking the time to give a great presentation to our club.

On June 21st our meeting will be back at our old stomping grounds in Martell for an Awards meeting, then July 26th we will go back to the Old Spaghetti Factory in Stockton to hear Richard, N6NRO, give us his presentation entitled "CW for the SS Operator". Richard's approach is different from Jim, K6OK, so this should be interesting.

The July Stockton meeting will be RSVP. I will send out an email with menu selections the first part of July. If you are a member of a general radio club around the Stockton area, please be sure to invite all those SSB operators to attend our July meeting.

You too can make DXCC!

As some of you heard at our May meeting, I made DXCC last month, which was one of my goals when I was first licensed in 2011. Dick, K6LRN, ask me to submit a paragraph on how I achieved this goal. Knowing brevity is better, here you go...Patience and Persistence!!

My DXCC was achieved using 100 watts, SSB, wire antennas and LOTW only, so patience and persistence was very important to collect the 100 entities needed for the award. I did have help from our club brain trust: W1RH, work the contests, W1SRD, show up, W6SR, when working split listen to the DX's working plan, and W6DE, improve your listening, wear a headset.

When first licensed I set some award goals, e.g. WAS, WAC, DXCC and WAZ, however I didn't set timelines that may have frustrated me. I also set a goal to only use LOTW and as a no code Extra it had to be SSB. To date I

have achieved everything with the exception of WAZ, which I currently have 35 of 40 zones.

Although all contacts were appreciated, one that sticks out was with Sable Is., CY0, when they were starting to pack up as a storm was coming in.

I currently have 146 entities, so now I need to start thinking about another goal and start implementing Jim, K6OK's ideas into my game plan. Also, since I don't have a lot of contacts on 40/80 I'm thinking of putting up a vertical to cover that area. Let me know what you think at our next meeting in June.

Signing off for now... **73, Verne, W6VMT**

Treasurer's Report

Balance May 1, 2014	\$1607.70
Income: Contest dinner NCDX conference	250.00
Expenses: CQP Award Reimbursement	98.04
NCDXF donation	250.00
Hays Affinity	
ARRL Club Liability Ins.	200.00
May 17 Speaker's lunch	10.27

Balance May 31, 2014 **\$1299.42**
Carolyn Wilson, K6TKD – Treasurer

Editor's Notes de Rick, W6SR

Hi all.....
At our last meeting, MLDXCC member, K6OK presented two very interesting programs to a full house; which included several members of other radio clubs. Our VP Verne is in great form, producing one interesting program after another. Way to go Verne!

The main focus at the old radio ranch last month was fire safety, water conservation, and pest control. We hired a crew to cut-down 2 acres of weeds, and had the local pest control guys stopping by to try to get rid of several gophers, voles and moles that have decided that they want to share the lawn and garden with us. We, like all El Dorado County residents, are trying to reduce our water consumption by going to an all drip system (except the lawn) and adding mulch to retain the water around all the plants.

The radio was not very active last month, but I did add one new DXCC country on 6M, HK6K from Colombia. And I

added a couple of new RTTY countries as well, I am now at 120+ RTTY worked and 74 confirmed all since mid-January, and all thru LOTW. My goal was 100 RTTY countries confirmed by the end of this year, as you can see getting a DXCC these days is NOT that difficult, so if you haven't added one to your radio resume' yet, it's time.

Last month club member Jeff, WK6I answered my request for a SO2R box. He had an older Array solutions SO2R box that he was not using, and we made a deal. It's a bit larger than I wanted but it just may fill the bill if I can figure-out how to integrate all the new cables into the space available. See you all at our June meeting.....**de Rick, W6SR**

The following is the latest installment of a multi-part series that was suggested by Dave, W6DE. It was compiled and written by W2XOY; I found it very interesting and hope our readers do as well. de Ed.

The History Of Amateur Radio Chapter 6

The Radio Act of 1912 was hopelessly obsolete by the early 1920's. Conceived in an era of long and medium wave spark telegraphy, the Act was totally inadequate when it came to broadcasting and the shortwaves. The Department of Commerce gamely tried to stretch the Act to meet new requirements; the 1922 and 1924 "regulations" that banned broadcasting by amateurs, set up the broadcast band, and carved out the 160, 80, 40, 20, and 5 meter bands, were really nothing more than "gentlemen's agreements", valid as long as they weren't challenged.

For a time, they worked. Amateurs enthusiastically settled in on their new bands and began working the world, while the number of broadcasters in the new 550 to 1500 kc region jumped from 30 to almost 600 in just 3 years. Technical advances had not kept up with this growth, however, and there were problems. Crystal control of transmitters was still a couple of years away, and the unstable broadcasting stations drifted from their assigned frequencies, sometimes to the point of interfering with adjacent channels. Even stations off frequency by 400-600 cycles could cause ear splitting heterodynes. Most receivers of the 1920's were either regenerative or TRF (Tuned Radio Frequency), good on sensitivity, poor on selectivity. As a result, the 1920's broadcast band was saturated with only 600 stations. (Compare that to today's medium wave where tight frequency control of 20 Hz, coupled with directional antennas and selective superheterodyne receivers, allows over 4000 stations to occupy the AM broadcast band without undue

interference). The Department of Commerce, therefore, issued regulations mandating such solutions as time sharing (where two or more stations occupied the same frequency at different times of the day), and daytime only operations. Stations were constantly moved to another frequency, or told to decrease power, in order to minimize interference. The Department also went after stations whose transmitters drifted onto adjacent channels. An interesting example of this was the Los Angeles station of "Sister" Aimee Semple McPherson, an evangelist who was the leader of the International Church of the Foursquare Gospel. Her station was notorious for drifting up and down the broadcast band. When the Federal Radio Inspectors tried to keep her on frequency, she imperiously wrote to Secretary Hoover, demanding that his "Minions of Satan" stay away from her transmitter. The Almighty would choose her Wavelength, she wrote, not the Department of Commerce.

Many of the stations that had been moved, told to reduce power, or share their frequency, did what any patriotic American would do--hire a lawyer. Once the legal bloodhounds began digging, certain things came to light.

Article I, Section 8, of the Constitution allows the Federal Government to regulate INTERSTATE commerce. Furthermore, it is an accepted fact that a Federal Agency cannot issue any regulations, unless it was given the power to do so by Congress. Thus, the lawyers for the disgruntled stations challenged the Secretary's "regulations" on two fronts, first, that the Radio Act of 1912 gave the Department no authority to regulate broadcasting stations, and second, that since many stations could not be heard across state lines, there was no "interstate commerce" and therefore no Federal jurisdiction. (This is the argument used by "Radio Free Berkley" and other low power pirate stations). The Day of Reckoning arrived in 1926 when an Illinois District Court held that there was no Federal Law to permit the Secretary of Commerce to assign

broadcasting licenses or frequencies. The Attorney-General admitted that the Federal Government had no control over radio, except what was specifically authorized in the 1912 Act. Pandemonium broke out. Stations, liberated from all Federal control, upped their power, jumped frequency, and/or began full time operations on daytime or time shared frequencies. Smaller stations were jammed off the air. Unlicensed transmitters appeared out of nowhere, dropped down on any convenient (or inconvenient) frequency, and began broadcasting. Anarchy was King. Amateurs, of course, could have legally joined in this RF Orgy. There was nothing preventing them from going back to broadcasting, moving to new frequencies,

exceeding the 1 kw limit, or anything else they desired. To their credit, they did nothing of the sort. One reason was the immense respect they felt for Secretary Hoover, a man who over and over publicly supported amateur radio in any way possible. They would abide by their "gentleman's agreement" with him. The other reason was common sense. They knew that Congress would soon rectify the problem by passing appropriate legislation. The broadcasters were "big boys" with a lot of money, powerful corporate backers, and 6 million listeners; they could afford to violate the spirit of the law and get away with it. Amateurs did not have this luxury. They realized that any violations of the 1922 and 1924 agreements, even if they were legally unenforceable, would cost them dearly in political support. So, while the 550 to 1500 kc segment was a free for all, the amateur bands were disciplined and orderly, as hams mastered the art of crystal control, and improved their operating skills.

Incidentally, one area in which those skills were honed was expeditions. From the Arctic to the Antarctic, from MacMillan to Byrd, amateurs provided the necessary communications of almost every major explorer. Also, in the area of emergencies, amateurs provided communications during snow and ice storms, hurricanes, earthquakes, and floods. The Federal Government quickly moved to end the chaotic mess on the broadcast band. On February 23, 1927, the Radio Act of 1927 was approved. This law defined "amateur radio" for the first time in a Federal statute, and created the Federal Radio Commission, which was given the power to classify and regulate all aspects of all radio stations for "the public interest, convenience or necessity". Criminal penalties were written into the 1927 Act for violations of the Act, or any regulation thereunder. The Commission immediately went to work. "Minions of Satan" got Sister Aimee's station back on frequency, and shut down the transmitter of KFKB, the station of "Dr." John Brinkley, graduate of the Eclectic Medical School and proponent of prostate operations and (get this) goat gland transplants to cure all medical ills. Patients by the thousands listened to KFKB's broadcasts, and flocked to Kansas to have the operations, picking out their goat from the pens next to the hospital as they went in. (Do you think I could make this up?). Unfortunately, after the Commission shut him down, "Dr." Brinkley went to Mexico by the Texas border, set up a 150,000 watt station, and continued his fraudulent operations.

In regards to amateur radio, the Commission, in effect, kept the status quo for the 15,000 hams. All agreements and regulations enacted by the Department of Commerce were maintained and incorporated into current regulations.

About the only change that hams noticed was the addition of a prefix on their calls, thus 1AW became W1AW, 1JS became W1JS etc.. However, the existence of a sympathetic Commission and friendly regulations wasn't enough. Radio was truly international, and, as a result, an International Radiotelegraph Conference was scheduled in Washington, D.C., for October 4, 1927. Word was filtering out of Europe and the Far East that many governments were anti amateur radio. How would our hobby fare at this conference? Stay with us next month as the Wayback Machine shows us the answers.

.....Bibliography and Suggested Reading.....

1. Empire of the Air, by Tom Lewis, 1991, HarperCollins Publishers. – An OUTSTANDING book by Professor Lewis, of Skidmore College, which covers the early years of broadcast radio and television. In particular, the book concentrates on the three men who are the foundation of broadcasting; Lee de Forest, Edwin H. Armstrong, and David Sarnoff. Well written, compelling and absolutely fascinating, this book should be required reading for any amateur.

2. 200 Meters and Down, the Story of Amateur Radio, by Clinton B. DeSoto, 1936, the American Radio Relay League Publisher. A history of amateur radio from the first spark gap to 1936. Complete, detailed and easy to read, this book is an ideal companion to "Empire of the Air".

3. Titanic, End of a Dream, by Wyn Craig Wade, 1979, Rawson, Wade Publishers. -- Unlike "A Night To Remember", which focused minute by minute on the actual sinking, this book concentrates on the Senate hearings that were held in New York and Washington, D.C.. There is an excellent section on Marconi, the wireless monopoly, and the events that led up to the Radio Act of 1912.

"William Continelli, W2XOY, Copyright 1996, 2001, All rights Reserved. Reprinted with permission."

Member News, Items For Sale & Feedback

I have not found too much good stuff on the standard HF bands lately. However, if the past two months are a harbinger of this year's 6M season we're going to have a barn burner. In April and May I've worked coast to coast in the US and have also worked CE3SX in Chile on SSB and JE1BMJ in Japan on CW. All of this with 100 watts to my 3el SteppIR. **de Shirl/AA6K**

Radio For Sale

I have my trusty Icom 765 PRO III for sale. This a late production run (high serial number) radio that has the 7600 type finals in the output stage. The radio is in perfect condition, includes the original manual, hand mic and

power cord. It is in the original Icom box. \$1850 picked up in Placerville California. **Contact Dave @ 530-409-7877.**

Hi Guys, hope all is well with everyone. The XYL and I are moving back to Amador County as soon as we sell off our property over here. We have a rental on the east coast that we are just about to put on the market. Once that is sold we will sell our new home at the south end of the island. **So our QTH is for sale/trade.**



The property is three acres with a new 4000 sq. foot home. Large Radio Shack with full bath and extra bedroom, plus 4 more bedrooms and 2 baths. A number of records have been made from this very quiet site. We are asking \$485k for the home and that includes the 100 foot (permitted) tower, a four square, and 30 foot Rohn tower next to the house. Also it has a net metering solar system 4KW, power bill is \$20 per month. We can also do private financing. I really do not want to leave but my wife wants to be closer to friends and family. If your interested we can give all the details. **Email kh7y@alohabroadband.net or call 808-557-9022.**
Aloha, Fred KH7Y

For Sale

LDG AT-1000 Pro II antenna tuner still under warranty, and LDG M-1000 external meter for the LDG AT-1000. Includes manuals.

Asking \$450.00 for both. Verne Terwilliger, W6VMT, 530-448-0381 verne.terwilliger@gmail.com

73, Verne, W6VMT

I have for sale

ICOM 746Pro Includes original manual, box, hand mic and

power cord. Very good condition from a non-smoking shack. \$850
Ameritron 811H Includes original manual. Very good condition from a non smoking shack. \$650

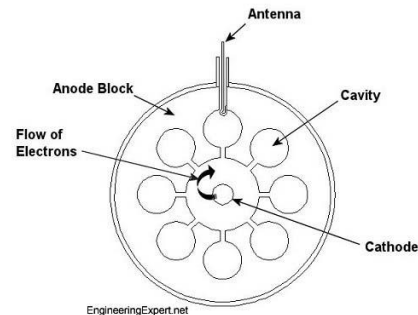
Pearce-Simpson Simba SSB CB in absolute gorgeous condition. No scratches, chips or dents anywhere. \$250 All of the above equipment is fully operational.

I also have some new equipment here, an ICOM 756ProIII and Alpha 91b amp. And I have even managed to find a matched set of new 4CX800a's
de Doc NM6K placerdoc@sbcglobal.net

Tube of the Month de Norm, N6JV

MAGNETRON

Many different devices and circuits were tried in the early days of tube development to circumvent the triode patent. Using magnetism was a promising concept. Before 1920, a GE engineer named Albert Hull developed a split anode diode that used a magnet to produce oscillations. He called it a "magnetron". It showed potential but at very low frequency. Fourteen years later, Hans Hollmann in Germany, used Hull's magnetron concept to make a device that used cavities that would produce oscillations in the UHF and microwave frequencies. As WWII approached, scientists in the UK, US, Germany and Japan were busy trying to improve the device into a practical microwave tube for use in the new RADARS.



In 1940, John Randall and Albert Boot were working in England on the project and made a cylindrical unit with multiple cavities. Legend has it that they took a cylinder from a Colt revolver as their template. The device worked and many improvements were made to improve power output. Their tubes were shared with their colleagues in the US who further improved the device. Six and eight cavity blocks of copper were machined to the very tight tolerances that were required to maintain frequency control.

A block of copper with a hole drilled through it and a slit cut down one side of the hole is the basic unit. The diameter and length of the hole is an inductor and the opening is a capacitor that will resonate at one frequency. Even numbers of holes were

arranged in a circle with the slits opening into a central chamber that houses a cathode. When you blow air into a flute, a small amount of air escapes through a hole and makes a sound. In the cavity magnetron, electrons are emitted by the cathode and are affected by a strong magnet. They travel in all directions, but those that move at an angle will pass by the slits and lose a small amount of energy that will make the cavity resonate. The cavities can be "strapped" together to combine their outputs that is picked up by a small loop in one cavity's wall.



A magnetron is a diode with very high voltages applied to it. If the anode was positive, the coax or waveguide would be at full potential. In use, the anode is grounded and the high voltage is negative and applied to the filament. In a RADAR, the voltage is pulsed at very short durations on the order of a few microseconds.

Wartime production of the WE725A/B magnetron for the AN/APS-15 RADAR was about 300,000 tubes. They operated at 9375 MHz with an output of 55 Kw. It was said that these X-band radars could spot a submarine's periscope at night in the fog.

Visit the museum at <http://n6jv.com>.

Meeting Minutes, 17 May 2014

The May 17, 2014 meeting was at Denny's in Cameron Park. President Bob Hess started proceedings at 12:05 PM. Introductions of members & guests followed. KP4MD, president of River City RC & KG6YST, president of El Dorado County ARC announced Field Day plans & invited all to attend. VP Verne gave preview of MLDXCC June meeting to be held in Stockton. Moved, seconded & carried to donate \$250 to the Northern California DX Foundation.

Moved, seconded & approved payment of premium on ARRL/Hays liability insurance that is due by the end of June. Premium is expected to be \$200.

Under achievements, W6VMT announced he made DXCC and K6SCA said he qualified for two WPX awards plus contacted Uganda. Congrats to both.

There were brief discussions about joint meeting with Northern California Contest Club and who was going to focus on which contests. No action was taken on either item.

Meeting was then turned over to Jim, K6OK who gave two talks. One was about using 'skimmer' to copy code plus some advice on improving one's code skills. The second part of his presentation covered current engineering aspects regarding towers and antennas.

Meeting was over ~2 PM.

34 attended..

Respectfully submitted,

**Dick Wilson K6LRN
Secretary MLDX/CC**

UP-COMING DX and Dxpeditons

Click the link below to display up-coming Announced DXpeditons:

<http://www.ng3k.com/Misc/adxo.html>

QST de W1AW

DX Bulletin 24 ARLD024

>From ARRL Headquarters

Newington CT June 12, 2014

To all radio amateurs

SB DX ARL ARLD024
ARLD024 DX news

This weeks bulletin was made possible with information provided by NC1L, QRZ DX, the Weekly DX, the OPDX Bulletin, 425 DX News, The Daily DX, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites. Thanks to all.

TIMOR-LESTE, 4W. Operator HB9FLX is QRV as 4W/HB9FLX until June 14. Activity is on the HF bands using QRP power. QSL to home call.

SAMOA, 5W. John, ZL1GWE is QRV as 5W0JM from Savaii until June 23. Activity is on 40 to 10 meters using CW and SSB. QSL to home call.

KUWAIT, 9K. Members of the Kuwait Amateur Radio Society will be QRV as 9K2KCBB on June 14 in celebration of World Blood

Donor Day. Activity will be on the HF bands using CW, SSB and RTTY. QSL via 9K2RA.

CUBA, CO. Members of the Las Tunas Contest Crew will be QRV as T48K in the ARRL June VHF Contest. Activity will be on 6 meters from grid square FL10mw. QSL via DK1WI.

MADEIRA ISLANDS, CT3. Rene, DL2JRM is QRV as CT9/DL2JRM from Madeira, IOTA AF-014, until June 19. Activity is on 80 to 10 meters using CW. QSL to home call.

FEDERAL REPUBLIC OF GERMANY, DA. Kai, DJ9KAO is QRV as DJ9KAO/p from Spiekeroog Island, IOTA EU-047, until June 20. Activity is holiday style on the HF bands. QSL to home call.

ETHIOPIA, ET. Ken, K4ZW plans to be active from the ET3AA club station in Addis Ababa over the next three upcoming weekends. Activity is on the HF bands. He plans on using RTTY as well. QSL via N200.

FRANCE, F. Special event station TM200BN is QRV on various dates in June and July to mark the 200th anniversary of the rise of Napoleon Bonaparte. QSL via F5KOB.

ST. LUCIA, J6. Bill, K9HZ will be QRV as J68HZ from Labrelotte Bay, Castries, IOTA NA-108, from June 15 to 29. Activity will be on 160 to 6 meters using CW, SSB and RTTY. QSL to home call.

CZECH REPUBLIC, OK. Special event station OL125D is QRV from Litomerice until June 20 to commemorate the 125th anniversary of the Draeger Company, a volunteer fire brigade. QSL via OK5AM.

WESTERN SAHARA, S0. Man, S01WS has been active on 20 meters using SSB around 0330 to 0500. QSL via EA2JG.

SWEDEN, SM. Lars, SM6CUK is QRV as SA6G/7 from Ven Island, IOTA EU-137, until June 16. Activity is on the HF bands near the usual IOTA frequencies. QSL to home call.

GREECE, SV. Members of the Radio Amateur Union of Northern Greece are QRV as J48TSL from Skyros Island, IOTA EU-060, until June 19. Activity is on 80 to 6 meters using CW, SSB and RTTY. QSL via SV2DGH.

TURKEY, TA. Alexey, UT0UM plans to be QRV as TA4/UT0UM from June 15 to 29. Activity will be on 40, 30 and 20 meters using CW. QSL to home call.

ASIATIC RUSSIA, UA0. A group of operators will be QRV as RI0F from the Kuni Islands, IOTA AS-062, from June 16 to 26. QSL via RX3F.

SPECIAL EVENT STATIONS. W1AW Centennial Stations W1AW/5 in Arkansas and W1AW/0 in Minnesota are QRV until 2359z on June 17. In addition, W1AW Centennial Stations W1AW/KL7 in Alaska and W1AW/7 in Montana will be QRV starting at 0000z on June 18. They will be active until 2359z on June 24.

Click on the Hyperlink below to check-out the MLDXCC scores in the latest contests.
<http://midxcc.org/scores.html>

UP-COMING CONTESTS (complete)
For the latest contest info. click on the following link:
<http://www.hornucopia.com/contestcal/contestcal.html>

July 2014

RAC Canada Day Contest	0000Z-2359Z, Jul 1
IARU HF World Championship	1200Z, Jul 12 to 1200Z, Jul 13
North American QSO Party, RTTY	1800Z, Jul 19 to 0559Z, Jul 20
CQ Worldwide VHF Contest	1800Z, Jul 19 to 2100Z, Jul 20
RSGB IOTA Contest	1200Z, Jul 26 to 1200Z, Jul 27

August 2014

NCCC Sprint Ladder	0230Z-0300Z, Aug 1
North American QSO Party, CW	1800Z, Aug 2 to 0559Z, Aug 3
ARRL August UHF Contest	1800Z, Aug 2 to 1800Z, Aug 3
NCCC Sprint Ladder	0230Z-0300Z, Aug 8
WAE DX Contest, CW	0000Z, Aug 9 to 2359Z, Aug 10
Maryland-DC QSO Party	1600Z, Aug 9 to 2400Z, Aug 10
NCCC Sprint Ladder	0230Z-0300Z, Aug 15
SARTG WW RTTY Contest	0000Z, Aug 16 to 1600Z, Aug 17
ARRL 10 GHz and Up Contest	0600 local, Aug 16 to 2400 local, Aug 17
North American QSO Party, SSB	1800Z, Aug 16 to 0559Z, Aug 17
NCCC Sprint Ladder	0230Z-0300Z, Aug 22
Hawaii QSO Party	0400Z, Aug 23 to 0400Z, Aug 25
Ohio QSO Party	1600Z, Aug 23 to 0400Z, Aug 24
NCCC Sprint Ladder	0230Z-0300Z, Aug 29

September 2014

NCCC RTTY Sprint Ladder	0130Z-0200Z, Sep 5
All Asian DX Contest, Phone	0000Z, Sep 6 to 2400Z, Sep 7
AGCW Straight Key Party	1300Z-1600Z, Sep 6
North American Sprint, CW	0000Z-0400Z, Sep 7

NCCC RTTY Sprint Ladder	0130Z-0200Z, Sep 12
FOC QSO Party	0000Z-2359Z, Sep 13
WAE DX Contest, SSB	0000Z, Sep 13 to 2359Z, Sep 14
Arkansas QSO Party	1400Z, Sep 13 to 0200Z, Sep 14
ARRL September VHF Contest	1800Z, Sep 13 to 0300Z, Sep 15
North American Sprint, SSB	0000Z-0400Z, Sep 14
NCCC RTTY Sprint Ladder	0130Z-0200Z, Sep 19
ARRL 10 GHz and Up Contest	0600 local, Sep 20 to 2400 local, Sep 21
Washington State Salmon Run	1600Z, Sep 20 to 2400Z, Sep 21
BARTG Sprint 75	1700Z-2100Z, Sep 21
NCCC RTTY Sprint Ladder	0130Z-0200Z, Sep 26
CQ Worldwide DX Contest, RTTY	0000Z, Sep 27 to 2400Z, Sep 28
Texas QSO Party	1400Z, Sep 27 to 2000Z, Sep 28

The K7RA Solar Update

SB PROP ARL ARLP024

ARLP024 Propagation de K7RA

Last week's bulletin opened with your author (me) moaning about a decline in solar activity, but this was short lived. The current week saw average daily sunspot numbers more than double, rising from 60.1 to 144.3, and average daily solar flux rise from 104.1 to 146.4. In addition, on June 12 the daily sunspot number was 196, and solar flux was 174.5. It actually was not long ago when sunspot numbers were last at that level. April 16-19, 2014 had numbers ranging from 245-296.

Predicted values are also up. The latest has solar flux at 170, 165 and 155 on June 13-15, 145 on June 16-18, 140 on June 19, 130 on June 20-21, then reaching down for a low of 110 on June 24-25, then peaking at 165 on July 8. The outlook for Field Day Weekend has brightened, with solar flux at 115 on June 27-28 and 120 on Sunday, June 29.

Predicted planetary A index is 18, 20, 10 and 8 on June 13-16, 5 on June 17, 8 on June 18, 5 on June 19-24, 8 on June 25-26, 5 on June 27 through July 5, 15 on July 6, 5 on July 7-9, 8 on July 10, 5 on July 11-14, and 8 on July 15-16.

OK1HH predicts mostly quiet geomagnetic conditions on June 13, quiet to active June 14, quiet to unsettled June 15, quiet June 16-18, quiet to active June 19, quiet to unsettled June 20,

mostly quiet June 21, quiet June 22-24, mostly quiet June 25, quiet to active June 26, active to disturbed June 27, quiet to unsettled June 28, quiet on June 29, quiet to active June 30, mostly quiet July 1-2, quiet to unsettled July 3-4, quiet July 5, quiet to unsettled July 6, active to disturbed July 7, quiet to active July 8, and mostly quiet July 9.

Again this week there was an interruption in data from the middle latitude geomagnetic observatory in Fredericksburg, Virginia, so the middle latitude A index numbers at the end of this bulletin for June 8-9 are my own guesses.

We saw a lot of geomagnetic activity over last weekend, June 8-9, when the planetary K index reached 6 in two 3-hour periods, and the planetary A index was 13 on Saturday, then 39 on Sunday. This geomagnetic storm was from a CME which hit Earth at 1630 UTC on June 7, but left the Sun on June 4.

A significant solar flare on June 10 could cause polar geomagnetic storms today, Friday June 13. It will probably deliver a glancing blow to Earth's magnetic field. See <http://earthsky.org/space/x2-solar-flare-today> for an article about the June 10 flare, and for a UPI story on possible effects today, see http://www.upi.com/Science_News/2014/06/12/Solar-storm-to-hit-Earth-on-Friday-the-13th/7891402590302/

Ted Leaf, K8HI sent a fascinating video and article about renewed activity at the peak of the current solar cycle. See <http://earthsky.org/space/solar-maximum-is-back>.

Max White, M0VNG sent two relevant articles. See http://www.upi.com/Science_News/2014/06/11/Another-giant-solar-flare-erupts/4281402500673/ and http://www.sciencecodex.com/the_solar_wind_breaks_through_the_earths_magnetic_field-135443

David Moore sent a review of "Nearest Star; the surprising science of our Sun" which you can read at <http://www.thespacereview.com/article/2513/1#.U5NRe3TXbgYe> mail.

An excellent book I've been reading is "Tesla: Inventor of the Electrical Age" by W. Bernard Carlson. This may be the best biography yet on Tesla, as other articles and books I've seen accepted uncritically some of his later work, which included transmitting electrical power via wireless. I think copper wire works better for this.

NASA has a new and slightly revised prediction for Cycle 24. View it at <http://solarscience.msfc.nasa.gov/predict.shtml>. The changes from a month ago are: May 2, 2014 forecast: "The current prediction for Sunspot Cycle 24 gives a smoothed sunspot number maximum of about 70 in the Fall of 2013. The

smoothed sunspot number reached 75.0 in October 2013." to: June 12, 2014 forecast: "The current prediction for Sunspot Cycle 24 gives a smoothed sunspot number maximum of about 70 in late 2013. The smoothed sunspot number reached 75.4 in November 2013."

These are smoothed numbers, averaged with real and predicted values over a year, so when we have higher and extended activity this year, that changed the maximum from fall of 2013 to late 2013, and 75.0 in October 2013 to 75.4 in November 2013.

Astrophysicists at Trinity College in Dublin are using crowdsourcing for classifying sunspots. They want people to visit <http://www.sunspotter.org/> to rank pairs of sunspot images based on complexity. As you are presented with each pair, use your gut feelings and vote for the image that seems the most complex. Or if you want examples, go to <http://www.sunspotter.org/#/classify>.

We learned of this from the Irish internet news site TheJournal.ie, and you can read their article "Trinity College astrophysicists want you to play 'Hot or Not' with sunspots" at <http://www.thejournal.ie/article.php?id=1513613>.

Another interesting project to use crowdsourcing is "Seafloor Explorer," where they want help classifying real images of the ocean floor. Check it out at <http://www.seafloorexplorer.org/>. People who believe they see a face on Mars or pyramids on the moon should find a lot to like here.

Find other projects and educational info at <https://www.zooniverse.org/projects>. Click on "Study explosions on the Sun" to enter their Solar Stormwatch project.

This weekend is the ARRL June VHF Contest. The multiplier is number of grid squares worked. The contest begins at 1800 UTC Saturday. See <http://www.arrl.org/june-vhf> for details.

If you would like to make a comment or have a tip for our readers, email the author at, k7ra@arrrl.net.

For more information concerning radio propagation, see the ARRL Technical Information Service web page at <http://arrrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrrl.org/w1aw-bulletins-archive-propagation>. More good information and tutorials on propagation are at <http://k9la.us/>.

Monthly propagation charts between four USA regions and twelve overseas locations are at <http://arrrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrrl.org/bulletins>.

Sunspot numbers for June 5 through 11 were 102, 132, 155, 144, 152, 149, and 176, with a mean of 144.3. 10.7 cm flux was 110.5, 133, 136.7, 148.6, 161.2, 166.2, and 168.4, with a mean of 146.4. Estimated planetary A indices were 7, 6, 13, 39, 5, 7, and 7, with a mean of 12. Estimated mid-latitude A indices were 7, 5, 14, 40, 6, 7, and 8, with a mean of 12.4.

The MLDXCC NEWSLETTER

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