

PAARAgraphs



The Official Newsletter of the

Palo Alto Amateur Radio Association, Inc.Celebrating 81 years as an *active* amateur radio club—*Since 1937*<http://www.paara.org/>

. The speaker at the July 6th meeting is:

Joel Wilhite ~ KD6W**The New ATSC 3.0 Standard for Hams**

The US broadcast industry is in the midst of major sweeping changes and a technology refresh with cutting edge technology to launch new business models. Joel Wilhite, KD6W will recap the results from the FCC auction and will further present parts of the new ATSC 3.0 specification for broadcast television, now launching in the US. The presentation will highlight many of the new features and capabilities currently not possible in the current system and provide some insight into how these changes will potentially impact our hobby. Joel is a broadcast systems designer and the ATSC standards committee representative for Harmonic Inc, and has been a licensed amateur radio operator since 1982 and a PAARA member since 1994.

President's Corner

July 2018

As I write this Field Day 2018 has just wrapped up and I'm still recovering from sleep deprivation. There's still a bunch of equipment lying around my house, still in boxes and bags, and my radio is not reconnected. I just crashed as soon as I got home after another unforgettable 30 hours of radio fun and adventure.



It was a hot Friday followed by a hotter Saturday. I

Upcoming Events

July 6 August 3 Sept. 7	PAARA General Meeting, 7:00 PM Cubberly Community Center, Room H-6, 4000 Middlefield Rd, Palo Alto
July 18 August 15 Sept. 19	Board Meeting, 7:00 PM Everyone welcome! Location: Marty, W6NEV, QTH



could feel the heat as I loaded up my car on Saturday morning to arrive at the site at 9:30 with gear for 2 stations and the filters and triplexer. My car was full as I drove across the Dumbarton Bridge, with things moving around as I made turns. Listening on N6NFI, it sounded like there was some issue again with U-Haul, but Doug, KG6LWE, was handling it. As I got past the Facebook campus, I could see our antennas up on the ridge. It was a beautiful sight. Pulling into the park brought back memories of all those past PAARA Field Days, and of some of the people who have become SKs over the years. In particular, I missed Rick, N6DQ.

I dropped off the triplexer at the B stations, and then went to the A side of the site. Just as I pulled in, Gary, KI6HIG, pulled my van into place, the table was put inside, and I started putting gear into place. CW-A went together without a single issue, so that I had Rick, N6RK, ready to go almost 40 minutes before the contest started. I'm used to working until just before 11. Everything started off just fine, though propagation was not that good. It seemed like 15 meters was underperforming, despite a good sunspot number and solar flux index. I had to leave to start visiting other sites, but then I heard there was a problem with the Phone B station, so I went down to look at that. Then a power supply broke on CW B. It wouldn't be FD without some problems.

(Continued on page 4)

A New Way of Modulation

by Joel Wilhite - KD6W

The next generation of television is starting to roll out. The standard was developed by the ATSC who developed the current set we have today. The next set of ATSC specifications were recently developed and published for use as the next generation broadcast television system to replace the current one we have today. The current specification was drafted nearly twenty years ago and has become rather dated in our mobile “wireless” world of today. Many of us know all the flaws and pitfalls of the current system using over-the-air reception to watch TV. The motivation was clear from the beginning, the change in broadcast television was all about transitioning the industry from analog to digital. The promise of better pictures was the enticement to get us to buy a new TV as the industry was not about to limp along selling cheap converter boxes. Even still, there were cries from the public about how we were about to disenfranchise grandma and leave her in the dark without a way to see the new signal. So, the government stepped in to spend millions of dollars and gave us a 40-dollar coupon so we could all afford a converter box. It was said there were millions of people who were not able to buy a new TV. I was recently told there is a warehouse in Illinois filled with those boxes to this day so needless to say, they are still waiting to hear from those millions.

We are approaching the decade mark since the great analog shut off of June 2009 in the US, a day in ham history where the noise level on the 6 meter ham radio band dropped to never seen before levels when all the channel 2 and 3 transmitters were ceremoniously shut down. DXers were there to record the moment when distant TV channels from another market would appear out of the noise as the local market transmitters were turned off and they knew how to turn their antennas, being a ham helped. Once all the analog transmitters were turned off, the noise level (S) on the 6 meter band dropped from a constant high of S7 down to S3 and S2 in most areas. As this is being written, it's true not all analog transmitters are off the air. Coming soon, there are some new transmitters showing up in the low VHF to re-occupy

those channels from the “Incentive Auction” (www.fcc.gov) and “Channel Sharing” programs (www.fcc.gov). When these new channels show up, the signal will be different from the old analog carrier. Some of these new channels may appear as the current 8 VSB digital standard or as the new standard as it begins to roll out. The new signal “ATSC 3.0” standard is flexible, unlike the predecessor. But more on that later.

The point to all this is the obvious case for innovation by making your own SDR receiver or transmitter all in software. And in this case, to receive the new 3.0 signals and develop, collaborate and integrate with other hams around the world. With all the changes happening more rapidly in the broadcast industry, it's fairly obvious which way the wind is blowing for the big TV networks so watching the trends move all workflows into a big computer, somewhere is a reality. The architects of the new 3.0 signal included some very clever mechanisms to allow a significant number of business options and choices in those conditions. As the silly saying goes, it has to make “cents” or becomes, hey brother can you spare a dime? The ATSC committee is made up of all the brand names you know and they have all graciously contributed a significant amount of work to provide the design of the new system. There has to be a use case or in this case, many of them. And yes, the new standard is NOT backward compatible with the current receivers, but so what? This is where the fun begins for those of us hams willing to try. - C U @ the meeting. 73 - KD6W

Vick , AB6SO, demonstrating WSPR to some interested onlookers.



N6NFI Youth Net

At 7:00 pm, on Tuesdays, on the N6NFI repeater, the Youth Net takes place. The purpose of the net is to encourage kids to get on the air and talk to other kids.

During the net, I ask everyone attending the question of the day. For example, one time it was 'What is your favorite Spring/Summer activity?' It is really cool to hear what everyone thinks.

After everyone answers the question, the Social Portion of the net begins. The Social Portion is where youth and adults can ask and answer questions. An example: Where did KM6JUP build a robot that could hit a ball?

KM6JUP (Josh) is Net Control every other week. I really love doing and running the net with him. It is a fun experience, I think, for adults and kids alike to participate on the Youth Net. I hope that whoever is reading this stops by soon.

-Alexia (KM6LGG)



Old glory flying in the morning sun on the 40M tower. Doug, KG6LWE, driving home one of ~28 stakes that are holding everything up.



(Continued from page 1)

Everything seemed stable by about 12:30pm so I took off to find other FD sites to visit. My first visit was the CMU West site, where I met with Bob, W6EI. I saw their mobile communications research van and heard about the first LTE phone call made on Amateur frequencies. That was amazing. Then I went to WVARA and finally saw the amazing QRP setup they have on Mora ridge in Rancho San Antonio. The antennas were very impressive, as was the number of operators and the solar panels. Then it was on to the FARS site, which is actually very close to WVARA. It was great to see many friends there. Next I went to the CARES FD site that Darryl, KI6LDM, helps run each year before coming to operate at PAARA. Sadly I got there just as they were about to leave. Next year I'll get there sooner. Lastly, I headed to the East Bay to visit SBARA, where I saw even more old friends and spent time chitchatting with everyone.

I arrived back at the PAARAsite at around 6pm and got to say hello to Pink, K7ILA, who had driven in from Arizona while I was gone. It was great to see

her. We talked and had dinner, including some forbidden items for me, like ice-cream, until it was time for me to start operating. I got into the chair at around 9:30pm, taking over for David, K6DAJ, who had done a long day of operating. He and N6RK alternated stations all day. 40m started out really great with pileups at around 11:30. It didn't last, though. At around 12:30 things really slowed down and didn't recover. It was a long, slow slog until morning. At about 7:30am 15m opened up with first weak, then strong signals to the East Coast. N6RK took over for me at about 9am, and he had a really productive couple of hours. Before I knew it, FD 2018 was over and the gear was going back into the car. It was a great time. If you didn't have a chance to join us this year, I hope you will next year. I think you'll really find it both fun and rewarding. If you want to see my pictures go to <https://k6wx.smugmug.com/Events/Field-Day-2018/>.

Don't forget that we have our July meeting coming up really soon. CU BACK AT PAARA IN JULY DE K6WX



Left, Joel, KD6W, working 6 M

Below, Clark, K6ISP working on an antenna

Below left, Rebar, N6DB waiting for the next tower tube





Top Left, Doug, KG6LWE, cranking the tower with Eric, KJ6LAY assisting.

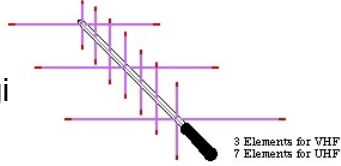
Top right, lunch under the big red awning.

Center right, Scouts working on their Radio Merit badge.

Left, Bob, KD6KYT, (with the cowboy hat) manning the public info and GOTA station.

July Raffle

1st ~ Arrow II Model 146-437-10 Element Yagi



2nd Daiwa CS 201A Two Position Coax Switch



3rd Two FSR Radios



4th LUX-PRO 2D 320 Lumen LED Extreme Brightness Flashlight



5th Come to find out

6th Come to find out



7th Grilliput/Portable BBQ Grill



Doug, KG6LWE already thinking about 2019!

Palo Alto Amateur Radio Association, Inc.

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VE Exams

Redwood City Main Library, Community Conference Room, 4th Saturday 10:30 am each month and De Anza Park, Sunnyvale, 2nd Saturday 10:30 am each month except November and December. See website for details and exceptions: <http://amateur-radio.org> or Contact Al, WB6IMX@att.net

Electronics Flea Market

Sponsorship by A.S.V.A.R.O. — Association of Silicon Valley Amateur Radio Organizations
 Second Saturday of month, March-September, 6am–12 noon
 Contact: <http://www.electronicfleamarket.com/>

PAARA — Palo Alto Amateur Radio Association

Meets 1st Friday 7:00pm each month at Room H-6, Cubberley Community Center; Net 145.230 - PL 100Hz Mondays at 8:30. See our website at <http://www.paara.org> for more information or contact: Joel Wilhite KD6W, KD6W@ARRL.NET, 650-325-8239

FARS — Foothills Amateur Radio Society

Meets 4th Friday each month at 7:30pm
 Contact: <http://www.fars.k6ya.org>

NCDXC — Northern California DX Club

Meets 3rd Thursday 7:30pm each month,
 Repeater for member info 147.360, Thursday 8:00PM
 Contact: <http://ncdxc.org> or Mike Gavin W6WZ, (650) 851 8699

QCWA Chapter 11

Northern California Quarter Century Wireless Association
 Meets third Wednesday monthly at Harry's Hofbrau in Redwood City @ 11:30 AM.
 Guests are welcome. Saturday morning net on 146.850 MHz, PL 114.8

50 MHz & Up Group

Meets 1st Thursday each month at 7pm in the Texas Instruments Building E conference room in Santa Clara.
 Contact: <http://50MhzandUp.org>

SPECS

Southern Peninsula Emergency Communication System

Meets each Monday 8:00pm on Net 145.27, 440.80 MHz
 Contact: <http://specsnet.org> or Tom Cascone, KF6LWZ, 650-688-0441

SCARES

South County Amateur Radio Emergency Service

Meets 3rd Thursday 7:30pm each month, Belmont EOC, Belmont City Hall, One Twin Pines Lane, Belmont CA 94002. Net is on 146.445 [PL 114.8] & 444.50 (PL-100) 7:30 Monday evenings. Contact: President Gary D. Aden, K6GDA 650-743-1265 (D), 650- 595-5590 (N)
 Web: <http://k6mpn.org> E-mail: pres@k6mpn.org

SCCARA

Santa Clara County Amateur Radio Association

Operates W6UU & W6UU/R, repeater 146.985-pl
 Nets: 2m, 7:30pm Mon; 70cm, 442.425+ (pl 107.2) Thur.
 Meets 2nd Mon each month @ 7:30 PM.
 Contact: <http://www.qsl.net/sccara> or Clark Murphy KE6KXO 408-262-9334
 ARRL/VEC license testing contact 408-507-4698

SVECS — Silicon Valley Emergency Communications

Operates AA6BT repeater (146.115 MHz+)
 contact: <http://www.svecs.net> or Lou Stierer WA6QYS 408 241 7999

TEARS — The Elmer Amateur Radio Society

Dedicated to operational training, knowledge building & FCC exam testing.
 KV6R repeater under construction.
 Contact: AA6T@ARRL.NET
 Most members are Extra Class or VE's. See QRZ dot com/kv6r for class info

WVARA — West Valley Amateur Radio Association

W6PIY six-meter repeater on 52.58MHz. Normally, six-meters is linked with 147 and 223, while 441 and 1286 repeaters are linked.
 VHF: 52.58 (-500) 151.4 ctcss UHF: 441.35 (+5.0) 88.5 ctcss
 147.39 (+600) 151.4 ctcss 223.96 (+1.6) 156.7 ctcss 1286.20 (-12m) 100.0 ctcss
 Meetings are 2nd Wednesday of every month except July, August and December.
 Contact: <http://wvara.org>, Bill Ashby N6FFC, 408-267-3118, president@wvara.org

**American Red Cross,
 Santa Clara Valley Chapter**

Contact: <http://santaclaravalley.redcross.org> or Scott Hensley KB6UOO, (408) 967 7924
shensley@Novell.com

(Please send changes to [PAARAgaphs editor](#))



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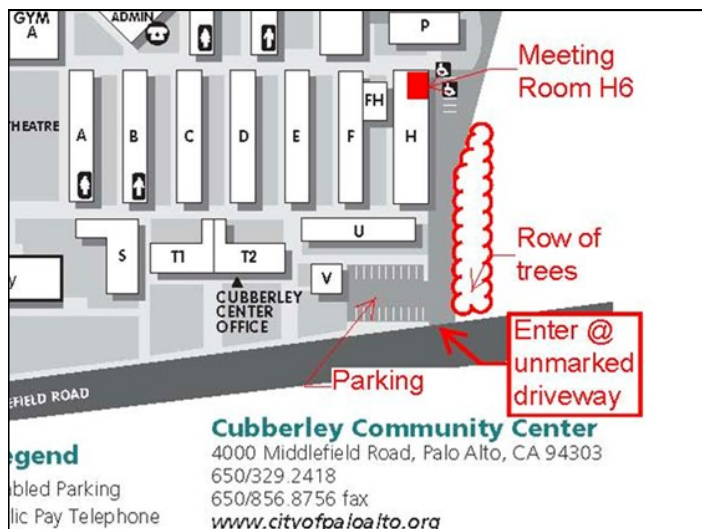
If you would like to
 order a badge, see
Doug Teter, KG6LWE.

PAARA Weekly Radio Net

Info and Swap Session
 every Monday evening at 8:30pm
 on the N6NFI 145.230 MHz repeater

<u>Week</u>	<u>Control Operator</u>
1 st	Joel KD6W
2 nd	Doug - KG6LWE
3 rd	Jack - W1VSL
4 th	Rob - KC6TYD
5 th	Rob - KC6TYD

If you're interested in trying out at Net Control,
 Contact Doug, KG6LWE. It's good practice,
 and lots o' fun! Give it a try.



**Meeting Location — Middlefield Road
 between San Antonio and Charleston in Palo
 Alto. 4000 Middlefield Road**

<http://www.foto.mail.ru/list/shkurkin>

Vladimir Vladimirovich

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**Palo Alto Amateur Radio Association
 P.O. Box 911, Menlo Park
 California 94026-0911**

Club meetings are on the first Friday of each month,
 7:00pm at the Room H-6, Cubberley Community Center.

Radio NET & Swap Session every Monday evening, at
 8:30pm, on the 145.230 –600 MHz repeater, PL 100Hz.

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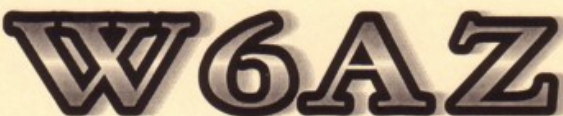

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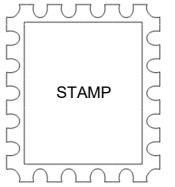
- Not-for-profit ads by association members for ham-related items and wants. No cost for business card-size ads (additional space at \$2.50 per business card size per issue).
- For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50 full page or back cover per issue.

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PAARAgaphs — July 2018

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