President's Corner

HamCation Review & Hamvention Preview

HamCation is barely in the rear-view mirror and we had a great time! Thank you to booth volunteers N4XWE, K0PFX and AB4EJ for demos, talks and fielding all sorts of questions at the booth. I got to visit with the ARDC folks who have been very supportive with grants to TAPR in the past and I am sure the support will continue into the future. I also got to meet Robert, KE4AL, the AMSAT president. We are planning a special co-sponsored Friday banquet this year at Hamvention, so keep your eye out for the announcement.

Sad news came our way with the passing of APRS creator, Bob Bruninga, WB4APR on February 7 after a long battle with cancer. He was 73. There is hardly space enough in this entire issue of PSR to cover Bob's many achievements. Here is a link to an ARRL article on his life and career:

http://www.arrl.org/news/aprs-developer-bob-bruninga-wb4apr-sk

I am collecting anecdotes and experiences that other hams have had with Bob as kind of a celebration of life. If you have "Bruninga Experiences" that you would like to share, please e-mail them to me. If you will be attending Hamvention in a few months, I would especially like to hear of your experiences in person!

Speaking of Hamvention, it is next event for TAPR and tentatively returns to a live venue again on May 20-22, 2022, at the Greene County Fairgrounds in Xenia, Ohio. TAPR will have a booth in our usual place (5009-5011) in building 5. The TAPR forum is still in the planning stages. If you would like to speak, please let me know so we can get your latest pet project some visibility in the ham community.

73, Scotty WA2DFI

###

TAPR is a community that provides leadership and resources to radio amateurs for the purpose of advancing the radio art.

2022 ARRL / TAPR Digital Communications Conference

Make your reservations now for three days of learning and enjoyment at the Hilton Charlotte Airport Hotel. The Digital Communications Conference schedule includes technical and introductory forums, demonstrations, a Saturday evening banquet and an in-depth Sunday seminar. This conference is for everyone with an interest in digital communications— beginner to expert.

September 16-18
Charlotte, North Carolina

Contact Tucson Amateur Radio at:
www.tapr.org/dcc

ALL PLANS ARE SUBJECT TO CHANGE DUE TO THE CORONAVIRUS

Hilton Charlotte Airport Hotel

TAPR is a community that provides leadership and resources to radio amateurs for the purpose of advancing the radio art.

80m & 160m WSPR Transmitters Available

TAPR now has 80- and 160-meter WSPR transmitter kits available. These are similar to the 10meter/12meter and 15meter/17meter WSPR transmitter kits in that the user solders the low pass filter components to the pcb. In addition, the user also solders the drain inductor for 80-meter and 160-meter transmitters.

Visit the TAPR store (https://tapr.org/product/wspr/) for more information and/or to order kits.

###

GRCon22 on Sept. 26-30

The 12th Annual GNU Radio Conference (GRCon) will be held this year in Washington, DC, in-person during the week of September 26-30 at the Capital Hilton Hotel.

GRCon is the annual conference for the free and open sourc GNU Radio project and community and has established itself as one of the premier industry events for Software Defined Radio (SDR).

GRCon attendees come from a large variety of backgrounds, including industry, academia, government and hobbyists.

The details:

September 26-30, 2022

Capital Hilton

1001 16th Street NW

Washington, DC 20036 USA

For more information, please visit https://www.gnuradio.org

You can contact the organizers at grcon@gnuradio.org

###

WB4APR – Silent Key

By Stana Horzepa, WA1LOU

By now, I'm sure that you have heard the sad news that the "Father of APRS," Bob Bruninga, WB4APR, died on Febuary 7, 2022.

APRS was very attractive to this writer. It combined my favorite *mode du jour*, packet radio, with maps, weather stations, GPS and computers. Who could ask for anything more!

I got to know Bob, editing his articles for *PSR*, moderating the first APRS forums at Hamvention and being a pain in the dupa, badgering him with questions while I wrote the packet radio and APRS books for the ARRL. Bob was patient and always answered my questions, made suggestions and as a result, the books were far better for it.

We remained friends after I became less APRS-active and over the years, he always supported me and *PSR* with articles on his favorite topics.

I will miss Bob, as will all of Amateur Radio.

###

N1URO – Silent Key

By Brian Webster, N2KGC

It is with great sadness that I pass along the news that Brian Rogers N1URO is now a silent key. He passed on Tuesday evening January 4th , 2022.

Brian was the author of the URONode packet radio software and past president of the Eastnet Amateur Radio Network (https://www.eastnetpacket.org/). He was an avid packet user and contributor to various software packages, not just his own. He was also the AmprNet coordinator for the states of MA, NH, VT, PA, MD, DE, CT, RI and ME.

Professionally, he was an IT consultant and ran his company Network Continuum Connecticut (https://www.nc-ct.net/).

He was a mentor to many who wanted to operate packet nodes or set up an ampr.org station. He had a broad knowledge of many other node operating systems, keeping nodes of all types running at his QTH. He was a wealth of detailed knowledge and will be missed immensely.

###

Wither APRS?

By Steve Stroh, N8GNJ (Source: Zero Retries)

Steve Dimse, WK4HG, on the TAPR APRS Special Interest Group (APRS SIG) mailing list:

"Yes, it is true. Amateur Radio has lost a true pioneer in its transition to the digital age. I will certainly miss him. We often argued, but I deeply respected him. I'm glad I had the chance to express that to him unequivocally before his death. When he was diagnosed he was not expected to last 6 months but he made it two years, and it took covid to finish the job. He was tough as well as brilliant.

"Bob did not want to make a big deal of his cancer and did not want sympathy, so he only told a few people. He did drop a few hints over the last two years though. Bob tried to get a group of active programmers in APRS to come together, but no one stepped forward. We talked about it, and I told him I thought it would not happen until he made his diagnosis public and involved the larger community. He did not want to do that, so I agreed to help as I could. I have control of aprs.org, and TAPR has the paperwork to transfer the APRS trademark.

"The APRS community has some choices to make. I am no spring chicken myself, and I have no desire to assume Bob's throne on top of APRS. However I am not going to just hand responsibility to a single person. This needs to be a community effort and not become dependent on a single person. We need to use this sad opportunity to strengthen APRS. I hope people will step forward to form a group to assume the leadership role. I would like to see a non-profit formed with a real board of directors, bylaws, and open membership. But I'm not going to do it - collaboration is not one of my strengths either!

"I am sure TAPR will be willing to help in any way it can, and a real APRS group should be able to secure a grant from ARDC (ampr.org) for funding itself. If you weren't aware ARDC, which has held the 44.0.0.0/8 IP allocation since the beginning, sold an unused quarter of the allocation to Amazon for $108 million a couple years back, and has been giving out grants for worthy ham radio projects.

"This can be a beginning of a new era for APRS if a few people are willing to take on a lot of unpaid, under-appreciated effort. If that doesn't happen, I will update the aprs.org pages with new user-defined packet definitions and to-calls. I will not be drawn into discussion about protocol changes, new icons, or other such minutia. Other than housekeeping details, the protocol is not officially changing until an open membership group steps up and takes over. Without the ability to change, people may decide to implement changes unilaterally, which will not be good for the community.

"Bob loved APRS, and he wanted it to thrive after his death. But for all his flashes of brilliance he was never good at creating a collaborative group. We tried to help him by creating the APRS Working Group in the early 2000s but he never did anything with it once we created the protocol and stepped aside. It is time for someone to step into his shoes and lead, or APRS will decline.

"It is in your hands."

If you want to get involved with the future of APRS, APRSSIG is the center of the APRS universe. I've just rejoined that list to follow what comes next.

On the one hand, Amateur Radio has come together for such standards work in the past, notably AX.25 and of course APRS. But that was a different era, decades ago. Whereas the creation of AX.25 resembled a formal standards effort (not too dissimilar to professional standards bodies), (my perception of) APRS "standardization" was more akin to the old motto about creating standards within the Internet Engineering Task Force (IETF):

Rough consensus and running code.

In a subsequent post about APRS standards, Lynn Deffenbaugh KJ4ERJ posted these links:

http://www.aprs.org/doc/APRS101.pdf

http://www.aprs.org/aprs11.html

http://www.aprs.org/aprs12.html

So, at least there's that. I do hope there can be a group that comes together for formal, or even informal stewardship to keep implementations of APRS and the ecosystem interoperable. I'm also glad that aprs.org and the APRS trademark are under stewardship.

This sort of situation was anticipated several years ago and a concept called Amateur Radio Engineering Task Force (ARETF) was created. Those who created it got busy with other activities. Later I put some energy into it and considered reviving it for work on an open source equivalent of VARA, but I decided that my energy and time was better spent on Zero Retries. I think the idea of ARETF is a good one, but I'm not well-connected enough to have a realistic chance of making it a reality.

Lastly, WB4APR offers a sobering reminder that none of us get out of this alive, despite our best efforts and hopes, we don't know how much time we have. So make the most of your life while you can. In a December 2020 YouTube video, WB4APR mentions briefly that two weeks after his retirement, he was diagnosed with cancer.

###

Starlink in Ukraine – Remarkable!

By Steve Stroh, N8GNJ (Source: Zero Retries)

As I discussed in Zero Retries 0035 just a few hours ago, I'm just not mentally up to writing about the use of radio technology in Russia's war against Ukraine. But I did hint that I would publish something about communications in Russia's war on Ukraine "soon" using Substack's "Threads1" feature, but this "something" quickly grew beyond what Threads was intended for. Thus, this special edition of Zero Retries.

If you're thinking Starlink isn't Amateur Radio, you're right. But this story deserves to be more widely known, including within Amateur Radio. Starlink is 21st century telecommunications infrastructure - mobile, wireless, software defined, and rapidly iterated.

Credit where due, YouTuber Steven Mark Ryan of Solving the Money Problem (one of my usual relaxations during my lunch break) tipped me off to this story. Ryan probably tells the story better than I'll be able to in text. Skip ahead to 1:42.

It has been widely reported that a shipment of Starlink terminals were delivered to Ukraine, and that SpaceX rapidly configured its Starlink constellation to accommodate those new terminals. The assumption is that the ground terminals to provide Starlink service to Ukraine are (safely) outside Ukraine's borders… probably protected behind NATO defenses in Poland.

What has been done since that delivery by the Starlink team to support emergency wartime use of Starlink in Ukraine is, in my opinion, remarkable.

At minimum, SpaceX got the Starlink terminals to Ukraine, in time for them to be useful - no small feat.

What happened next is told in a series of tweets. In sequence:

@FedorovMykhailo is Vice Prime Minister of Ukraine and Minister of Digital Transformation of Ukraine.

@FedorovMykhailo: many thx! Starlink keeps our cities connected and emergency services saving lives!

With Russian attacks on our infra, we need generators to keep Starlinks & life-saving services online - ideas?

@elonmusk: Updating software to reduce peak power consumption, so Starlink can be powered from car cigarette lighter. Mobile roaming enabled, so phased array antenna can maintain signal while on moving vehicle.

Software update to adapt a civilian system for wartime usage so that it can be powered from 12 volts DC (presumably via a small 12 volt DC to 220 VAC inverter).

Then to enable mobile usage from a flat panel antenna, with beam forming. That's an experimental, or beta (to be generous) feature.

From a civilian organization. Wow.

@elonmusk: Important warning: Starlink is the only non-Russian communications system still working in some parts of Ukraine, so probability of being targeted is high. Please use with caution.

When asked how to use with caution:

@elonmusk: Turn on Starlink only when needed and place antenna away as far away from people as possible.

@elonmusk: Place light camouflage over antenna to avoid visual detection

When asked about painting the Starlink dish:

@elonmusk: Yes, provided no metal particles in paint.

What's remarkable about these last two exchanges is they're rapid replies, with actionable information. No waffling, no weasel-wording, etc. Just helpful answers, fast!

…

We're in a way different world than I grew up in when the CEO of a (defacto) telecommunications company can be in direct communications, in a public forum, with a senior official of a country being attacked by Russia, in close to realtime.

I can't offer enough kudos for quick-acting SpaceX and SpaceX CEO Elon Musk for this work to very, very substantively aid the people of Ukraine. SpaceX, and Starlink really is an "only in the USA" success story. There just isn't any comparison. Musk might be a "challenging personality" at times, but we in the US can proudly point to him that he's our "challenging personality". There's no denying Musk's brilliance and drive and the "Get it DONE" culture he has imbued into SpaceX and Starlink.

###

Donate to TAPR

TAPR is now participating in the AmazonSmile program!

When you shop using the AmazonSmile program, Amazon makes a donation to TAPR equal to 0.5% of the price of your eligible AmazonSmile purchases.

AmazonSmile is the same Amazon you know. Same products, same prices, same service.

Bookmark the TAPR AmazonSmile Program link:

https://smile.amazon.com/ch/86-0455870

That link takes you to a special login portal where you enter your normal Amazon credentials and get redirected at the same Amazon home page except there will now be a notice that you are supporting TAPR.

Other ways to donate to TAPR, email contact@tapr.org:

###

Write Here!

Your *PSR* editor is working on the next issue of *PSR* and hopes to find a few good writers, particularly ham radio operators working on the digital side of our hobby, who would like to write about their activities and have them published here in *PSR*.

You don't have to be Hiram Percy Maxim to contribute to *PSR* and you don't have to use *Microsoft Word* to compose your thoughts.

Your *PSR* editor can handle just about any text and graphic format, so don't be afraid to submit whatever you have to wa1lou@tapr.org --- she can handle it!

The deadline for the next issue of *PSR* is June 15, so write early and write often.

                                                        ###

On the Net

By Mark Thompson, WB9QZB

Facebook

As you may know, TAPR has a Facebook page, www.facebook.com/TAPRDigitalHam.

However, I also created a TAPR Facebook Group, www.facebook.com/groups/TAPRDigital/.

If you have a Facebook account, "Like" the TAPR Facebook page and join the TAPR Facebook Group.

If you join the group click on the Events link and indicate you're Going to the events.

On Twitter, Too

Access the TAPR Twitter account at

www.twitter.com/taprdigital.

Also on YouTube

TAPR now has its own channel on YouTube: the TAPR Digital Videos Channel: www.youtube.com/user/TAPRDigitalVideo.

At this time, there are a slew of videos on our channel including many from the TAPR-ARRL Digital Communications Conference (DCC) that you may view at no cost, so have at it!

                                                        ###

PSR

Submission Guidelines

TAPR is always interested in receiving information and articles for publication. If you have an idea for an article you would like to see, or you or someone you know is doing something that would interest TAPR, please contact the editor (wa1lou@tapr.org) so that your work can be shared with the Amateur Radio community. If you feel uncomfortable or otherwise unable to write an article yourself, please contact the editor for assistance. Preferred format for articles is plain ASCII text (OpenOffice or *Microsoft Word* is acceptable). Preferred graphic formats are PS/EPS/TIFF (diagrams, black and white photographs), or TIFF/JPEG/GIF (color photographs). Please submit graphics at a minimum of 300 DPI.

Production / Distribution

PSR is exported as Adobe Acrobat and distributed electronically at www.tapr.org

PSR Editor: Stana Horzepa, WA1LOU

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TAPR Officers

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TAPR is a not–for–profit scientific research and development corporation [Section 501(c)(3) of the US tax code]. Contributions are deductible to the extent allowed by US tax laws. TAPR is chartered in the State of Arizona for the purpose of designing and developing new systems for digital radio communication in the Amateur Radio Service, and for disseminating information required, during, and obtained from such research.

PSR Advertising Rates

TAPR is a community that provides leadership and resources to radio amateurs for the purpose of advancing the radio art.

Membership Application

TAPR

1 Glen Ave., Wolcott, CT 06716-1442

Phone +1 972 413 8277, Monday–Friday, 9AM–5PM Eastern Time

E–mail contact@tapr.org   URL www.tapr.org

Join or renew online at https://tapr.org/logout/

Benefits of a TAPR Membership:
- *Subscription to the quarterly PSR*
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