President's Corner

By Steven Bible, N7HPR, President, TAPR

DCC, Sept. 20-22

Final preparations are being made for the 32nd Annual ARRL and TAPR Digital Communications Conference, September 20-22, 2013 in Seattle, Washington.

Are you ready? Here's a check list to help you out:

Have you booked your travel?

Have you booked your hotel room? (see below)

Have you registered for the DCC? Go to https://www.tapr.org/dccregistration.php to sign up.

Below is the list of submitted papers. The DCC tentative schedule appears on page 3. We have an exciting list of paper talks, guest speakers, and Introductory Seminars.

Hotel

Cedarbrook Lodge

18525 36th Avenue South

Seattle, WA 98188

Hotel Internet Site: Cedarbrook Lodge (http://www.cedarbrooklodge.com/)

Reservations: 1-877-515-2176

Submitted Papers

"(CAB) Controllable Altitude Balloon Proposal" by Pedro Converso, LU7ABF

"A Software Defined Radio for Mesh Networks" by John B. Stephensen, KD6OZH

"Applications and Infrastructure for Marathon Support" by Erik Westgard, NY9D

"DATV-Express – a Testing Report" by Art Towslee, WA8RMC and Ken Konechy W6HHC

"Evaluating OLSR and B.A.T.M.A.N over D-STAR" by John Ronan, EI7IG and Darren Long, GØHWW

"Gnuradio Companion module for openHPSDR Hermes / Metis SDR Radio" by Tom McDermott, N5EG

"High Performance BPSK31: Ideas for a New Generation" by John A. Gibbs, NN7F

"Modulation – Demodulation Software Radio" by Alex Schwarz, VE7DXW and Guy Roels, ON6MU

"Narrowband IP over Amateur Radio Networks (NIPARnets): Next-Generation Networking for Amateur Radio" by Timothy J. Salo, ABØDO

"Noise Power Ratio (NPR) Testing of HF Receivers" by Adam Farson, VA7OJ/AB4OJ

"Raspberry Pi Applications in Digital Communications: A Mobile Xastir-Based APRS Station" by John A. Hansen, W2FS

"Whitebox Handheld Software Radio Kit" by Chris Testa, KD2BMH

The DCC is a gathering of the digital hams who

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

are on the cutting edge of the Amateur Radio; they come to the DCC to show and tell what they are doing on that edge. Perusing the list of papers that the attendees will present in Seattle, this year will be no different.

So if you are anywhere near the upper left corner of the lower 48, then I recommend that you spend a few days during the last weekend of the month attending the DCC and soak in all that cutting edginess that the conference has to offer.

By the way, if you arrive on Thursday, stop by at the biannual "in the flesh" meeting of the TAPR Board of Directors (observers are always welcomed). I say "in the flesh" because the Board is in session 24/7 via the Internet, but only meets twice each year in person (at the DCC and at the Dayton Hamvention), where we discuss present and future projects.

The TAPR Annual Meeting occurs Saturday afternoon, which will include presentations to the membership, the Treasurer's report, and a question and answer session where your Board of Directors fields questions from the membership.

As always, we will look forward to hearing your input regarding the future of TAPR, so make your plans now to attend TAPR's real big show in the Pacific Northwest.

73,

Steve Bible, N7HPR, President TAPR

###

2013 ARRL/TAPR Digital Communications Conference

September 20-22 in Seattle, Washington

Make your reservations now for three days of learning and enjoyment at the Cedarbrook Lodge in Seattle, Washington. The Digital Communication Conference schedule includes 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.

Call Tucson Amateur Packet Radio at: **972-671-8277**, or go online to **www.tapr.org/dcc**

2013 Digital Communications Conference
September 20-22, 2013

Mark your calendar and start making plans to attend the premier technical conference of the year, the 32nd Annual ARRL and TAPR Digital Communications Conference (DCC) to be held September 20-22, 2013, in Seattle, WA.

The DCC is an international forum for radio amateurs to meet, publish their work, and present new ideas and techniques. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications.

Topics include, but are not limited to: Software Defined Radio (SDR), digital voice, digital satellite communications, Global Position System (GPS), precision timing, Automatic Position Reporting System® (APRS), short messaging (a mode of APRS), Digital Signal Processing (DSP), HF digital modes, Internet interoperability with Amateur Radio networks, spread spectrum, IEEE 802.11 and other Part 15 license-exempt systems adaptable for Amateur Radio, using TCP/IP networking over Amateur Radio, mesh and peer to peer wireless networking, emergency and Homeland Defense backup digital communications, using Linux in Amateur Radio, updates on AX.25 and other wireless networking protocols.

The following is an outline of the DCC schedule:

- Friday Day - Paper Presentations, Introductory Presentations, Demonstrations

- Friday Evening - Social (open to all, not just TAPR members)

- Saturday Day - Paper Presentations, Introductory Presentations, Demonstrations

- Saturday Afternoon - TAPR Annual Meeting Banquet,

- Saturday Evening - Banquet, Speaker, Awards, Prizes

- Sunday Morning - Android programming tutorial by Ron Frohne, KL7NA.

Our Saturday evening banquet speaker is Tom Van Baak, whose speech is titled "Passion and Precision: Adventures of a Time Nut."

Tom Van Baak is a physicist and mathematician by education, an operating systems software engineer by profession, and a precision clock enthusiast by passion.

He received a degree in physics and mathematics at Calvin College in Grand Rapids, Michigan. In his career he worked as an operating systems software engineer in Silicon Valley and in Redmond, Washington. His interest in precise time dates from a middle school science project where he built an optically triggered, electromagnetically impulsed pendulum clock from old radio and car parts, balsa wood, and plastic.

More recently he began collecting atomic clocks and created a world-class precision timing laboratory in his home with clocks ranging from marine chronometers to hydrogen masers. He specializes in time measurement and error analysis, in experimenting and education. A virtual museum of his clock collection and numerous lab reports are on his http://www.LeapSecond.com website. Van Baak is also the creator of the time-nuts group, a loose collection of hundreds of individuals around the world who collect, repair, create, or experiment with quartz, GPS, rubidium, and cesium time and frequency standards as a hobby.

He lives in Bellevue, Washington, with his wife, two dogs, three children, and several dozen atomic clocks.

DCC presentations, meetings, and seminars will be held at the Cedarbrook Lodge, Seattle, WA. It is highly recommended that you book your room prior to arriving. A block of rooms at the special DCC room rate of $145 single/double. This special rate is good until 5 PM PDT, Wednesday, August 28, 2013. After that you will pay the regular room rate..

Complementary services and amenities include:

Courtesy Shuttle to/from Seattle Tacoma International Airport, Link Light Rail and Tukwila Amtrak Train.

Enhanced Continental Breakfast including steel cut oats, homemade pastries, smoked trout, bagels, yogurts, hard boiled eggs, charcuterie, homemade granola, cereals, coffee, tea and juice.

24-hour snack bar in guest room lodge communal living rooms including bottled water, whole fruit, chips, sweet treats, string cheese, yogurt and ice cream.

Complimentary WiFi throughout the hotel (for both overnight and day attendees)

To book your room:

Online at Cedarbrook Lodge (http://www.cedarbrooklodge.com/) (Go to the quick reservations and click on check availability, put the code DCC in the far left box under Group Code along with the dates of stay and then hit continue. The ARRL and TAPR Digital Communications Conference rates will show up for you to book.)

Or call the hotel directly (1-877-515-2176) and be sure to mention the group code "DCC" when making reservations.

###

HPSDR Hermes J16 Breakout Board

By John Ackermann, N8UR

TAPR's Board of Directors approved a plan to produce and sell an HPSDR Hermes J16 Breakout Board.

This board provides access to the audio and keying lines available on the 26-pin J16 rear panel connector. The board is designed to be as small as possible (about 1.25 x 1.5 inches) because there is little room on either side of J16 and we don't want to increase the required clearance behind the radio any more than we have to.

The board plugs directly into J16 and extends horizontally behind the radio. On the left side, CON1 is a right-angle, PCB mount, female, unkeyed, 26-pin connector that mates with J16. It mounts on the top of the PCB and has its pinout mirrored to match the actual layout of J16 (which is NOT the same as shown in the Hermes schematic!). If the pinout doesn't make sense, remember that it's a right-angle connector, so the row of pins closest to the edge of the board ends up connecting to the bottom row of J16.

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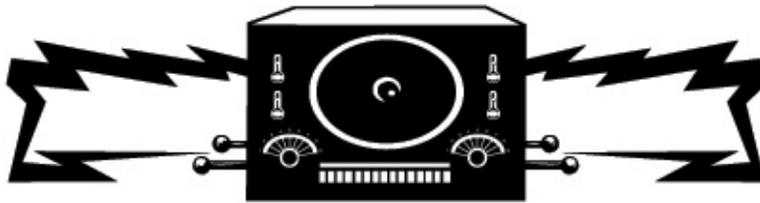
KICKSTARTER for DCC Video

By Gary Pearce, KN4AQ

We've got our hand out again... looking for funding to go to Seattle and shoot (then produce) video of all of the sessions at the 2013 ARRL and TAPR Digital Communications Conference. We've produced the videos four out of the past five years, two years on DVD, and the last two online. Viewership online was much higher, of course, but financially we took a bath. So this year we're looking for funding in advance.

We've started a KICKSTARTER that runs through Labor Day, September 2 (just before midnight). Stop by HamRadioNow.tv (http://hamradionow.tv/) for details and a link to the KICKSTARTER page.

###

Directors Election

Three Director positions on the TAPR Board of Directors are now open for nomination and nominations may be submitted now.

TAPR Board members serve three-year terms and their responsibilities include:

1) Attendance at both board meetings each year. [One is held at the Dayton Hamvention in May, the other at the Digital Communications Conference (DCC) in September.]

2) Regular participation in the continuous board session, which is conducted over the Internet.

3) Active engagement in TAPR's management.

To place a person in nomination, please remember that he or she must be a member of TAPR. Also, confirm that the individual is willing to have his or her name placed in nomination. Send that person's name (or your own if you wish to nominate yourself), call sign, mailing address, e-mail address, phone number(s), and a biographical sketch (100 words maximum) via http://www.tapr.org/inforequest.php or to via snail mail to P. O. Box 852754, Richardson, TX 75085-2754 to arrive by September 10th. If you submit a nomination via e-mail, we strongly encourage you to follow up by regular mail.

Nominations close after the call for nominations from the floor at the TAPR Membership Meeting at the DCC on September 21, 2013, and an online election will be held at http://www.tapr.org/tapr_elections.html from September 28 to October 11, 2013.

The three Director positions that are up for election are currently held by John Ackermann, N8UR, Dan Babcock, N4XWE, and Jeremy McDermond, NH6Z.

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TADD-2 Mini Kit
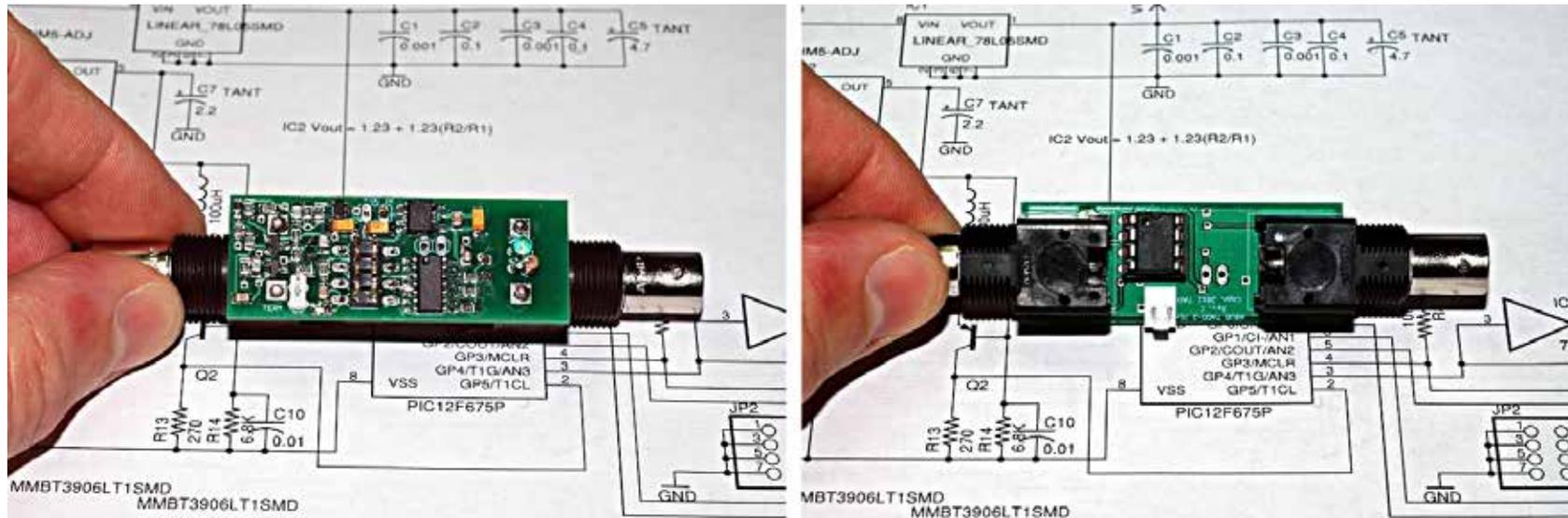
The TADD-2 Mini or "T2-Mini" is a tiny frequency divider board that accepts a 1, 2.5, 5 or 10 MHz input signal and generates a 1 pulse-per-second (PPS) output pulse. The pulse can be synchronized to an external source (such as a GPS receiver). The divider is implemented in a DIP-socketed PIC chip using software written by Tom Van Baak. The source code is freely available and other software loads are available from Tom's web site (http://leapsecond.com/) to implement different division ratios.

Tests indicate that the jitter is in the range of 1 picosecond --- near the noise floor of the best test systems we've been able to configure. The input circuit is a wide-range design that works with signals from -20 to +13 dBm. The input may be high impedance or terminated in 50 ohms via a jumper.

The T2-Mini has a single low-impedance output that delivers greater than 3.5 volts into a 50 ohm load with rise time at the connector of less than 3 nanoseconds. In addition to the primary output, optional headers on the board provide either an LED or an auxiliary TTL-level output signal and an inverted TTL-level pulse.

Power input is from 9 to 15 volts and current draw is from 20 to 50 milliamps depending on output load.

An 8-pin header provides direct access to four of the PIC's pins; these may be used for configuration or additional input signals. The pre-programmed PIC that TAPR provides uses the 8-pin header to allow selection of four input frequencies (1, 2.5, 5, or 10 MHz) and synchronization of the divider to an external clock source.

The board is only 0.75 by 2.0 inches and uses surface mount parts, although the PIC chip is a socketed 8-pin DIP to allow easy reprogramming.

Because of the small size and tightly packed surface mount components, the TADD-2 Mini is available only with all SMT parts installed. TAPR is offering the following option:

T2-Mini w/Connectors --- A semi-kit that includes the PCB with all SMT parts installed, plus connectors, headers, socket and programmed PIC chip to be installed by the user. ($49 US TAPR members, $55 US non-members)

To order a T2-Mini, go to http://www.tapr.org/kits_t2-mini.html

Acknowledgments

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TAPR at Hamvention

Dayton, Ohio, May 16 - 19, 2013

"TAPR Update" by the TAPR Forum Moderator Steven Bible, N7HPR, TAPR President

"Multiple-Personality SDR: FPGAs, Reconfigurability and Unconventional SDR Applications" by Scotty Cowling, WA2DFI

"An Update on Whitebox, the Handheld SDR Project" by Chris Testa, KD2BMH

"Testing Digital Radios" by Dennis Rosenauer, AC7FT

"Codec2, FreeDV, and HT of The Future: Wide Open and Digital" by Bruce Perens, K6BP

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

Laura and John (W9DDD) Koster accepted cash and credit cards at the TAPR store throughout Hamvention weekend.

Scotty Cowling, WA2DFI, Jeremy McDermond, NH6Z, and Tim Shepard, KD1KY, fielded questions from folks visiting our booth in the Hara Arena.

The TAPR Directors held an in-person board meeting Thursday of Hamvention weekend. Attendees included Tim Shepard, KD1KY, Director John Ackermann, N8UR, Scotty Cowling, WA2DFI, Director John Koster, W9DDD, Chris Testa, KD2BMH, Director George Byrkit, K9TRV, Director/Vice President Jeremy McDermond, NH6Z, Director/ President, Steve Bible, N7HPR, Director Dan Babcock, N4XWE, and Director/Treasurer Tom Holmes, N8ZM. (Photos by Director/Secretary Stana Horzepa, WA1LOU.)

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

TAPR Helps Kids Build Kits

TAPR funds a Morse code kit-building project in an Oregon middle school

By Stana Horzepa, WA1LOU

When I was a student, the only technical gadget in the building was a cranky 16 millimeter projector that our teachers used to show films like *Hemo the Magnificent* (http://www.imdb.com/title/tt0156602/) and *The Unchained Goddess* (http://www.imdb.com/title/tt0157135/).

Today's typical classroom is filled with computers, laptops, tablets and -- if you are lucky enough to attend a school like Hamlin Middle School (http://hms.sps.lane.edu/) in Springfield, Oregon -- ham radio equipment. Recently, 200 Hamlin 6th grade students built Morse code oscillators under the guidance of the Emerald Amateur Radio Society (EARS) (http://www.emerald-ars.us/). EARS funded the project with the assistance of education grants from TAPR and two local utility companies.

According to the EARS website (http://www.emerald-ars.us/pictures.html), both "the volunteers and students said [the project] was fun and interesting." The students learned a little electronic theory, some Morse code and they actually had the opportunity to use a gadget that they built themselves, rather than something store-bought. This might inspire the students to do more in electronics, and perhaps there will be some Hamlin ham operators in the future. This could be just the kind of project to inspire your radio club to sponsor a similar project at a local school, and help grow ham radio.

(This article originally appeared at http://www.arrl.org/news/surfin-kids-and-kit-building.)

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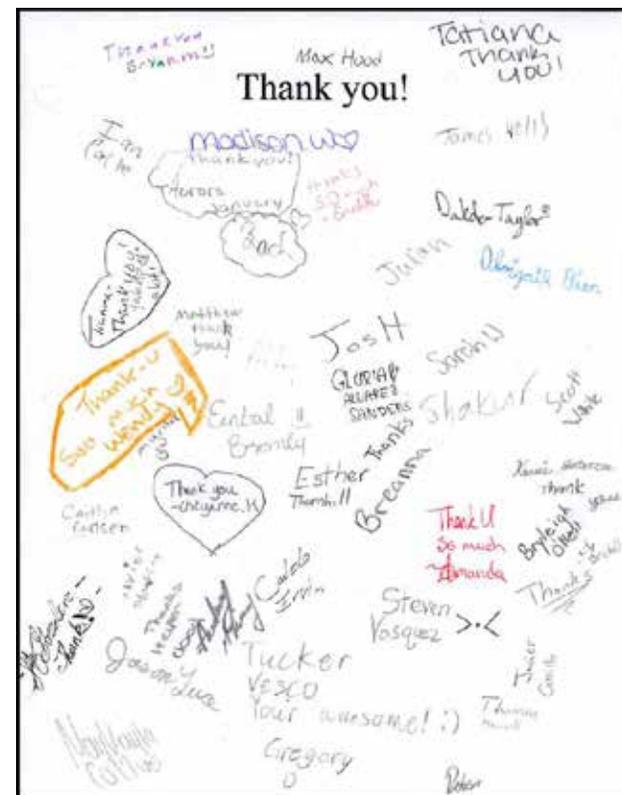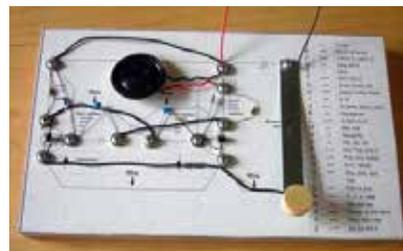
APRS Touchtone

Event Data from Everyone with DTMF

By Bob Bruninga, WB4APR

APRS Touchtone (APRStt) was introduced in 2001 as an attempt to extend the value of APRS as a data entry system for all members of a ham radio club and not just the 10% that had APRS radios. Virtually everyone has an HT with a keypad that can send DTMF digits. We have had these radios for over 40 years. Originally, we used the keypads for autopatch and now for a variety of remote controls for establishing Voice-Over-IP (VOIP) and other repeater functions.

There is no reason that these radios cannot be used for data entry at any club radio event almost as easily as APRS radios. Since everyone in the club has a DTMF radio, this capability can greatly multiply the use of field data reporting for club events. As shown in Figure 1, the goal is for the DTMF users and APRS users to communicate equally.

What APRStt does is recognize that a DTMF encoded call sign heard on an FM channel can provide almost as much value as an entire APRS packet, especially when compared to the typical initial voice announcement when one keys the radio such as "WB4APR Listening. In this voice transmission, the value is an ID delivering CALL and TIME. But it is only heard by the one or two humans actually monitoring the channel and has no retention for others who may tune in later.

In contrast, a single DTMF data burst with encoded call sign provides all of the following values:
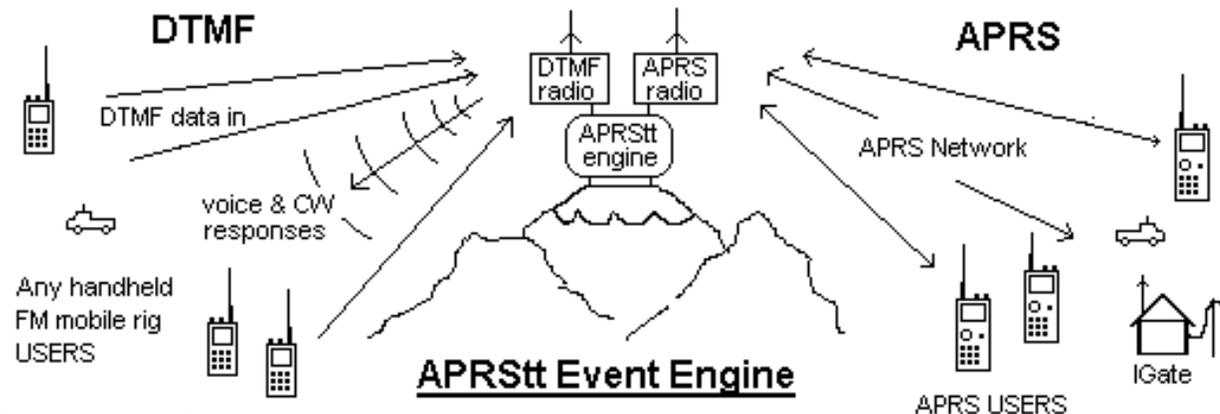
* Call sign ID
* Time of availability

Figure 1. APRStt Event Engine

* APRS symbol
* Location (VHF range of receiver)
* Frequency (channel on which heard)
* Event title (Event, Club, Hamfest, Marathon, etc.)
* And all of this data is distributed worldwide instantly

You may wonder how all of that is encoded in the DTMF. It is not. The only thing in the DTMF is the amateur call sign and 1 or 2 digits of symbol information. All the rest of the data is unique to the receiver of that DTMF burst.

The receiver knows where it is, knows the frequency on which it was heard, and knows what is going on that day. It adds all of this information to the call sign and transmits that as a standard packet over on the APRS channel, which distributes the packet worldwide.

In this callsign-only DTMF transmission, the position is handled in a special way. Each APRStt node receiver has a SYSOP established TT Corral origin. This TT Corral origin is a place on the map in the local area near the APRStt position beacon itself where the DTMF call signs will be placed. In this manner, each new call sign is put in the TT Corral location with a slightly decremented latitude. This then makes all these (call sign only) DTMF call signs appear as a LIST on the map (at the TT Corral location).

Anyone observing any APRS map like http://aprs.fi/, will know that these vertically aligned closely spaced call signs are in the TT Corral because the APRStt engine also transmits a periodic APRS object named "TT Corral"

which then appears at the TT Corral list origin.

The above description of a callsign-only DTMF transmission conveys (in global distributable form) who is on the air, where (within VHF simplex range), when and on what frequency he or she can be contacted and

Figure 2. Marathon Event

is 90% of what APRS is all about. However, the DTMF user can also send DTMF positions as well!

Whereas a call sign is a DTMF string beginning with the DTMF "A" key, a beginning DTMF "B" key indicates a position. There are several different "B" type position formats depending on the application or event. Two digits can identify any checkpoint at a marathon, for example. The 2 digits (usually a mile mark) index a table of mile marks so that when the position is translated over to APRS, the position is exact. This is the B0nn* format where "B0" indicates the two-digit table lookup position format.

Another common routine application is on a voice repeater. Two digits of XX and two digits of YY can locate a voice user anywhere within about 25 or 30 miles of the repeater to the nearest mile, which is more than adequate for generally knowing where voice users are located in the area. The DTMF format is B2YYXX* where "B2" indicates it is a 2x2 format. Users can either use their local latitude/longitude minutes as the YY/XX values or they can simply jot down the resulting four-digit position values for their usual haunts.

In the marathon event shown in Figure 2, the entire marathon fits in a 10-mile grid so we can prepare our own YY/XX grid overlay and then hams can place themselves anywhere on the map to the nearest tenth of a mile (170 yards) while still using only the YY/XX four-digit grid.

There have been various APRStt engines written in the past since the original APRSdos version in 2001, but now in 2013, we finally have some active workable projects. One is a DTMF daughter board ($32 from Byonics, http://byonics.com) that is added to their standard
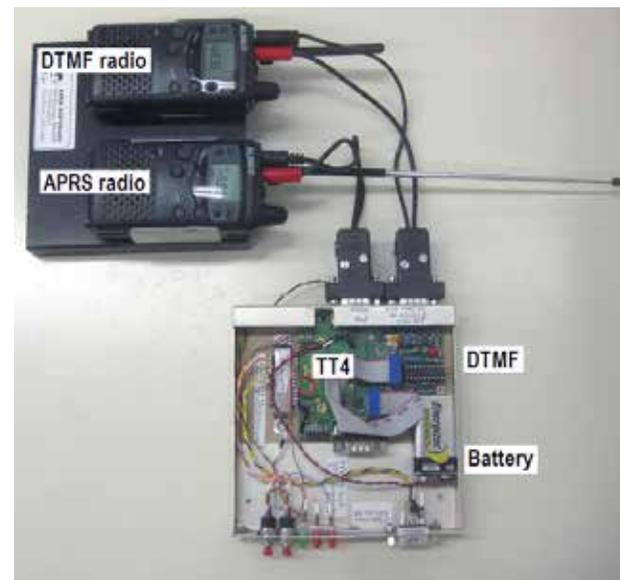

Figure 2. Self-contained APRStt Engine

TinyTrack4 tracker to build a self-contained APRStt engine as shown in Figure 3. I assembled the TT4 and the DTMF card into an old KPC3 case and then added two simple Alinco FM HTs to serve the DTMF side and APRS side of the APRStt gateway. Since this project box is where I also do other data fiddles, there are extra buttons and LEDs that are not related to this particular APRStt application.

There are two other APRStt implementations in a PC. They have the advantage of synthesized voice and can provide the full two-way information exchange with the DTMF users. The first was written by Doug Quagliana, KA2UPW, and is called APRSpeak. The second is in the

works by John Langner, WB2OSZ.

Lastly, this inclusion of all ham radio users (using DTMF) into the machine-readable APRS global communication system is only a part of the goals of the DTMF APRStt project. Once we can signal to-and-from every ham radio operator purely by call sign, then we have the full-capability for APRStt that was introduced back in 2001. That was to use the global call sign signalling capability of APRS as the global means to setup a point-to-point voice contact between any two hams anywhere via all of the currently available VOIP networks. And ultimately to have radios that could automatically QSY based on this signalling capability to move to the Echolink, IRLP, Allstar, or DSTAR local channel. This over-reaching system is called the AVRS or Automatic Voice Relay System. Please see http://aprs.org/avrs.html

Kenwood and Yaesu have kept pace and with the introduction of the D710, D72, FTM350 and FTM400 radios which not only display and transmit their existing voice operating frequency, they can also display the frequency of all other nearby APRS operators and can also automatically QSY to any displayed station's frequency with the press of a single button (TUNE or QSY). The goal is that ultimately this TUNE or QSY function can be forced over APRS to QSY the radio to receive an incoming VOIP call.

To keep up with the progress on APRStt, please see http://aprs.org/aprstt.html

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That T in TAPR

By Stana Horzepa, WA1LOU

TAPR is the initialism for Tucson Amateur Packet Radio, the ham radio organization that has been on the cutting edge of digital radio technology for over 30 years.

I have been a member of TAPR for almost as long as it has been in existence. Presently, I am on its board of directors, serve as its secretary and edit its quarterly newsletter, PSR.

Every year, I staff TAPR's booth at the Hamvention in Dayton, Ohio. And invariably, every year a handful of attendees will come up to our booth and ask, "How are things in Tucson?" or something similar indicating that they believe that TAPR is a ham radio group out of Tucson, Arizona.

In truth, today TAPR is related to Tucson in name only. The organization was founded there in 1982, but is not headquartered there. TAPR's mailing address used to be a post office box in Tucson, but that has not been the case for awhile.

None of TAPR officers or directors live in Tucson and although TAPR does have members who reside in Tucson, the majority of TAPR's membership are scattered all over the world.

And by the way, TAPR is no longer strictly an "amateur packet radio" organization and has expanded its horizons to become a "community that provides leadership and resources to radio amateurs for the purpose of advancing the radio art."

(This article originally appeared at http://horzepa.blogspot.com/.)

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

Amateur (Digital) Radio and Ramblings of a Software Developer
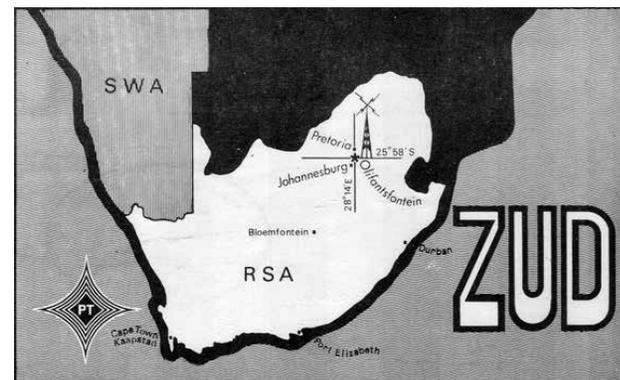
By Maiko Langelaar, VE4KLM
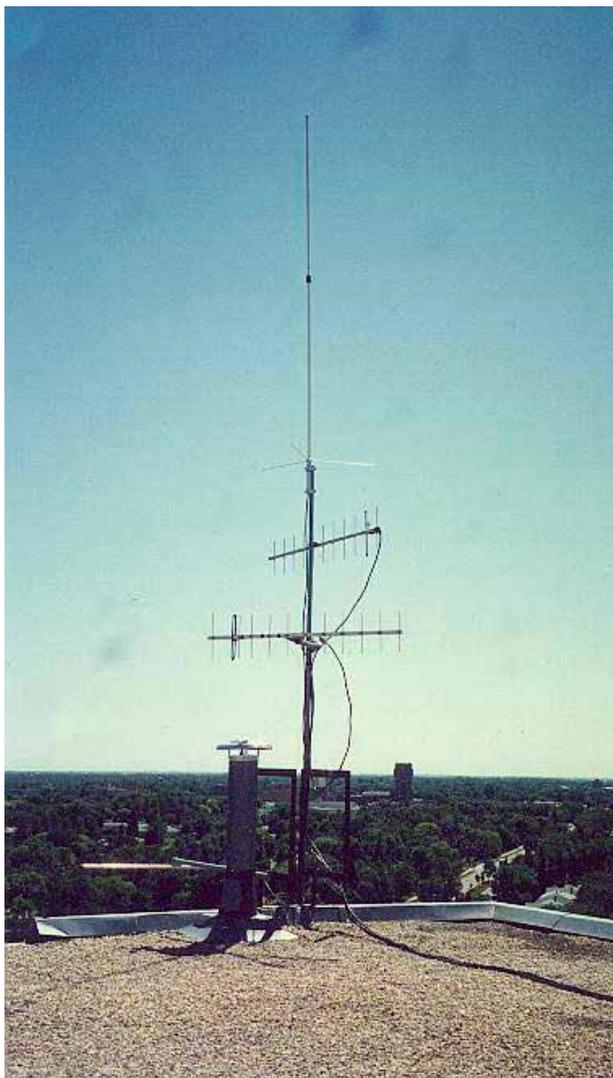
In the case of packet radio, it seems I had this uncanny ability of discovering something new and interesting, only to learn it was on the verge of fading away or becoming obsolete. I discovered packet just as the provincial memberships started fading away, just as the digipeater infrastructure starting collapsing to the point that there have been no digipeaters left around for over 12 years.

My system runs 24/7 and months at a time, I may be lucky to have more than three local call signs in my heard list. So why bother?

One of the reasons has always been if people want to try packet, they need another station to connect to. If I pull the plug and if my colleague, Werner, across town pulls his FBB system, then nothing is left, and I doubt anything new will ever appear to replace it.

Packet radio for me seems to be the last remaining connection I have with how we used to communicate years back. Perhaps that sentiment is strongly related to my shortwave listening years when I was much younger. It was an exciting time for me. Collecting QSL cards was the greatest, especially utility stations, like this rare one from South Africa. The beginnings of my interest in CW came from listening to coast guard stations; some even sent QSL by letter.

Maybe it has to do with the fact that I have never wanted to put large amounts of cash into my radio interests. As much as the technology out there has advanced, I have never been able to justify the costs of much of it. Build a mighty Michigan mite for a few bucks, use a basic shortwave receiver and CW becomes quite affordable. If my Dad used orange radios when he went out into the bush to do claim staking and rock sniffing, is the Michigan mite and shortwave receiver conceptually that much different (well, maybe it is). Build a Baycom board or use sound modem software and 1200-baud packet continues to be affordable. Are modern day text pagers any faster?

Another colleague, Jim, once suggested to me it was not so much the technology that was obsolete, it was the bandwidth. Maybe being stubborn and using low speed, low bandwidth options - thereby keeping my costs down - has kept me going in ham radio. At the same time, it does frustrate me and sometimes I really do long for the modern modems.

For over 13 years, I had a career in software development and systems integration, designing and installing financial transaction systems worldwide. It was a sweet gig, but the dot com era quickly wiped all of it out and I've become relegated to just another IT guy for the past 10 years.

In the end, maybe it is the fact that the digital side of
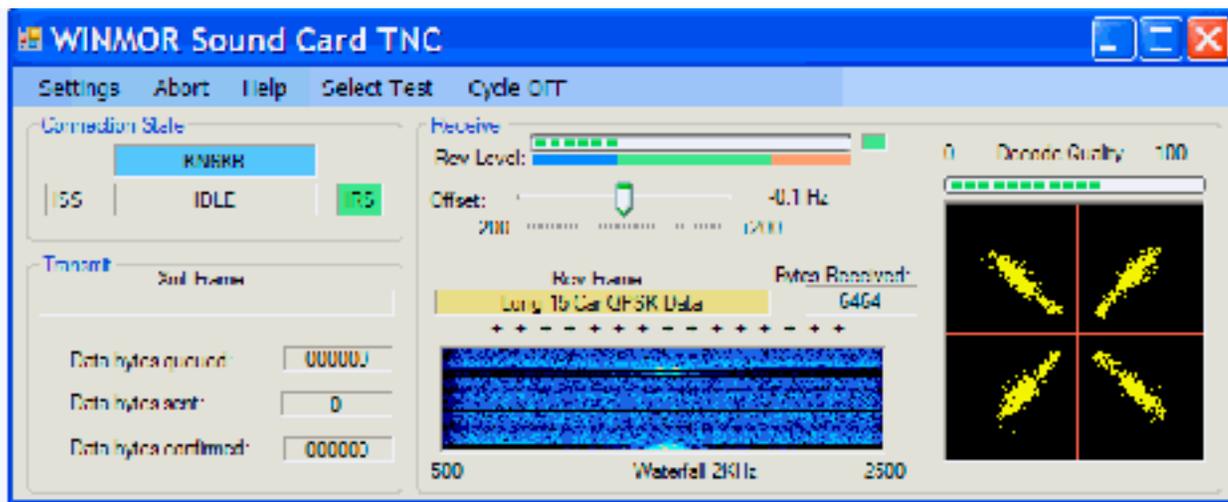
amateur radio has given me another venue to keep my programming skills up to date. That's why I took on JNOS development back in October of 2004, with some TNOS stuff as well. The C programming skills are as sharp as ever. Just the nature of the NOS programming environment attracts me to it, the use of user space threads, the fact that all memory is shared memory, the ease of which one can add a new 'service,' the list goes on and on. It continues to be an excellent development platform (for me anyway).

When APRS came out, it was a breath of fresh air and a big incentive to keep NOS support going. Think about it: NOS gateways still existed and with reduced frequency of regular packet users, what if those gateways could do double-duty as APRS I-Gates, extending their life, I suppose.

Then along came software like WINMOR (which incidentally I should probably take a look at again, since it's been awhile) and MultiPSK, which brought out the systems integrator in me. One of my latest projects sees using MultiPSK as a front end to JNOS such that anyone running a keyboard mode supported by MultiPSK can access the BBS. It's a bit radical, imagine connecting to JNOS using Morse code and actually be able to read messages waiting for you, or sending messages to an Internet user. Sounds crazy… a QRP station interfacing to a BBS?

Porting software was a big part of my job description from years ago, so yet another opportunity to hone the skills; what better then to port JNOS to native Windows (win32), a project that is ongoing and seems to be coming along quite well when I have time to work on it. That's another story…

I've had the good fortune of trying out the Pactor III stuff. There's nothing like watching the lights go solid green when things are going full bore; it's very cool and man, can it move the traffic. Well, before that, the DXP38 and Clover gave me similar sentiments. JNOS even has rudimentary 'drivers' for those devices, but I never got enough feedback from users to go far with them.

Such can be the life of a developer, getting little to no feedback, where the developer sometimes becomes their own best customer, meaning that the particular idea may not have been a great one in the first place. Perhaps the connecting to JNOS via Morse code will meet a similar destiny, but I need to emphasize - it does not have to be CW, it can be whatever mode is supported by the MultiPSK front end. I just mention CW as a last resort.

I can only hope people will give it a try, I certainly will.

###

Your Working E-Mail Address is Important to TAPR

By John Koster, W9DDD

As we transition our to more automated and a reduced paper consuming operation, your e-mail address has become quite important. I know many of your are reluctant to spread your e-mail address around just as we are. You may have noticed that the office e-mail address as well as those of members and officers are not provided in plain text on the website anymore.

We do ask for your e-mail address whenever you place an order or join TAPR. This address is used only to contact you when necessary for the processing of the order. As we transition to a more automated and paperless office, this is also being used to remind you of renewal time for your membership. Some of you may have already been the 'target' of our initial attempts to send you a renewal reminder.

What our reminder e-mails have shown is that a high percentage of addresses in our records are no longer working. This is most likely because many are trying to avoid spam and change addresses when the old one becomes too much of a target. Another reason is the result of an ISP change. If you has changed recently (for example, since your last order or renewal), please contact us with your new address.

What's the point of this little article? Please trust TAPR with an e-mail address which is likely to remain workable for at least a year and update us if you do need to change your address. We're not going to share it with anyone else. We won't even give it to another member without your OK.

If you don't recall the last e-mail address you gave us and therefore have trouble creating a log-in on the TAPR Member Portal (https://secure.tapr.org/np/clients/tapr/login.jsp), please contact the TAPR Office (https://www.tapr.org/inforequest.php).

If you have an e-mail screening feature that requires an entry in a white list or other means of authorization, please contact us for the addresses to enter in your white list.

Finally, there's no connection between our membership database and the address database for any e-mail list you may belong to. So unfortunately you'll have to notify the office and also change your e-mail reflector setting separately with the password in the monthly reminder.

###

Write Here!

PSR is looking for a few good writers, particularly ham radio operators working on the digital side of our hobby, who would like to write about their activities here.

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.

The *PSR* editorial staff can handle just about any text and graphic format, so don't be afraid to submit whatever you have to wa1lou@tapr.org. The deadline for the next issue of *PSR* is October 15, so write early and write often.

If *PSR* publishes your contribution, you will receive an extension to your TAPR membership or if you are not a member, you will receive a TAPR membership.

###

On the Net

By Mark Thompson, WB9QZB

Facebook

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

However, recently 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 over 30 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

TAPR Board of Directors

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

P. O. Box 852754, Richardson, TX 75085–2754

Phone 972–671–TAPR (8277), Monday–Friday, 9AM–5PM Central Time

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Join or renew online at https://secure.tapr.org/np/clients/tapr/login.jsp

Benefits of a TAPR Membership:
- *Subscription to the quarterly PSR*
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- *Co-sponsor of the annual TAPR-ARRL Digital Communications Conference (DCC)*

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