The President's Corner

The Internet Changes Everything...

By John Ackermann, N8UR, n8ur@tapr.org

That was the catch phrase during the Internet bubble a few years (though it seems like a few decades...) ago.

The TAPR community recently had an experience, though, that shows there's at least some truth to that generalization.

In the last issue of *Packet Status Register*, I talked about the TAPR Vector Network Analyzer and issued a challenge for a port of the VNA's software to Linux. I also posted that challenge to the GnuRadio mailing list (GnuRadio is a fascinating topic of itself and one you'll be hearing more about).

Within a few days, I had several responses including one from Mario Lorenz,

DL5MLO. Mario offered to get started right away and began work on about

August 28. Only a few days later, he finished designing the GUI and had most of the code written. By the time of the Digital Communica-tions Conference in Des Moines on September 10, Mario had a working version of the code and I was able to do a basic demonstration of the Linux port at the DCC.

OK, that's fast development, but it may not sound spectacular.

That is, until you consider that during the whole development process, Mario had never had his hands on the VNA hardware (in fact, as of today he *still* hasn't seen it except in pictures). When Mario needed to work with the hardware to see if his code actually worked and to debug the USB interface, I plugged the VNA into a Linux machine in my basement and he logged into that box to do his testing. I had to go downstairs once or twice to reset the VNA, but other than that he did all the development remotely.

The story gets better. Once he had the software working, Mario decided it would be good to see how the *Windows* version actually worked. Up to this point, not only had Mario never seen the hardware, he'd never seen the original software run!

We took care of that problem by hooking up a *Windows 2000* machine in my basement to both the VNA and the Internet. With a program called *VNC* (*Virtual Network Computing*), a PC remote control application like *PC Anywhere*, Mario was able to poke around the application to see how it worked.

So to summarize, the Internet allowed a ham/programmer in Germany to port *Windows* software that he'd never seen run, for hardware he'd never touched, to Linux, using a computer in Dayton, Ohio.

I think that's pretty remarkable, and it shows a way in which the Internet helps, rather than hurts, ham radio. Not everyone is going to do a remote software development effort, but there are limitless ways we can use the Internet to collaborate in research, development, and experimentation. From simply using e-mail to bounce ideas back and forth, to downloading software so your friend on another continent can try a new digital mode, to building remote control stations accessible from anywhere via a web interface, the Internet offers new ways for hams to work together.

You may say I'm just trying to find a silver lining behind a dark cloud and maybe that's true. But when I think about the things we can do today that weren't even dreams 20 years ago, I can't help but feel that our days as experimenters and creators are far from over.

The DCC in Des Moines -- Another Success

In the last issue, I also promised that this year's DCC would be one of the best ever. I think that everyone who was there would agree that promise came true. Attendance was its best in several years, the papers published in the *Proceedings* were great, and the presentations were equally good. And, even more importantly, the "buzz" was in the air. There were conversations in the halls, in the restaurant, in the bar, and who knows where else, that will lead to new innovations in ham radio.

I'd like to thank Rich Amundson, WA0JFS, and the rest of the Des Moines gang for their help making the show a success. In particular, between the VNA demonstration and the demonstration that Matt Ettus, N2MJI, and Eric Blossom did of GnuRadio and the upcoming Universal Software Radio Peripheral (USRP) hardware, we had a last-minute needs for cables, connectors, and an oscilloscope or two that the team managed to scrounge for us. Thanks, guys!

New Faces

Byon Garrabrant, N6BG, decided not to run for re-election to the TAPR Board this year, and I'm happy to announce that Dave Toth, VE3GYQ/W8, was elected to fill the open position. Dave is a long-time friend of TAPR and in the past, served as a TAPR Board member as well as Vice President. Dave will bring a lot of both experience and vision to the Board, and I'm very glad to have him on board.

At the same time, I'm sorry to see Byon retire. He has been a valuable representative of the APRS community and his work with PIC devices helped bring a whole new area of focus to TAPR. While he'll be freed of Board responsibilities, we hope Byon will continue to give TAPR the benefit of his experience and skill.

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HF Digital Voice Update

By Mel Whitten, KØPFX, k0pfx@tapr.org

Sound Card DV...

A new DV program is now available called *WinDRM* (www.qslnet.de/member/hb9tlk) providing both LPC (http://en.wikipedia. org/wiki/Linear_predictive_coding) and SPEEX (www.speex.org/) codecs. These codecs and COFDM provide communications quality audio all within a 2.4-kHz bandpass. *WinDRM* simplified the GUI interface of *Hamdream* while retaining most of *Hamdream*'s features including text messaging. The 22-October release includes various formats for graphics data transfer.

Although *WinDRM* is easier to use with two sound cards, it can be used with only one. A Rigblaster, or equivalent interface, between the PC and the transceiver is required. Voice input is made at the sound card's mic input.

Experience has found that some low cost PC microphones' response may not be suited for LPC and SPEEX speech input. The best audio on the receive end requires keeping a watchful eye on the transmit mic input level.

A group has been formed for *Hamdream* and *WinDRM*. Several screen shots are shown of operators using both programs (see the next page for screen shots of *WinDRM*). You are welcome to join the hamdream24 group at http://groups.yahoo. com/group/hamdream/24. A detailed "how to set up *hamdream*" document and *PowerPoint* presentations with embedded QSO sound bytes may be found at http:// qrq.us/k0pfx. Always check Cesco's web site for the latest release. Cesco frequently makes updates in his effort to improve the audio quality, sync times, and add features.

In the US, listen (and join in!) on 20 meters at 14.236 MHz and alternately 14.255 MHz. Tuning is not critical; the signal just has to be within the bandpass of your receiver.

AOR ARD 9800...

Since its release, several firmware updates have been made available for the ARD 9800. The latest one provides an unattended "auto sync" that automatically "re-syncs" the signal if lost during a QSO. Prior to this release, (which I believe may still be in final testing) the black "Transmit" button had to be pushed and, if equipped with the graphics memory, switched from analog to digital to re-sync the lost signal.

There have been some reports that auto sync may cause false syncs on noise. But I believe AOR will, if not already, resolve this minor problem.

The AMBE (Advanced Multiband Excitation) vocoder can provide near-FM voice quality over a noisy band. The AOR box is a real eye opener the first time you hear its audio on HF. A sound byte and the frequencies used may be found at an ARD 9800 liaison web site, www.rfelectronics. com. You're welcome to join the AOR ARD 9800 group at http://groups.yahoo. com/group/aor9800.

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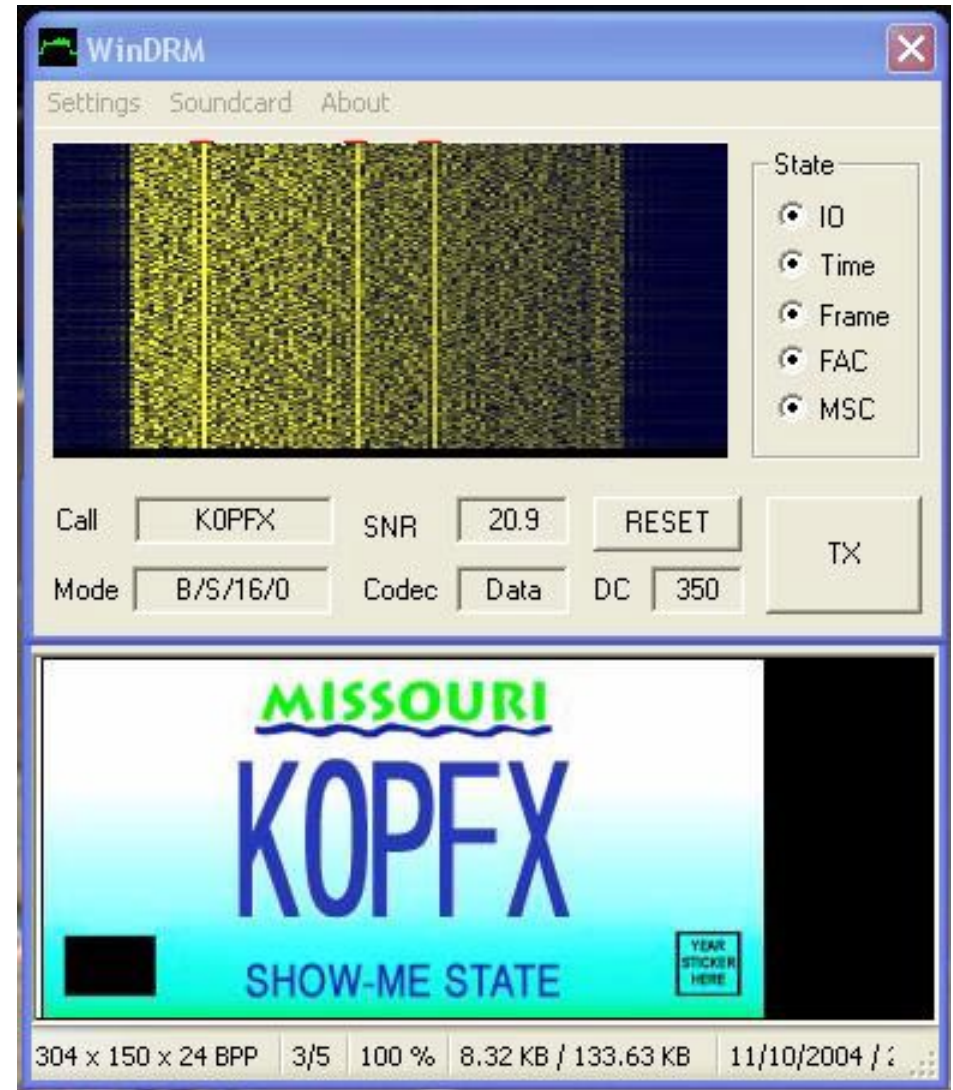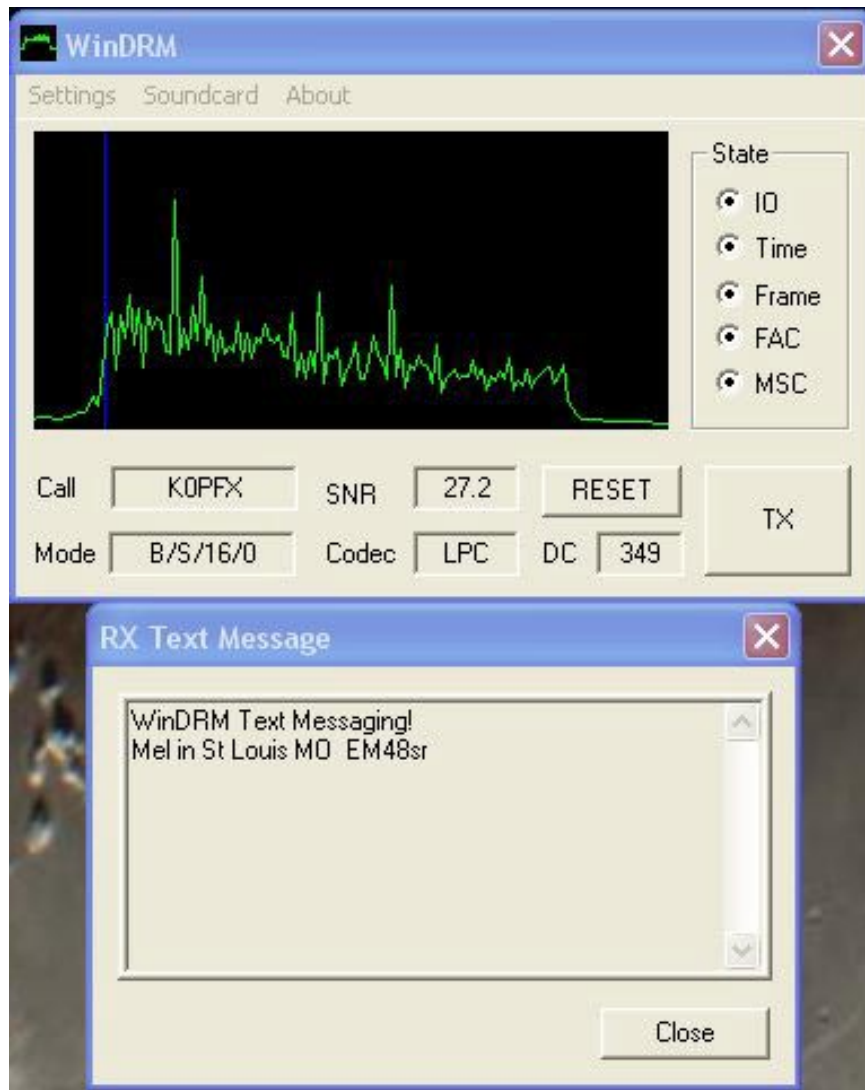
Two screen shots of *WinDRM*: **the left screen shot is in the text message mode; the right screen shot is in the image transfer mode.**

The 2004 DCC in Des Moines, Iowa

By Darryl Smith, VK2TDS, vk2tds@tapr.org

Elsewhere in this issue of *PSR*, the subject of the DCC (Digital Communications Conference) is mentioned in a few places. As a board member of TAPR, it is my responsibility to attend the DCC whenever possible. With the distances I need to travel, it has not always been possible. But, thankfully, this time it worked out.

For example, back in 2001, I had all the arrangements booked and then could not get out of the country thanks to the chaos following September 11. In 2003, work commitments stopped me from traveling close to half way around the world for the conference.

I should explain the travel a bit more. I live in Sydney, Australia. To get to the USA I have basically only one option – fly into Los Angeles. This flight is one of the horrors of modern aviation at up to 14 hours in a Boeing 747. As you can imagine, this is not something that I look forward to.

This time, I made a detour on my way to the USA – flying via New Zealand. This reduced the flying time down to about 11 hours, which is a bit more manageable... slightly. Still, it requires a full day or two in Los Angeles to get over the jet lag. In North American summer time, the time difference is seven hours between home and LA. In winter, things improve to five hours.

To get to Des Moines from LA required a four-hour flight to Chicago, followed by an hour flight into Des Moines, making a total of 19 hours in the air.

As bad as these flights are, they are a chance for me to catch up on all those movies I thought I might want to watch at the cinema

DCC Main Session Room. Wonder what the chap in red is Googling? (N7HPR photo)

and never got around to watching. And also, I find that some flights are good for working on presentations and writing letters.

With my work commitments, I had not really had a chance to do much work on my presentations before I left. I had started on one, but that was it. I volunteered to do another two that I had yet to start.

This was the first time I really got to use this laptop as a laptop for more than the 20 minutes or so that I usually ever need it in meetings without power. The power seemed to last forever and was still running nicely after 2 ½ hours running on batteries.

The conference hotel in Des Moines was actually walking distance from the airport, even with baggage. After spending five hours flying that day, the last thing I wanted to do was to wait for a shuttle bus.

The Holiday Inn in Des Moines had free wireless access. At the start of the event, the access would constantly drop out. Following some technical support calls, the access was reconfigured to allow long sessions and things improved significantly. There were times that the Internet was slow, but that was mainly when lots of people were downloading lots of files from the Net.

Wednesday, I had dinner with TAPR Vice President Steve Bible, N7HPR. After dinner,

we ran into John, W9DDD, and Laura Koster. John is a board member and as a couple, they run the TAPR office.

Thursday

Thursday morning, I woke up about 6:30. About 7:00, I went down and started work on my presentations and checked e-mail. Sure,

I could have done this from my room, but it was more social to go down to the café and work. A bit later, John Ackerman, N8UR, came down and we had breakfast. John had got in overnight and had actually got the room next to me. Steve Bible with John and Laura Koster arrived a little later.

Show and tell in the DCC Demonstration Room. (N7HPR photo)

The board meeting started about 9:00. At the start of the board meeting, we found out that Roger Barker, G4IDE, had died. This was rather sad, but was certainly not unexpected. Just the timing was a bit strange.

Following the board meeting, we all congregated under the Holidome. For the un-initiated, like me, the Holidome is a 1960's or 1970's concept where the hotel is built around a courtyard. They build a round roof on the dome and have the swimming pool semi in doors. After a break to wind down, the board went to the restaurant allowing us all to catch up in an informal session.

After dinner, we adjourned to the Holidome. This was a good informal time. Basically, we talked about computer animation, graphics, ham radio, wireless access, and just about anything else. I finally got to meet Scott Miller, N1VG, who I had been in discussions with about his tracking hardware and protocol.

During this time, I got a phone call from my friend Jack in Australia via his mobile talking about some work stuff. It was amazing how the world has changed in the last few years. My cell phone just works and Jack had rung my mobile number from somewhere in the Aussie Outback; it just worked thanks to the international nature of GSM.

After a while, I went to my room and did some more work on my presentations, which I had to have done by the next day.

Friday

Friday morning, I went down for breakfast nice and early and did more work on the presentation. Once I had done a bit of work, a few other people joined me and we continued to discuss just about anything.

After breakfast, I registered for the conference, then went into the main venue and scouted out a desk. The important thing was power. I found an outlet, but the outlet was full. Scrounging, I found a TAPR extension cord that worked for a few of us later.

The audience is held spellbound at the DCC. (N7HPR photo)

Sitting in there, I did some more work on my presentation. An hour or so later, it was my turn to present my first talk on Spread Spectrum Power Control and Alternative Routing Techniques. Presenting it went well and I stuck to the time. Phil Karn, KA9Q, asked some interesting questions and despite what I thought, he had changed his views in the last ten years.

One of the reasons I wrote the paper was that he had made a statement about power control and spread spectrum many years ago and then made comments to the contrary later. I disagreed with these later statements and I needed to say why.

One of my friends IM'ed me and asked about what laptop he should get. My reply was along the lines of "I use a Dell, but really since Bdale Garbee is sitting next to me my reply must be a HP running Debian *Linux*". What you need to understand is that Bdale, KB0G, works for HP and he is a former head of Debian.

After some more presentations, came lunch. My idea for lunch at these things is to find a table with no one I know sitting at it or even better, find an empty table. You get to meet some very interesting people that way.

After a short lunch, I went back to the room to finish my second talk. This one was a general update on tracking technology in general. The way it was structured was as a whole lot of five-minute segments. More talks by others followed this talk.

Friday night was time for the DCC Social. This is an excuse for people to gossip eating finger food and the like. This lasted for a couple of hours or so.

Seems that the conference people do not drink much as a rule and there was a $100 minimum if we had a bar. So we decided on soft drinks and that worked well.

Saturday

Saturday was another full day with a slightly earlier start, but it was not that bad. I got to see about 75% of the first talk before I needed to leave for my session. It is always a good sign when the speaker is there *before* anyone else. I put on a slideshow of some APRS photos that I had collected doing consulting work. And the audience was impressed. I had finished working on this talk literally just before my talk started. Talk about cutting things fine.

The talk was an introduction to APRS. It started off with some cool uses I had put it to and then worked through the basics. Some of this, I admit, was a bit out of order, but it was good. People were asking the right questions. Having Internet access there was cute. I could demo some of the Internet services available.

Laptops galore at the DCC. (N7HPR photo)

The entire session of 90 minutes went very well.

One of the standout sessions of the conference was from TAPR President John Ackerman, N8UR. John is a lawyer and his presentation was on some of the legal situations with software and particularly Open Source. Basically, he gave a talk to us poor uneducated hams that he normally gives as a continuing education seminar to internal lawyers at his company. I would suspect, though, that as a rule, we got the legal implications better as a group than the people he normally speaks to.

Following the talks, we had a TAPR membership meeting. Following this was the DCC Dinner. The keynote address was by Ken Kaplan, N0GZ, who wrote the OS/9 operating system many moons ago. Near the end of the evening, John Ackerman, TAPR president, took the opportunity to talk to those assembled about TAPR's special Lifetime Achievement Award for Roger, G4IDE, for his work on *UI-View*. John read the text of the award.

After the dinner, there was a huge number of little groups talking and gossiping about who is doing what. You know the sort of thing. Reminiscing. Some people see each other only twice a year. Others see each other every few months. With this in mind, it should not surprise you that Saturday was a late night.

Sunday

Sunday was to be early, but not too early. No talk, but there was a session from 8:00 AM to midday on DSP. This was really interesting. Not much to say apart from the fact that I did some e-mailing during this time. Other people were speaking through instant messaging.After the session finished, everyone quickly went their own way, until the five or six of us left went to an Italian restaurant for lunch. Quite nice, but I am sure that things will be better when I am in Italy itself though. They tried to give some weird concoction to one of the people with us when he ordered ginger ale. They gave him a Pepsi and bitter and something else mix without telling him. Since he did not want to have caffeine, he was not impressed... not at all.

At the airport, I made the mistake of not taking my laptop out of my bag. After all, there were no signs. This was not a good move as they did the treatment on the bag including bomb scanning.

John and Tim (from Boston) with John and Laura Koster were the ones left at the hotel. Then John and Tim left, although Tim did return when he realized that he had left the radio he had won the previous night. The flight to Chicago from Des Moines was pleasant enough.

In Chicago, I used the Admirals Club lounge. This is a place that is slightly better than the one in LAX, but not much. Power outlets were hard to find, but I did find the bar even if I didn't use it. The phone was good enough for my to ring Oz with a support issue I needed to fix.

Some stuff I forgot about the conference: Bdale, I believe, showed me an antenna plot that someone in AMSAT had made recently. It was a plot of the antenna gain for the GPS transmitting antenna as you change direction.

This is information that AMSAT has asked the US Navy for a number of times, each time being told that the information was classified. Well, it is no longer classified since AMSAT has experimentally determined what the plots look like. Funny thing is that they look exactly what I thought they would look like being an end-fed helical.

The plots do prove something though. The GPS antennas are pointed to Earth, but you can receive the signals from behind the satellite in outer space.

With some modified software in the GPS receiver, you can actually use GPS many, many thousands of km from Earth!

The other thing is that there are plans for AMSAT to launch a space probe. They have

Fourth Annual Ø7Ø Club PSKfest

Sponsored by the Penn-Ohio DX Society (PODXS)

done a lot of work on satellites on Earth, but now they are looking at sending a probe to Mars. There are some unknowns here, but they hope to have it launched by the end of the decade. One of the problems would be that you only have a launch opportunity every couple of years and if you miss it, you need to wait until the next one.

Then again, there is also the feeling in AMSAT that even if you miss getting to Mars, then there is still science to be done. Sending a probe just out into space missing the planets altogether would still be a success.

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Purpose — To work as many stations as possible in the allotted time using the PSK31 mode.

Entry Categories — QRP Single Band 5 watts, QRP Multiband 5 watts, Low Power 50 watts, Medium Power 100 watts (all powers maximum output).

Date — 0000Z January 15, 2005 to 2400 January 15, 2005

Mode — PSK31 only.

Exchange — Call sign, signal report and state/province/country (SPC). Call "CQ PSKFEST."

Bands — 80 thru 10 meters, no WARC bands. Work each station once/band. All contacts must be 2-way PSK31. No repeater, cross-mode or cross-band contacts allowed.

Scoring — QSO points - Each contact counts one (1) QSO point, dupes count (0) points.

Multipliers — Each different state/province/country (SPC) worked. Use current ARRL DXCC list for country reference. Note also: First U.S. station worked counts as two (2) multipliers (country and state). First VE station worked counts as two (2) multipliers (country and province). First Alaska station worked counts as two (2) multipliers (country and state). First Hawaii station worked counts as two (2) multipliers (country and state). Final score = (Total QSO Points) x (Total Different SPC's).

Awards — Top scores from each continent receives a certificate, highest 070 Club entry gets Top Dog. All 070 Club member entries received will automatically qualify for an Attaboy. For more information on the 070 Club check out **http://www.podxs.com/html/070_club.html** .

Entries — Send log data showing date, time(z), band, exchange received and claimed score. For entries with 100 contacts or more include a dupe sheet listing contacts in call sign alphanumeric order. Be sure to also include your call sign, address, e-mail address, entry class and 070 Club member number if applicable. Send your entry as a .txt file via e-mail (best way) to **PSKFest@podxs.com** or **SPDomingue@aol.com** or snail-mail to: Steve Dominguez N6YIH, 11700 Fairlarn Ct., Boise, ID 83709 USA

All entries must be received by February 16, 2005. A listing of logs received and claimed scores will be posted on the 070 Club web site (**http://hometown.aol.com/n3dqu/2005_pskfest_results.htm**). Entries with excessive dupes will be listed as check logs. All entries are subject to verification.

The Penn-Ohio DX Society (PODXS) reserves the right to disqualify entries deemed not in accordance with the above rules or contrary to the spirit of this event.

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Alternate Input Frequency for APRS

By Wes Johnson, KD4RDB, wes@kd4rdb.com

With the proliferation of APRS on 144.39 MHz, many local networks find themselves saturated and unreliable for the very people who need them, i.e., mobile operators. The crux of the problem is that mobile stations can only hear 3% or less of the average digipeater's coverage area. Mobiles waiting to transmit only think they are hearing a clear channel, when in reality they are only listening to their own small area.

Additionally, when a mobile is transmitting, other distant digipeaters can't hear the mobile's packet and transmit with a much stronger signal causing the local digipeater to not decode the packet due to the packet collision.

It has been suggested that a fix for this is to have a digipeater listening on another frequency and have the mobile stations operate on that frequency only when transmitting a position. The special digipeater in each locale would hear the packet on the alternate input frequency and digipeat it out onto 144.39 MHz.

Since the "alt input digi" is presumably located at a better site than the mobile, it is better able to insert the mobile's packet into the busy APRS network with fewer collisions.

Which frequency should be used for the alternate input frequency? In the end, that will be left to local coordination, but 144.99 MHz is the preferred frequency because it is 144.39 MHz plus 600 kHz, the standard offset for 2-meter repeater operation.

All the mobile operator has to do is operate 144.39 MHz plus 600 kHz instead of simplex. The mobile stations continue to receive packets on 144.39 MHz so they don't miss a thing.

The 144.99 MHz channel falls right in the middle of the packet subband of 144.90 to 145.09 MHz. Packet use as a whole is waning, leaving vacancies in the packet subbands on 2 meters where there used to be BBS and DX cluster activity.

Another advantage of 144.99 MHz was that it was reserved for SAREX voice uplink during the early 1990s before the big move to the new ARISS frequencies.

Thus, unless a DX cluster moved in, these frequencies were not used for packet during the peak in packet activity and may still be available in your area.

Please check with your coordinators, and give a listen on 144.99 MHz in your area and see if the frequency is vacant.

The argument has been raised that the mobiles operating on 144.39 MHz plus 600 kHz are actually transmitting in the blind and that is poor amateur practice. In practice, this is no different than operating a voice repeater. The occasional "double" happens there and the world has not come to an end. As long as the alternate input frequency is locally coordinated, it becomes a part of the APRS system and all users of that frequency accept and understand the occasional double.

Another perspective is that given the mobile stations' ability to hear only 3% of the digipeater's coverage area, it may as well be transmitting in the blind. There is a 97% chance another station could transmit to the digipeater during the same time as the mobile station's tracker and that tracker would not know it especially considering the sheer number of packets on the network. Would you rather compete with over 500 stations streaming in to your local digipeater on 144.39 MHz, or would you rather compete with the 4 or 5 mobile stations around you once in a while? Since no traffic is ever routed on 144.99 MHz, mobile stations only have to compete with other mobiles in the local area. The channel remains mostly quiet.

What about the travelers who come through an area served by an alternate input digipeater? If they operate on 144.39 MHz, they still utilize the existing APRS network. If they have a mobile station capable of receiving packets, they can be made aware of the local alternate input frequency in the status text of one of the local digipeaters and simply press the plus offset button on their radio when in that area. In the end, utilization of the alternate input frequency is up to the individual users and in no way affects the existing APRS network.

To properly implement the alternate input digipeater will require two radios and one or two TNCs. A dual band radio such as a Kenwood TM-733 capable of VHF/VHF operation is actually an ideal candidate. Since the alt input digi will only serve as a first hop digipeater, any TNC can be used with MYAlias set to RELAY. There is no need for this digipeater to have any fancy APRS specific firmware.

One of the radios will be set to receive on 144.99 MHz and the other will be set to transmit and receive on 144.39 MHz. The TNC will listen to only the 144.99 MHz radio and transmit using the 144.39 MHz radio. The receiver in the 144.39 MHz radio can be connected to either another TNC (such as John Hansen's $45 TNC-x), which will serve

only the function of detecting other packet activity on 144.39 MHz, or the squelch on the 144.39 MHz radio can be used to assert the XCD pin (pin 2 on the Kantronics KPC-3 radio port).

In either case, the alt input digipeater TNC will decode packets from 144.99 MHz, listen on 144.39 MHz for a clear channel by way of the

XCD pin, and transmit on 144.39 MHz. Unless a 2-meter duplexer is used, the 144.99 MHz digipeater will be deaf during the digipeat. Since 144.99 MHz will not be a highly utilized frequency and there is a good chance other mobiles will hear the digipeated packet on 144.39 MHz when the alt input digi transmits, this short period of unavailability is not expected to be a problem if the duplexers are not used.

If duplexers are used, there is no reason to not co-locate the alt input digi with a full service APRS digipeater. In either case, the existing local coverage digipeater will pick up the packet and digipeat it as normal on 144.39 MHz.

A quick test digipeater can be implemented by simply switching a home RELAY station radio to 144.99 MHz minus 600 KHz. This station will serve as the alt input digipeater for the area. While this will work as a quick

test, it is recommended that some sort of carrier detection be implemented on 144.39 MHz.

Please be mindful that our objective is to forward a mobile's stations packets smoothly and seamlessly onto the 144.39 MHz network and not to blindly transmit our packets over the top of other packets on 144.39 MHz.

It is important to note that this idea will not increase the bandwidth available to the local users, but it will increase their reliability. A given local area will still support the same number of users. What this does is bridge the gap between mobile stations which operate predominately using the ALOHA "randomized transmit timing" access method and the home stations and digipeaters. These home stations and digipeaters predominately use the CSMA "listen before you transmit" access method because of their ability to hear larger portions of the digipeater's coverage area and effectively avoid collisions. The alternate input frequency digipeater will provide a smooth mesh between these two access methods instead of the mix-match we have today.

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findU Major Project

By Steve Dimse, K4HG, k4hg@tapr.org

Last Friday, I fell (not even a good story, I was just walking out to get my mail and slipped on my gravel driveway) and suffered a bad fracture of my ankle. Sometime in the next week, I will be getting an operative fixation followed by three months of non-weight bearing and a couple months of intensive rehab. This obviously is not going to be fun for me, but with all this time sitting around with my foot elevated, I figured I would tackle one or more of the major unfinished projects in findU.

Before I start planning what to do, I thought I'd see if there might be a little discussion generated in terms of priorities, or perhaps someone might come up with a new idea. So, these are the big things on my to-do list, please feel free to let me know what you think.

1. User written web pages — What I've thought about here is first, a more comprehensive registration system than the one in place now, with the ability for each user to write their own web pages, embedding in it any information findU keeps in its database. In other words, everyone could have their own customized find.cgi, wxpage.cgi, and so on, with its own look and feel.

2. A more complete set of cgis for users to incorporate in their own web pages. For example, a cgi to return just the text info at the start of find.cgi or wxpage.cgi, which people could then insert into their own pages. I'm also thinking of graphical elements, like a thermometer for temperature and so on.

Ideas 1 and 2 differ mainly in where the web page is stored. In idea 1, it is on findU, and in idea 2 it is on the users' web servers. I do not believe anyone has trouble getting web space these days; almost all ISPs have some, and there is qrz.com, qsl.net, and many others that offer it free or cheap as well.

I've always favored the second approach; anyone that has strong feelings for #1 should speak now or forever hold their peace. If I'm not convinced to do it now, it will be dropped from my to-do list.

3. Use cookies for customization — Have the user configure how the pages appear with the data saved as cookies on the user's computers (things like metric or English, hide photo-relief, and so on). Once configured, any web pages they bring up will be correctly configured.

4. Weather charts — The cgis I wrote for temp, wind, rain, and pressure were not meant to be permanent. I've always planned on something with more capability, such as auto-scaling, better labeling, and of course metric units, the latter being the most-requested feature over the years. I've looked at several different plotting packages and may be able to use one of them instead of starting from scratch, but either way is a significant amount of work.

5. Map caching — This is something I really need to do. The trouble is it will improve performance, but not add any new features. Basically the problem is that except for NEXRAD images (which cache for three minutes, limiting the maximum load findU can place on the NWS machines), every time findU is requested to bring up a geo file from an outside machine, it fetches it anew, slowing down response. A good caching system might even improve things enough that I can bring back the three maps in find.cgi. I recently had to cut that down to a single map because of the load on the APRSworld map server.

6. Animated radar images — It is pretty easy to assemble single GIF/PNG images into animated radar loops. The biggest difference in my infrastructure would be that instead of fetching the radars on demand

Southwest Ohio Digital Symposium

By Hank Greeb, N8XX, hgreeb@one.net

and caching them for three minutes, I'd get them in a continuous fashion and save the last of them for each radar to assemble a loop. This could be interesting in that I could also draw on each image before assembly, created animations not only of the radar, but also of the overlying data.

7. Routes for special events – For the Baker to Vegas run, I have a system, which uses waypoints to calculate where along the route a tracker is. I had an even more accurate system for the Mississippi River Challenge, as I was given a lat/lon for each mile of the river. I'd like to create a more generic set of tools to create a findU route page for any special event. I'm not sure if enough people would avail themselves of this to make it worthwhile.

8. And beyond – This is what I'm really hoping for. All of these others have been around for a while, and not gotten me excited enough to finish them. I'm hoping someone will come up with an idea that will make the next three months fly by.

The Nineteenth Annual Southwest Ohio (SWOH) Digital Symposium will be held

Saturday, January 15, 2005, 9 AM to 4 PM, in Thesken Hall, Middletown Campus, Miami University, Middletown, OH.

In the past, we've had discussion about coherent CW, RTTY, PSK-31, AMTOR, packet radio, space aspects of digital radio (AMSAT), software and software defined radio (SDR), FSK441, and even semaphore and wig-wag!

This year, we will be featuring a demonstration of how standing waves and reflections can augment or interfere with wireless LANs. This is important because many people forget the RF aspects of wireless digital communications!

We are currently putting together the program. Those interested in presenting their work within any digital communications field, please send a note to Hank Greeb, N8XX, n8xx@arrl.net, including a synopsis of the presentation, and a short ham biography of the presenter.

The SWOH Digital Symposium is the second longest running event in the United States devoted to Amateur Radio digital communications. We typically have a gathering of 50 to 150 hams interested in digital communications with attendees traveling from a radius of 100 or more miles of Middletown.

For more information on past symposia, directions, etc., see **www.swohdigi.org**.

###

Roger Barker, G4IDE, SK

By Darryl Smith, VK2TDS, vk2tds@tapr.org

Just as the people were leaving to attend the DCC in Des Moines, some very sad news reached the APRS community via a short e-mail to the TAPR APRS SIG mailing list. The message was short and to the point

```
It is with deep regret that I wish
to inform everyone that Roger Barker,
G4IDE, passed away peacefully in his
sleep during the early hours of today,
9 September, and is now a silent key.

For those who wish to send a card of
condolence to Dee and the family, the
address is:-

Mrs Dee Barker and Family,

79 South Parade

Boston.

Lincolnshire. PE21 7PN

UK

--

Ken Collins - G4FIP

E-mail:- g4fip@t..."
```

Knowing that the TAPR board was in Des Moines already, Stan Horzepa, WA1LOU, who was unable to attend, forwarded the e-mail to the board, and it arrived just in time to become the first item on the agenda of the TAPR board meeting. Thus, the first order of business by the TAPR board was to e-mail a message of condolence to his family.

Roger had been sick for a few months with cancer, so his death was not unexpected. The TAPR board awarded Roger a Lifetime Achievement Award a couple of months before his death knowing we had to act quickly. Roger's family was given the choice of when it would be awarded and chose to have it immediately announced rather than wait for the DCC. Looking back, this was the correct choice, as this also allowed the RSGB to recognize Roger and his award before he died.

Roger's Funeral

Most people know that I live in Sydney, Australia, and that traveling to the DCC is a mammoth effort commonly involving 19 hours in the air each way. My plans for this trip had always involved flying home via London and Rome. Since I had never been to either place I was really looking forward to the trip.

The plan leading up to the DCC was for me to take a day off out of my holiday to visit Roger to present the award plaque in person. But things were uncertain once Roger died. So I e-mailed Ken Collins, G4FIP, from the DCC letting him know that I could still come up as planned to meet the family and some local hams or I could come up for Roger's funeral if it was appropriate and fit my schedule.

Through an amazing coincidence, a reply came back letting me know that the funeral was planned for the Wednesday afternoon in Lincolnshire. This allowed me to get over some of the jetlag that I knew I would experience having flown in from the USA arriving at 8 AM on the Tuesday morning. Ken also noted that not only was I welcome to attend the funeral, but that the family felt privileged that someone from TAPR could attend.

On the day of the funeral, I took the train from London King's Cross up to Grantham, where Ken picked me up. The journey was quite pleasant and I was glad to get out of the city. Four of us, all hams, then went to lunch at a local pub having Lincolnshire sausages for lunch, and then prepared for the funeral. Ken went in the funeral cortège, while the rest of us went direct.

Roger's service started about 3:20 PM. The casket arrived about this time, and those gathered followed the family in. Enya's *Shepard Moons* was playing in the background when the people entered. Dee and the children sat in the front row; and I think Roger's sister was in that

row, too. I was in the second row with Ken and a woman. The rest of the congregation sat in the rows behind. In total, there were probably 50 to 80 people there.

I was given a special place in the service, at the family's request, sitting in the second row. This was from people I had never spoken to and for the funeral of a man I had never met. I was honored and felt at least partially unworthy. I also felt the weight of the world on my shoulders as I was representing the entire international APRS community including every *UI-View* user.

After an introduction, the congregation sang the hymn *The Day Thou Gravest Lord, Is Ended*. After this, the funeral celebrant spoke about Roger's life, history, and loves. I learned a lot about Roger during this talk. How he was a sports fan and how much he loved his family. I also learned that Roger, having been born in 1947, was the same age as my own father.

Then followed a poem Roger wrote at University called *The Death of Creativity* read by his son. After this, Ken gave a tribute to the family about some of the things that Roger had done and the impact he had in the ham radio community and the world outside. This included a quote from Andrew Robb from here in Australia from the online condolence book. TAPR also got a mention.

Following this was Roger's favorite song, *Heaven (Candlelight Mix)*, performed by D.J. Sammy, either as a reflection or prayer depending on your beliefs. This was rather sad and stirring, bringing much of the congregation to tears.

Following this song was the commitment, where the curtain was pulled around the coffin ready for cremation.

The funeral celebrant said some more things, inviting people back to the house, not the least to see the presentation of Roger's award. It was stated that I came all the way from Australia to present the award. Not quite, and this left me a bit embarrassed.

We were then asked to leave out the side door to the *Theme from Ally McBeal* sung by Vonda Sheppard. Roger loved *Ally McBeal*, at least partially because it was set in Boston, USA, and Roger lived in Boston, UK.

Following the service, everyone went outside to see the flowers. This is a concept that I have never seen in Australia and is a nice touch. I also got to meet Dee and the family for the first time.

On getting to the house, we were all invited into the back garden. Everyone was given a glass and some wine for a toast. Dee and the two children were at one end of a huge circle. I then

got to present the parchment and the plaque to Dee. This started with thanking the family for inviting me to participate, and apologizing in advance for any mistakes made reading things due to hefty jet lag. Concerned that I would be too emotional to finish what I started, I basically just read what was on the plaque and the parchment.

Dee responded by noting that in the last month and a half that there had not been much that had brought light into Roger's life. One of the things that brought so much joy to him was the award. And I believe that the family got a lot from seeing his reaction to the recognition. They were all so happy that Roger had got some recognition.

Following this presentation, there were two others. The Tier 2 APRS Sysops gave US$500 and the Core Sysops gave US$600. These were presented to each of the children, and they both noted that the money was being donated to the St Barnabas Hospice, a voluntary organization that cares for terminally ill patients in Boston. It worked out so well, with each of the three members of the family getting to receive a token from the community.

I can now see the impact that the TAPR award had on Roger and his family. They kept thanking me for what I had done, bringing them the award. And I needed to say no, it

is me who needs to thank you for letting me participate and for supporting Roger with his work.

What Roger had never told his family about was the impact of his software on the real world. Roger was a real sports fan, had spent a lot of time attending sports events, and also a lot of time participating in sport. He loved cycling, and used to cycle next to his daughter whilst she ran.

But he had never told them how his software had been used in the Sydney Olympics to support the cycling, and the marathons. Nor how it had been used in IronMan Hawaii to track the cycling and the running. His son seemed really impressed when I let him know that I had the Sydney Olympics recorded in *UI-View*.

After the presentation, one of the hams gave me a lift to Grantham station, although I would have loved to stay much longer at the house. But the offer of the ride was too good to ignore and I arrived back in London about 8 PM.

Whilst the funeral was a sad occasion, the entire worldwide ham community should be aware how much their support has meant to Roger in his final weeks and to Roger's family after he died. It was a privilege to represent the entire community at such a sad time.

###

New Version of D700 Keyboard Interface

By John Hansen, W2FS, john@hansen.net

At the September DCC, John Hansen, W2FS, introduced a new version of his D700 Keyboard Interface, which allows a standard PC keyboard to enter text into a Kenwood D700 APRS-enabled radio. The new version features a custom-made steel enclosure. The interface is available either in a wired and tested version or as an easy-to-build kit. Additional information can be obtained at www.coastalchipworks.com.

###

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

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 (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:

Packet Status Register is exported as Adobe *Acrobat* version 5 and distributed electronically at **www.tapr.org**

PSR *Packet Status Register* Editor:

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