# OLE VIRGINIA TIMES

May 2008

Next Meeting: May 19, 2008

PRESIDENT'S LETTER:

Greetings to all. I'm sure everyone is busy preparing for the OVH Manassas Hamfest. As that fast approaches, there is much to do and co-chairmen Chris/KI4POT and Bruce/AB8CI are your main contacts. I know we can count on all the Club members to come out and support this important event which is the OVH's big annual fund raiser. We'll need help with setup on Saturday morning, table setup, vendor placement assistance and space marking. Sunday help will be needed for gate collections, directing vendors and parking and after the Hamfest we'll need help for tear down, and cleanup. And don't forget to tell all of your radio/computer/electronics friends to come to the Hamfest. Please mark your calendars for June 7th for Hamfest set up, and June 8th for the Hamfest itself and then tear down and cleanup. More details will be forthcoming at the May 19th OVH meeting and are posted on the OVH web site.
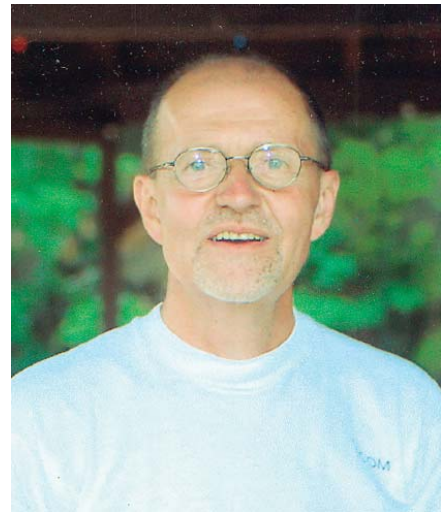
Bob/K4HJF has taken the lead to organize a dinner at KC's Restaurant in Manassas on Saturday evening, June 7th, to honor the extraordinary efforts of Mary Lu/KB4EFP and Butch/W4HJL for the OVH Club over many years. This is planned at that time because many of their [and our] out of the area "radio" friends will be in town for the OVH Manassas Hamfest and able to attend too. More details on this later in this Newsletter.

By now, almost everyone has probably heard that the U.S. Court of Appeals for the District of Columbia Circuit issued its decision at the end of April in the ARRL v. FCC case involving the BPL emission limits controversy. The decision appears to be a big win for all users of the HF spectrum (including ham radio operators), all of which have been adversely affected by the FCC's regulatory position up until now. Because the Court remanded the matter and requires the FCC to disclose its internal laboratory test results and technical analyses which it withheld in issuing its regulations, we are very hopeful that the new rules to be promulgated by the FCC will reflect "technical reality" about BPL system HF radiation and interference potential and require operators of BPL systems to abide by the same rules as all other spectrum users. BPL operators will be in real trouble here

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in Manassas and in many other places when that happens. We think the City of Manassas reads the future implications for Court's ruling the same way as we do because it announced the City's approval for Verizon FiOS deployment in the City very shortly after the Court's decision issued. It appears there will be little use for BPL here in the future with the possible exception of monitoring power meters which only involves infrequent data transmissions. Congratulations to all Hams, and a big THANK YOU to everyone that have monitored, filed formal complaints to the FCC and kept vigilant. It appears that years of work may be finally be paying off!

OVH Field Day plans are well underway with John KG4NXT at the helm. We need club members and friends to participate in event which is a real fun event for everyone. John is looking for operators and volunteers. Bring your friends and family to the pot luck dinner to be held Saturday evening—all are welcome. As more details become available they will be posted on the OVH reflector and the OVH web site.

Hope to see everyone at the meeting, 7:30 pm, Monday, May 19th at NOVEC Technical Center in Gainesville.

73 for now — George / K4GVT

Sunshine Corner:

May Birthdays – Chris/KI4POT, Bob/N4RL, David/KI4GIY, Jack/N4YIC, Craig/N4WUV, Craig/WA3UFY, Blaine/KB4RKL, David/KI4HE, Susan/K3SSP, Jim/W4JTP, Bruce/AB8CI and John/KG4NXT. WOW there are going to be a lot of candles burning this month! Hope you all have a great day!

Congrats to Chris/KI4POT and his family, they are expecting their second daughter at the end of August.

Also congratulations to Chris/KI4POT for reaching his fund raising goal for the MS Bike Ride scheduled for May 17th and 18th. I saw online where his team has reached their goal of over $22,000. That is incredible, way to go Chris! It's not to late to still donate, here is the link: http://www.nationalmssociety.org/goto/allencb Thanks to everyone who has donated!

Best wishes to Brenda/WD4RKH for a speedy recovery and hope you are back on your feet soon.

Please keep Henry/N4AZC in your thoughts; he is battling cancer.

Thank you to everyone at the April meeting that helped with the Hamfest mailer and getting it ready for the post office. Special thanks to Lauren, daughter of Wayne/N7QLK [picture to the right] for coming to the meeting with her dad to help with all those labels.

Please get your ovens warmed up for the Hamfest Bake Sale, last year we had a tremendous turnout of baked goods. Proceeds will go to a local charity.

A special dinner at KC's Restaurant in Manassas on Saturday evening, June 7th, is being organized to honor the extraordinary efforts of Mary Lu/KB4EFP and Butch/W4HJL for the OVH Club over many years. This is planned for that time because many of their [and our] out of the area "radio" friends will be in town for the OVH Manassas Hamfest and able to attend too. More details later in this Newsletter.

Hamfest – The second Sunday in June – June 8th this year. Thanks to all the club members who have put it so much time and effort already to pull everything together. Here's hoping the weather is a little bit kinder to us this year. If you haven't volunteered to help, it's not too late. Help will be needed Saturday to set up the fairgrounds and then on Sunday to run the event.

Once we wrap up Hamfest, we will be right into the annual OVH Field Day event!

Please contact John/KG4NXT if you need any additional info! (703) 257-3566 Don't forget Saturday night at Field Day is the covered dish dinner, this is a family and friends event! Just bring your favorite cookout dish to share!

I will have my camera at both the Hamfest and Field Day, I'm trying to get a good picture of every club member before the end of the year. If I haven't gotten your picture, please find me!!

I'm trying to get in touch with James Harper W4HJH and Samuel Somers WB4FGS, both are club member and I need your birthday information please!

To all the Moms, Happy Mother's Day! Please send me your news, kg4tvm@hotmail.com or tel. 703-257-3566.

73 Theresa/KG4TVM

Minutes of the Ole Virginia Hams Amateur Radio Club Meeting April 21, 2008:

George / K4GVT called meeting to order at 1930 Eastern Time.

Following the Pledge of Allegiance, all present stated their names and call signs. There were 24 OVH members present, and two guests.

BUSINESS MEETING

The minutes of the March 2008 meeting were approved.

Treasury report: Balance is in good standing. Report approved.

COMMITTEE REPORTS

Membership: Joe/KI4OHR - No new membership applications; however, Joe is looking for a volunteer to take over the membership duties as Joe is deeply engaged as the Treasurer.

ARES: Brian/WC4J - MS 150 Bike Ride May 17th/18th. Numerous other events coming up; check out www.pwcares.org for more details. Next ARES training session is April 17th at 09:00 at the County EOC.

Repeater: Art/W1CRO - Autopatch code will be changed on Saturday night, April 26th. Be sure your OVH membership is renewed to get the new code. All repeaters working well.

Training: Brian/WC4J is finalizing a location for the Technician Class. General class conducted by Mark/WA4KFZ is continuing.

Scholarship: Butch/W4HJL – Several applications have been received and more are expected. Award will be announced and made at the next meeting.

Hamfest: Chris/KI4POT – Still looking for more volunteers, otherwise activities are moving along. Sales of vendor tables continues. Fliers for mailing are underway. Forty six tables sold to date. Announcements of the hamfest are posted in a number of publications. Send the list of current vendors to Bill/N3OH for posting on the OVH web page.

Field Day: John/KG4NXT - plans are ongoing. Education station will consist of manufacturing a 440 antenna using scrap material. Saturday night pot luck meal is planned. Theresa/KG4TVM is assisting in preparing invitations for local politicians to visit, and newspaper announcements.

Sunshine: Theresa/KG4TVM - Photo ID forms were issued to club members. Old Dominion Baptist Church thanked the club for donations in memory of Alman Reames. Birthday cards were received by April birthday members with great appreciation.

Packet and OVH web site: Bill/N3OH – OVH web site is working.

PROGRAM

John/KG4NXT handed out an information package and discussed the PropNET Project with which he has participated on the 30 meter band using a PSK mode. See http://propnet.org for details about PropNET. Custom software may be downloaded from that web site and used to participate. An Internet connection is needed to aggregate transmission and reception reports for specific participating ham stations. Those reports can be viewed by anyone at a central web site.

OLD BUSINESS

Gary/WG4ARC has secured the use of Signal Hill for the OVH Special Events Station for the Second Battle of Manassas to be held on August 30th. Thanks Gary!

Dues: Pay up laggers!!

NEW BUSINESS

50/50 for $25: Winner was Dwight/AI4II. The Mystery Box raffle generated $20. John/KG4NXT was winner.

The meeting adjourned at 20:29 but Hamfest announcement post card labeling continued until completed.

Reminders about some upcoming events / calendar dates:

UPCOMING HAMFESTS

May 16 - 18, 2008. Dayton Hamvention, Dayton Ohio. This is the biggest hamfest in the world and everyone should go to it at least a few times. Go to http://hamvention.org for more info. Check with other OVH members for possible rides to / from Dayton, Ohio.

June 8, 2008. OVH Manassas Hamfest, Prince William County Fairgrounds, 10624 Dumfries Road, Manassas, Virginia. More information at http://w4ovh.net and at the upcoming OVH meetings. Volunteers and helpers are needed, contact Chris/KI4POT or Bruce/AB8CI.

More information for OVH members about the OVH Manassas Hamfest : June 7th and 8th. Set up for the Hamfest at the Prince William County Fairgrounds will occur on Saturday morning (June 7th); lots of volunteers are needed as usual to make that go quickly; take down will occur at the Fairgrounds on Sunday afternoon (June 8th) after the Hamfest is over - lots of volunteers will be needed for that too so that can be accomplished quickly. More information will be forthcoming at the May 19th OVH meeting and on the OVH email reflector.

SPECIAL DINNER FOR MARY LU AND BUTCH BLAISDELL - 6:30 PM on Saturday, June 7th.:

June 7, 2008. This is being planned and organized by Bob/K4HJF for Saturday evening (6:30 PM on June 7th) at KC's Restaurant, 9550 Center Street in Manassas to honor Mary Lu/KB4EFP and Butch/W4HJL for their many years of dedicated work and extraordinary efforts on behalf of the Ole Virginia Hams Amateur Radio Club. See the separate announcement later in this Newsletter, and watch you email for further updates from Bob/K4HJF. Everyone who has been active in the OVH knows how much Butch and Mary Lu have been doing for many years in the Club and should plan to attend if at all possible. You can email Bob/K4HJF about this at ovhdinner@aol.com.

OPERATING EVENTS:

June 28 - 29, 2008, OVH Annual Field Day event at the Nokesville Park. Be sure to mark this on your calendar; it is always a major OVH event and will be so again this year. ARRL

2008 Field Rules and early info is online through http://www.arrl.org/news/stories/2008/02/08/101/?nc=1. John/KG4NXT is chairman. Check out http://www.arrl.org/contests/announcements/fd/locator.php and be sure to look at a zoomed in, close up satellite aerial view of the W4OVH Field Day location near Nokesville, Virginia. More information will be posted at http://w4ovh.net.

UP-TO-DATE INFO ABOUT OTHER CONTESTS / OPERATING EVENTS

WA7BNM maintains an excellent Contest Calendar website at http://www.hornucopia.com/contestcal/. The ARRL's operating events / contest calendar web page is at http://www.arrl.org/contests/ This includes a link to ARRL's Special Event activities listings at http://www.arrl.org/contests/spev.html

A dinner in honor of Mary Lu and Butch Blasdell - June 7, 2008

What: we're organizing a dinner in honor of Mary Lu and Butch Blasdell.

Why: To honor Mary Lu / KB4EFP and Butch / W4HJL for their many years of dedicated work and extraordinary efforts on behalf of the Ole Virginia Hams Radio Club, and to create a special opportunity for an evening of socialization and fun when many of their and our "radio" friends are in town for the OVH Manassas Hamfest.

When and Where: Saturday evening, June 7, 2008 beginning at 6:30 PM at KC's Restaurant, 9550 Center Street, Manassas, Virginia 22110.

The Details / What You Need To Do: Because this event is not being underwritten by the OVH Club, we are counting on those who will attend to pay in advance. Estimated cost is $30 per person for a buffet style meal including two main entrees, salad, plenty of side and vegetables dishes, desert, tea and coffee. Wine and other alcoholic drinks are available and the kitchen is open for those with special needs.

Please Do This Now: Send your check drawn to the OVH for $30.00 for each person attending to P.O. Box 1255, Manassas, Virginia 22108 or bring your check (or cash) to the May 19th OVH Meeting where money will be collected and there will be sign up sheet. If you [either alone or with others] are planning to attend, please send your check right now (or as soon as you are able or bring it to the May 19th OVH Meeting), and also email to right away to ovhdinner@aol.com that you are planning to attend. Include your name / callsign / number of people planning to come with you in your email. This special email address is being managed by Bob Zaepfel / K4HJF who has taken the lead in organizing this long overdue dinner to honor the Blasdells.

Note: if we have enough attendees, we expect to be able to negotiate a lower charge per person at KC's and partial refunds will be available. We will be collecting checks and have a sign up list and more details at the upcoming May 19th OVH Meeting.

Bob Zaepfel / K4HJF

The OVH Annual Field Day Event is fast approaching:

FIELD DAY 2008

When: 1 PM on June 28th until 4 PM on the 29th

Where: Nokesville Park

          From Manassas: Rt. 28 South to left on Fitzwater Dr.
          Go to the end of the road turn right and follow to the
          entrance of the park on your right.

Sponsored by: The Ole Virginia Hams

Purpose: Ham Radio Operators using emergency power to
communicate with other hams around the world! This event is
open to the public. Radio stations will be set up so that we will
          be able to get YOU on the air!

Dinner: Pot Luck on Saturday evening at 6 PM, join us with
          your favorite cookout dish!

More information contact John Heartney, (703) 257-3566
kg4nxt@arrl.net

**To the left:
Announcement
for the
2008 OVH Field Day
Event
prepared by
John/KG4NXT**

**Below: aerial view of the
OVH's Field Day
operating area
at the Nokesville Park
(image from Google Earth).**

OVH's FD
Covered
Operating
Pavilion
at the
Nokesville
Park

Aerial
Image
from
Google
Earth

The April 25, 2008 Court Decision In The BPL Controversy

On April 25th the U.S. Court of Appeals for the District of Columbia Circuit issued its decision (by a divided 2 to 1 vote of the three judge appeals panel) in the FCC's BPL regulation case now known by the short title: ARRL v. FCC. A full text PDF file of the Court's decision [06-1343-1112979.pdf] may be downloaded without charge from http://pacer.cadc.uscourts.gov/common/opinions/200804.htm. This is essential reading for everyone who wishes accurate information about where the BPL controversy now stands and what is likely to happen next. The nub of that controversy is centered about the technical question, resolved the FCC in the regulations it issued, about how BPL system radiation and interference potential at HF frequencies is to be determined. The FCC said the unintended radiation from BPL dropped off at 40 dB per decade, while the ARRL (and several other reliable sources) provided test data and analyses showing that the real drop off rate was much closer to only 20 dB per decade - indicating a much great potential for harmful interference to licensed services.

The Court's decision is a strong "win" for the ARRL as well as for all licensed HF spectrum users (e.g., including ham radio operators), all of which have been adversely affected at least potentially by the FCC's regulatory position which the Court rejected as improperly adopted in a manner not in accord with basic administrative law requirements. The decision is "win" for HF spectrum users because it is always difficult to get a Court to overturn an agency regulatory action - just what has happened here - because the Courts are required to strongly presume that an agency (the FCC here) has correctly decided the matters entrusted to it based upon the special expertise the agency is presumed to possess. [Read the dissent in the decision which discusses this point at length.] In its April 25th decision, the Court did not decide the technical issues, but instead remanded the case back to the FCC with instructions for the FCC to release its previously withheld internal technical test results and analyses and to provide a reasoned and considered discussion of those results and analyses before re-issuing any new BPL regulations dealing with the questions involved.

Hopefully, this approach by the Court's majority will put an end to what appears to have been gamesmanship by the FCC in shoving through a particular technical based regulatory rule which is unsupported, if not just wrong and unsupportable. It appears the FCC did that to achieve a particular regulatory objective intended to favored regulatory inaction [i.e., no enforcement action] again harmful interference emitting BPL systems which harmfully interfered with licensed HF spectrum users. That should happen unless the FCC digs in and decides to contest the technical merits of what the ARRL and some others submitted for the FCC's technical consideration. Those submissions most likely are consistent with the FCC's own withheld internal test results and analyses. Otherwise, quite simply, why did the FCC withhold those materials?

As noted by George / K4GVT in his President's letter, the Manassas City Council - likely with the advice of its own counsel - may be "reading the tea leaves" the same way for the future. Shortly after the BPL court decision issued, the City Council - according to newspaper reports - voted to allow the Verizon FiOS system to be deployed and made available to users in the City. The FiOS system uses optical transmission over fiber optic cable to provide broadband connections to its users and should not have any potential to radiate harmful interference at MF / HF / VHF / UHF or Microwave frequencies to other licensed users of the spectrum. Our understanding at this point is that basic FiOS services will be made available by Verizon for not much more than the monthly charges for a single Internet connection by the Manassas BPL operator; further, to the users benefit the FiOS system will offer a much much higher bandwidth capacity than anything achievable with the BPL system. Thus, this is likely the beginning of the final end for the Manassas BPL system for all potential uses, including for remote meter reading. Indeed only very few of the many, many other utility systems which now employ remote meter reading technologies and devices use BPL for that, but instead use other well proven remote reading devices and techniques which are less expensive to maintain.

On-Line Tunable "SDR" Radio Receiver in the Netherlands for the 40 and 80 Meter Bands!

A web site sponsored by the ham radio club at Twente University in the Netherlands has an online Internet, automated, 24/7, remotely tunable Software Defined Radio ("SDR") Receiver on the 40 and 80 meter ham bands which can be accessed by multiple users, each of which can separately tune and adjust the SDR receiver to which he is connected. The individuals who got this very effective, novel SDR receiver system working are to be complimented for their ingenuity and achievement. Go to http://websdr.ewi.utwente.nl:8901/ to try it out! No password or log on is required to use it.

The web site provides some limited information about how the system works but almost nothing about who actually developed it and got it working. See, http://websdr.ewi.utwente.nl:8901/info.html. A software defined radio web page at the Twente University by PT / PA3FWM suggests he may be the one behind this. Look at http://wwwhome.cs.utwente.nl/~ptdeboer/ham/sdr/. The key to how it works seems to be in the custom JAVA software and its integration with a relatively low cost hardware SDR receiver.

What can actually be done with this? Connect to http://websdr.ewi.utwente.nl:8901/ to find out! You can listen to what is coming in / being received in the Netherlands on the 40 and 80 meter bands any time of the day or night - here or there - so be sure to keep the time zone differences in mind when you listen! The receiver does not tune the entirety of those bands as allocated in the Western Hemisphere, but does cover most of the SSB bands (and parts of the CW and digital mode bands) as used in Europe. It is quite interesting to listen because many of the "DX" stations heard have very strong signals and can be heard much more clearly and easily than from here.

Even in a short amount of listening, you will hear SSB QSOs in progress in many languages besides English which, nevertheless, predominates, even for non-native speakers. The other languages heard spoken most frequently are German, Italian, Russian, French and Spanish in approximately that order. You will hear stations all over Europe as well as in Asiatic Russia, the Middle East and North Africa. You will also hear the European side of crossband contacts with stations in North America.

What a way to check band conditions! That will become possible if many systems like this are deployed in geographically diverse locations. Will this type of system become widely used in the future? Does anyone in the OVH who has put an SDR receiver together know how to get a system like this working?

The Outpost Packet Manager Software

Several OVHers interested in using or getting ready to use packet radio for emergency communications have been discussing or considering experimenting with the Outpost Packet Manager Software which is intended to simplify message handling via packet radio. For details, manuals, and the freely downloadable Outpost software, go to: http://www.outpostpm.org.

The CW Skimmer

The next three pages present an article by Pete / N4ZR describing the quite recently released CW Skimmer software from VE3NEA. The article appeared in the February 2008 issues of the Potomac Valley Radio Club Newsletter; it is both laudatory and comprehensive and worth reading by anyone with any interest in automated CW reception (or contest operations) on the HF bands. Now that CW proficiency is no longer required for HF, but major parts of those bands are still restricted to CW and the other digital modes, that should include just about everyone!

The CW Skimmer possesses an automated ability to simultaneously track, decode and display plain text corresponding to multiple, simultaneous CW signals being received by a wide band radio receiver such as a Software Defined Radio (SDR) receiver. This is likely eventually (before long) to revolutionize CW operation. What software related CW "aids" will appear next?

What's Next.. A Review of VE3NEA's CW Skimmer

by Pete Smith N4ZR

Every decade or so, something comes along that can substantially change the way we approach DXing and contesting. The next such innovation has arrived. It comes (no surprise!) from Alex Shovkoplyas, VE3NEA. CW Skimmer, just publicly announced, is shareware available from www.DXAtlas.com. Combined with your current transceiver or simple, very inexpensive Software Defined Radio (SDR) hardware that is already available, CW Skimmer will enable CW operators to be aware of everything that is going on across large swaths of any band. It will copy literally hundreds of signals on the band simultaneously (limited only by CPU capacity), and decode, recognize and list callsigns with their associated frequency.

First, an apology to the people who are working on SDRs, for whom much of this will be old news. But what's different here is that the hardware and software are inexpensive, accessible without a lot of technical knowledge, and combine capabilities (notably the intelligent CW decoding) that have not been available in one place before.

How does this work? You feed audio from your receiver (SDR or otherwise) to your computer's soundcard. CW Skimmer looks at the entire swath of spectrum it can "hear", identifies CW signals, and decodes them all! Then it looks at the decoded text and works to identify stations newly arrived on the band, stations calling CQ, etc. It generates a time-stamped list of these stations and their frequencies. You can pick out individual signals and enhance their readability by putting them through a tight DSP filter, or click on a station and move your transceiver to its frequency, but what is truly different about Skimmer is its mega-multi-tasking decoders.

There are three basic modes of operation with CW Skimmer. Most people will start by simply listening on their current radios, with the widest available filter. Typically, that will let Skimmer hear 2-3 KHz of spectrum. Tune to a frequency with activity (a DX pileup, for example) and you'll see each of the stations represented by a horizontal line of dots and dashes on the waterfall display. As it identifies stations and other message content of interest it "flags" these for you.

The second mode is a little more complex, but more rewarding. For several years, now, simple, inexpensive, single-band software defined receivers have been available for less than $15 (in kit form) from Tony Parks, KB9YIG. For full details, see www.softrockradio.org. Essentially these receivers downconvert a portion of the band of interest to audio, which is then converted to digital information by the sound card in your computer (more on this later). The digital information is then available for processing by software, which can pick out individual signals from the passband, display the band on a "panadaptor" screen, demodulate any mode of

transmission and a zillion other things. Alex wrote the most popular "back end" software for these little radios, called "Rocky", so it should be no surprise that he has found a way to evolve the idea to the next level.

Below is a sample of CW Skimmer at work on 40 meters with a SoftRock. It was "listening" to a brief period of a recent CQWW CW and decoding what it saw. The first figure shows the main screen. The waterfall display only shows about 5 KHz from the center frequency of the principal decoder (the green zone at the bottom), but in fact, the SoftRock is receiving the entire slice of spectrum that the soundcard can handle.
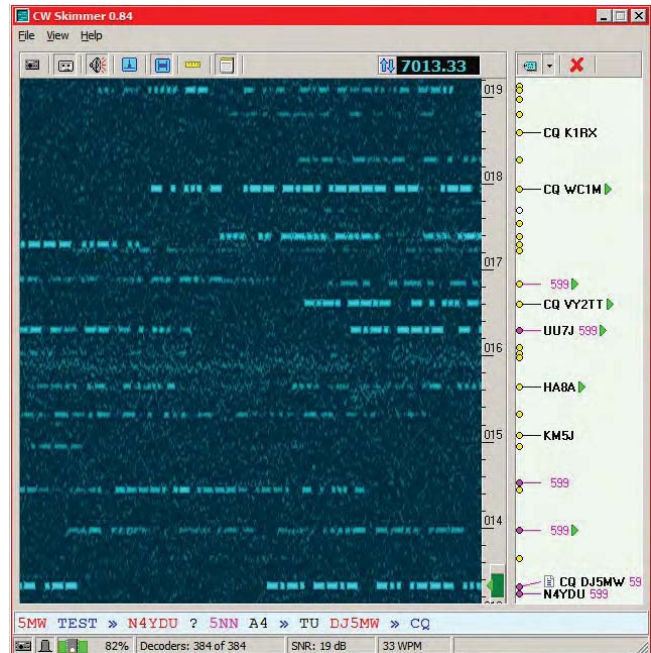
In this case, 326 different signals (or possible signals) were being copied across the band, and 154 calls were identified in less than 2 minutes figure 2). The callsign list is dynamic – stations are constantly being added or dropped when they are no longer there.

Alex believes that the third mode of operation may be the most useful to the most people, particularly DXers. It involves configuring a Softrock to work off the first IF of a receiver, after the roofing filter, but before the usual selectivity-defining filters. Some surgery will generally be required, but more and more people are trying this, and detailed instructions for some transceivers are already on the web.

A good way to find out what's available is to join the SoftRock Yahoo group (softrock40@groups.yahoo.com). A big advantage is that you require only one SoftRock to monitor any band your transceiver covers .Of course,

the width of the passband will be limited by the width and sharpness of your roofing filter, so some radios, such as the Orion, will effectively preclude this approach.

As primarily a DXer, Alex reports using Skimmer to greatly improve his efficiency in pileups when the DX is operating split. Take another look at Figure 1, and imagine that DJ5MW was the rare DX, listening up. Skimmer identifies UU7J sending a typical exchange, at the same time it was decoding DJ5MW's transmission to him in the main decoder, so the Skimmer user now knows where the DX operator is listening, and can quickly move there. Not a big deal when the DX is using a narrow split, but imagine how useful it would have been trying to work some recent DXpeditions that listened across a 30-40 KHz window.

The SoftRock receiver is very inexpensive ($12 for the latest 20M version, in kit form), and is a single-band device. The receiving frequency band is also fixed by the frequency of the reference oscillator. Each of these limitations is readily worked around; at the price, it might make sense simply to switch single-band receivers in a contest application, particularly if you want to listen to more than one band at a time. I have connected my SoftRock to the "RX Antenna Out" jack on my transceiver, so that it is always listening with my main antenna for the band, and has the advantage of the bandpass filters in my SO2R setup.

The SoftRock requires only 12V DC, an antenna connection, and a stereo output to a sound card. For initial experiments, any sound card will work, including onboard audio chips such as the SoundMax or Realtek, but for best performance and the largest bandwidth, serious users will probably want to invest in a sound card that supports a 96 KHz sampling rate.

What about limitations – well, first of all, the SoftRock's sensitivity is probably somewhat less than a top-grade amateur transceiver, so you may be able to hear things on your main transceiver that it cannot. It's to be expected that this spec will improve in the next few years as better ICs become available. Dynamic range and blocking are also likely to be issues in some circumstances. After all, it's a $15 receiver, and Alex reports that on 40 meters it already hears as well as his TS-570!

As for the Skimmer software, it's very simple to operate and seems quite able to copy CW at or near the noise floor. The software automatically adjusts the number of decoders available, to keep your CPU utilization below 100 percent. Some contest experience suggests that it may be somewhat prone to multiple miscopies of a single callsign, dependent on QRM and signal strength. And don't forget, this is the first public release; there will doubtless be many improvements in coming months.

So what? Why should you care, if you're primarily a DXer or contester, and not a do-it-yourselfer, QRPer, or a computer specialist? Aside from pileup-busting, as

described above, here are a few more possible applications to think about:
- You can monitor a whole band, and see a needed DX station appear on that band, or just see the band open. You can know quickly and easily what stations are coming in, all while continuing to listen and operate as usual, on the same band or another. This capability is potentially far superior to packet, because you won't have to wait for a packet spot, or tune to one, only to discover that while spotter has propagation, you don't.
- Contest sponsors could use strategically placed Skimmer/SoftRock combinations to record an entire band worth of activity for a 48-hour contest. The hard drive space required (roughly 95 Gigabytes) is no longer prohibitive, and the resulting record could be extremely useful in resolving accusations of two signals on the same band simultaneously, rubber-clocking and other rule violations. Total coverage would not be required; like radar in the control of speeding, the deterrent effect of not knowing whether he was being recorded could be an excellent deterrent to any prospective cheater.
- Skimmer could enable hearing-impaired operators to chase DX with much greater facility than ever before. At moderate speeds, the CW streams being copied could be read by eye from the waterfall display, or brought into the principal decoder for better copy. Meanwhile, other stations would be copied and added to the call list.
- Looking a little further ahead, Alex anticipates adding Telnet capability to Skimmer. Once Skimmer is able to talk to other programs, or be accessed via the Internet, then a whole range of new possibilities opens up. For example:
- SoftRock radios and CW Skimmer software can potentially enable a network of "reverse beacons." You might be able to query the Northern Europe 20-meter Skimmer station, for example, and get a list of stations it has recently received, or call CQ and see whether you turn up on the list. A still later evolution might even provide signal strengths, so that you could compare with your friend across town and see who has the better signal.
- A Skimmer could feed the packet network more efficiently than even the most energetic tuner and spotter, because it listens to all frequencies of a band at once. As always, miscopied callsigns will continue to be a problem, because Skimmer isn't as good as a human at inferring a callsign from incomplete information (in QRM or QRN). If this idea takes off, packet node operators will have much more incentive to filter out duplicate spots, at least until the Skimmers become more sophisticated and recognize when a spot is a dupe.
- With the same enhanced Skimmer software, contest logging software would be able to make use of "spots" from Skimmer, just like packet. One potential downside is that it would no longer be so easy to detect packet cheating by statistical analysis of the time lapse between packet spots and when the stations were worked. Indeed,

with Skimmer, operators might often be able to reach new stations on the band even before users of conventional packet spotting.

I'm sure this is just the beginning of the list. It isn't hard to imagine that before long, some enterprising programmer type will develop a true robot, capable of operating an entire contest without human intervention. I bounced this idea off Alex, and he responded, "Fortunately, it doesn't look like such a robot will become a possibility in the next few decades. Automatic decoders can be as sensitive as a human ear, because the same laws of physics apply to both, but the computer cannot fully understand the meaning of the message it has decoded and thus cannot use context information to fill the gaps. Humans are unbeatable in this area."

As always, technology seems to challenge our imaginations, as well as our entrenched ideas. Someone recently lamented that we were getting away from the original idea of "a boy and his radio." A waggish friend immediately commented that Skimmer is more like "a boy and his sound card." I hope we can all agree that change is inevitable, and exciting. In fact, isn't that a lot of the fun of amateur radio?

Notes about the Article:

The original article by Pete / N4ZR may be found using the Resourses links to the February, 2008 PVRC Newsletter at http://www.pvrc.org. The original may be easier to read than the copied version reprinted here.

To summarize the important web links:

VE3NEA's software, including his "CW Skimnmer," can be found at http://www.DXatlas.com

Information and very low cost, hardware SDR receiver kits may be obtained through http://www.softrockradio.org. More information may be obtained through the Yahoo newsgroup: softrock40.

VE3NEA's web site also provides his "Rocky" software which is suitable for use with an SDR receiver such as the Softrock. OVH member, Dwight / AI4II, has built a 40 meter Softrock SDR receiver using the Rocky software.

Sources For Some "Free," High Quality, Technical Reference Materials

The MotionMountain Physics Textbook. Go to http://www.motionmountain.dse.nl/. This is a large PDF file download (72 Mb), but may be downloaded in parts.

Electromagnetic Field Theory - Classical Electrodynamics. Go to http://www.plasma.uu.se/CED/Book/ for the 1.8 Mb PDF file download by author / professor / ham: Bo / SM5DFW. The book is solid, but it is written somewhat in the style of Prof. Julius Stratton's famous Electomagnetic Theory which, it was suggested, was designed to frighten the timid away from attempting to major in Electrical Engineering.

Lessons in Electronic Circuits, Volumes I through VI (D.C., A.C., Semiconductors, Digital, Reference, Experiments). There are six separate PDF files, one for each volume, all of which are being updated regularly, which may be downloaded at http://www.ibiblio.org/kuphaldt/electricCircuits/. The material covered is basic, but it is generally well presented.

Radio Wave Propagation. The ARRL has a Technical Information Service (TIS) web page devoted to the complex subject of Propagation of Radio Waves at http://www.arrl.org/tis/info/propagation.html. That web page has many downloadable PDF references to "old" QST articles and other resources. The current editions of The ARRL Antenna Book, ON4UN's Low Band DXing and The ARRL Handbook For Radio Communications each have chapters about radio wave propagation, each of which contain many references to other sources. Another superb resource is the private web site of the prolific QST and NCS Journal author, Carl / K9LA who has published numerous articles on radio propagation subjects. Go to http://mysite.verizon.net/k9la/ for a treasure trove of downloadable and well written, readable and practical information in PDF files.

Learn Some Russian Phrases for Amateur Radio!

Len / W6HJF provides a web site at http://traubman.igc.org/russian.htm which has a host of printed materials and MP3 files which you can download for free to learn "hear" and "speak" some basic Russian phrases, especially those used in ham radio. You can also learn the basics of reading text when the symbols are written or printed in the Cyrillic alphabet. This is all very basic material, but it can greatly expand your mind and outlook if you're so inclined and give it a chance!