



# Radio Amateur News & Views

The Official Journal of the Radio Amateurs of Northern Vermont

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## INTERNET REPEATER LINKING PROJECT (IRLP) The April 10<sup>th</sup> RANV Meeting

The *Internet Repeater Linking Project* (IRLP) is a system whereby repeaters all over the world are linked over the Internet. Why would we want to do that? There are many times when it is useful to be able to connect widespread groups of hams together off of the crowded HF frequencies. Being in a relatively "remote" corner of the Northeast, linking is a boon to ham radio in our area. We have had a lot of opportunities to "link" over the years. For example, the 146.85 MHz Essex repeater was a port for a number of networks, including the *New England Network*. Through this network, hams could travel all over New England and talk back to the folks in Vermont. For years, I have been attempting to link into the *Northeast Connect*, a big network linking southern New York. It has been a daunting task since good in-between repeater sites are hard to come by and maintaining a network with distant sites is a full time job. With the IRLP, we have, within our grasp, the ability to effect this linking easily and efficiently. If you have a sound card, go to: <http://www.irlp.net> to hear what this linking sounds like.

For our April meeting, Mike KB1FUV returns to talk about the IRLP. Last month, he gave a fine talk on how the cable system operates. He will let us know how the IRLP system works and how well it works. In the last few months, he has obtained and built the IRLP linking board and hopes to have a working system one of these days. Mike will fill us in on all the myriad details, helped along by Brian N1BQ.

Who said the Technician license was only for short range. Come find out how to work DX on 2 meter FM at the RANV meeting, April 10<sup>th</sup>, at 7PM, at the O'Brien Civic Center, 113 Patchen Road, South Burlington. Pre-meeting snacks and eats will be at Zach's around 6. Come early for a good seat!

## COMING UP!

Things will be getting busy this spring. Start planning! The RANV meeting on April 9<sup>th</sup> is about Internet Repeater linking. It should be tremendous!

Our first Fox Hunt is Friday, April 19<sup>th</sup>. You have two weeks to get your hunting equipment out of the closet!

On Friday-Saturday May 3-4<sup>th</sup> is the Hosstraders Swapfest in Hopkinton, NH. This is very early in May, and will be the only warning you get!

May 11<sup>th</sup> is the NCAA Bike Race where hams are needed for communications for this race in Addison County.

On Saturday, May 25, is the Essex Memorial Day Parade, followed by the Vermont City Marathon on Sunday, May 26<sup>th</sup>.

## FOX HUNT – APRIL 19<sup>th</sup>

It is finally Spring and the first Fox Hunt of the season is only a few weeks away. In the last installment of the hunt, the wily fox threw everyone for a loop and 6 teams of hunters could not locate him in his Westford hideout after 4 hours of trying. So, he's back and up to his old tricks and has this to say, "bet 'ya can't find me!" It's time to start practicing (*see related article inside!*)

I can't say much about where the Fox will be hiding, because he doesn't know that yet. There are rumors that he might go right back up to Westford, or he might literally hide under your nose (*Aha, perhaps a hint!*).

However, I can say that the hunt will take place starting at 6 PM on Friday, April 19<sup>th</sup> on the 145.15 repeater. Tune to the input, 144.55 MHz to listen. The Fox will be hidden in Chittenden County, in a public accessible spot and will transmit at least 10 seconds out of every minute. Happy hunting!

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## OUR LAST RANV MEETING

by Charlie W1CHG, Sec'y

The meeting was called to order by Paul AA1SU at 7:15. After introductions, we counted 30 people including 4 new General licensees. Howie K2MME volunteered to bring the snacks to the April meeting. It was announced that the May meeting was to be at the QTH of Brian N1BQ. Brian said that the revenue from the Milton Hamfest was normal compared to the last few years. It appears we have done very well with this year's Hamfest since many hamfests have been seeing poor attendance and some have gone away. There was some discussion about the repeater and its problems, and also the costs of it in the future. Also, Debbie W1DEB is going to make ONE more jacket order. The next order will probably cost slightly more as the holiday deals have gone by.

Paul AA1SU announced that he submitted his nomination for ARRL Vermont Section Manager. As there are no other candidates, he will become Section Manager on July 1<sup>st</sup>, succeeding Bob WE1U (*applause*).

Mitch announced that Knight State Park, home to our summer picnic, might be closed this year. (*We later learned that it will be open -ed.*) The picnic will be on the first week-end of August. The MS-150, a public service event, will be on the second weekend. The Burlington Club is working on a hamfest for the third weekend, making August very busy.

The speaker for the evening was Mike KB1FUV. Mike works for *Adelphia Communications*, the local cable provider. First, he dug back to the roots of CATV systems of the years gone by, starting with the first system in Pennsylvania in the 1940's and working up to present day systems. He then spoke about *Powerlink*, which is Adelphia's high speed Internet service. Mike explained how an RF signal carries the information and where it is converted to digital, whether the service is used for Powerlink, digital TV or

## THE PREZ SEZ

by Paul AA1SU, President

It would appear that my ambition for amateur radio has gotten me into trouble again. As of January of this year, the elected position of ARRL Vermont Section Manager was up for nomination petitions. In February, the current Section Manager, Bob WE1U, asked me if I would be interested in running for the position. I informed him that with two jobs, and the club to run, that I just did not think that it was possible, and that there must be several other qualified candidates willing to run. At the Milton Hamfest, Tom Frenaye K1KI, the ARRL New England Division Director, approached me about running. I was flattered that he asked, but I told him that I did not think it was possible. After the Hamfest, I was E-mailed several times by nice hams asking me to run.

I looked around, and I was the only one standing. I now felt honored to have been asked, and I decided to run. I had to get my petition into the League by March 8<sup>th</sup>, which I did. Thus, as of July 1, 2002, I will be the ARRL Section Manager for Vermont. Since only one valid petition was received from our section, I will be declared elected without opposition for a two-year term. I think I began to feel a sense of urgency to run when I read that, if no one ran for the office, Rosalie White, ARRL

the normal analog TV. He also displayed a fiber distribution cable box similar to the one hanging off the pole near your house. This unit is capable of bi-directional service, whether it be television or data, between your home or business and the control center in Williston. A nice handout of notes and block diagrams helped us to understand all of the technical discussion. Mike finished the presentation with an interesting video of the control center he made. It was a very informative talk and display session.

After consuming the goodies, the meeting was adjourned at 9:02.

Field & Educational Services Manager, would appoint someone for six months, while our section was resolicited. I felt that this would be too disruptive for the Vermont ham radio community. It is also probably a burden on the League. Rosalie just had to appoint Section Managers to fill three vacancies in other sections. I am sure that she struggled to find these people.

Those of you who attended the March meeting were stunned when I made this announcement. Once I decided to go for it, I carefully planned to make it a surprise at the club meeting: it worked. I am having fun running RANV, and I plan to have fun as Section Manager. I will serve the community to the best of my ability, and help keep us ready for emergencies. It may not be easy, but I am looking forward to the challenge. I know that with you folks behind me, I can do anything. Speaking for the entire club, I wish to congratulate and thank Bob for an outstanding job as SM for the past 4 years, and good luck with your future endeavors. See you all at the April 9 meeting.

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## DX CLUSTERS – Part IV

by Fred NIZUK

Living in what many have dubbed, "The Information Age" can be both difficult and exciting. The Library of Congress has over twelve million items cataloged on their bookshelves, which run over 530 miles long. Each month, tens of thousands of books, magazines, newspapers, and periodicals are published. No one really knows just how many pages are available on the Internet. Knowledge is power, but one obviously will never see all the world's writings.

Executives of large corporations have people who sift through this information for them. These assistants will read the trade and financial magazines, filtering the information down to just the items that are relevant to their CEO's needs. This saves the executive's time, allowing them to act quickly and come out ahead. Wouldn't it be nice if you had an assistant of your own?

One problem with DX clusters is that you can get too much information: DX spots from 160 meters to microwave; announcements and talk chatter; propagation and weather information; all coming at you in real time. During the ARRL DX contests, DXBVT had over 25,000 spots/day! It can be overwhelming, but the good news is that by applying some simple filters, you can make it tell you just what you want to know. Just like the CEO, you can then act quickly, and come out ahead of the pile up with the QSO for that new country.

The first set of filters we'll talk about aren't really filters at all. They really are more like switches, that select the different types of information you receive. By using the SET and UNSET commands, you can toggle on and off individual items. I personally find the announcements to be too much clutter, so I disable them with the UNSET/ANN command. Other types of information include: TALK, WX (weather), WWV (propagation), WCY (magnetic), LOGIN (shows who logs in/out), and DX (DX spots). These switches, as well as the filters discussed below, will be stored. That way, you won't have to remember and re-enter them the next time you log in.

The software that DXBVT is using allows users to define some very complex filter sets. Fortunately, you can usually accomplish what you want with a very simple, one-line filter. Filters can be set up for DX spots, announcements, WX and WWV. I'll just focus on filters for spots, as it applies for all.

There are two types of filter commands – ACCEPT/SPOT and REJECT/SPOT. Although you can use both at the same time, I suggest sticking to one or the other. I prefer using the ACCEPT filter. It basically says "reject everything except what I ask for." The REJECT filter works in the opposite way, showing you all the spots except those you ask to be blocked.

Let's try an example: I've turned on the 6 meter radio, as the bands open to Europe. I really don't need to see spots on the HF frequencies, for unless a P5 is calling for me exclusively on 20 meters, I'm much set on working 6 meters. I would set my filter like this: ACCEPT/SPOT ON 50000/52000. This would tell the cluster only to send me stations that were spotted between 50 and 52 MHz, making it a lot easier to notice the stations I haven't worked before.

There are a number of bands defined in the cluster, allowing you to do more by typing less. I could have also entered ACCEPT/SPOT ON 6M, and had the same result. You can see all the defined bands by typing SHOW/BANDS.

One place this is powerful is in this next example. Not being very proficient at code, I want to only see spots on the phone portion of the HF bands. ACCEPT/SPOT ON HF/SSB will allow the cluster to only send spots that are in the phone portions of the bands between 10 and 160 meters

Give these a try, and next month we'll discuss more ways you can filter the information to fit your needs. Remember, the cluster will save your filter settings. To erase all the filters, type: CLEAR/SPOT ALL.

## CONTEST CORNER

by Paul AAISU

If you visit the contest calendar at [www.hornucopia.com](http://www.hornucopia.com), you may see something that will interest you of the many small contests. For instance, the *Holyland DX Contest*, on April 19 would be great, if you need to work Israel. There are also several state QSO Parties, a RTTY Test, and even a YL event.

The *New England QSO Party* makes its debut on May 4-5, 2002. It starts a few hours after Hosstraders, and yes, that was a factor in the contest period. The Saturday hours are 4-11 PM, and on Sunday it runs from 7 AM to 8 PM. So, you can have fun at the hamfest and still get home in time to play. The rules for scoring are similar to other QSO Parties. Multipliers are states, provinces, and a maximum of 20 DXCC countries. I do find it odd that we can't count New England counties as multipliers. The rest of the country uses the 67 New England counties. For more information, see [www.neqp.org](http://www.neqp.org). The organizers are looking for hams to activate rare counties, even if they have to do it mobile. If you plan to do this, they would like to know.

The results for the Vermont QSO Party is out already. Boy, are they fast! Mitch W1SJ, at the helm of WB1GQR logged over 2200 contacts for a score of 344K. David W1KR was first in the Rover category with a score of 8K. There were a total of 23 logs submitted.

I am trying to get more of you interested in CW contesting, but I know that the code is intimidating. But, we all go through different phases. The fun of ham radio is trying new things, getting good at them and perhaps moving on to something else. I am entering a new phase of the hobby (SM). When that phase is over, I will certainly be up to something else.

Next month: the *VHF QSO Party!*

## REPEATER NEWS

by Mitch WISJ

After a long winter of fighting crud and noise on the repeater, I'm happy to report that Bob KB1FRW and I recently paid a house call at the repeater and the surgery was successful. As I suspected, corrosion in the connector feeding the antenna created a mixing diode which spewed garbage across the receiver when the transmitter came on. There are theories why this became a problem, including moisture leakage and dissimilar metal contact. It hasn't been a good season for me where connectors are concerned! We cleaned out the connector as best we could and the problem cleared right up. The connector will be changed out over the summer.

The repeater is back to peak performance. It is hearing everything again; sadly, it hears the paging interference again too. That tells us we're back in business.

The repeater has two basic access modes. When the courtesy tone sounds like a "burp" the repeater receiver on the mountain is in carrier access. When you hear a short "boop" this receiver is in tone access, requiring 100 Hz. Sometimes, the mountain will be in tone access, and a remote receiver here in town will be on carrier access. This will be used from time to time, but is not planned to be a regular feature. For best results, program two memory channels for 145.15 – one with tone and one without. This will allow you to switch back and forth as needed without programming while driving.

If you have been off of FM for a while, turn the radio on and say hello!

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## HOSSTRADERS

Hosstraders will spring up again in early May. The location is the *Hopkinton State Fairgrounds* in New Hampshire. Take I-89 into New Hampshire and head for the *Exit 7 - Davisville* exit. After getting off, go left under the highway for 0.2 miles and then go right (*should be Kearsarge Avenue*). The fest will be a little over a mile down on the left side. The whole trip should be about 2 hours from Burlington.

The fest opens at 9AM on Friday, May 3<sup>rd</sup> and finishes 1 PM on Saturday. Try to be there both days for the best deals. Exams will be given on Saturday at 9 AM. Admission is \$10 before Friday at 3, \$5 afterwards. Sellers pay \$10 additional.

The 145.15 MHz repeater should take you virtually all the way there, although it will be spotty for the last 25 miles. The 145.33 MHz repeater is popular near Hanover and the talk-in is on 146.865 MHz. At the hamfest, check in on the 146.67 MHz repeater to find the gang. I plan to have a link into the 145.15 MHz repeater.

There is a map of the Fair!. Go to [www.ranv.org/hossmap.jpg](http://www.ranv.org/hossmap.jpg) to download a copy.

## SHARPEN THOSE FOX HUNT SKILLS

by Mitch WISJ

We have a Fox Hunt coming up this month and judging from last Fall's results, everyone could use some practice. I have the perfect way to provide practice any time you want it and it will also help us out later on.

As any user of the 145.15 repeater knows, our frequency has been selected by certain manufacturers as the national tune-up frequency for fax machines. Drive in any residential or business area and you will hear all sorts of carriers on the frequency. Use them! Here's how. Drive around until you hear an offending carrier on 145.15 MHz. You shouldn't have to go more than a mile to find one. Drive by the spot a couple of times and select the spot where the signal is the strongest. Safely park your car off of the traveled roadway. Pull out your HT and directional antenna. Yagis work best, but they also draw the biggest crowds – and that's your opportunity to sell amateur radio! Realize that these signals won't be very strong – no need for attenuators here because the signals are usually 1/2-3/4 scale. Use your antenna to zero in on which building the signal is coming from. Get as close as you can but absolutely do not trespass. You wouldn't like it if some kooky character came waltzing up your driveway with a weird looking antenna, either. Try using both vertical and horizontal polarization, and make sure you end up getting the same direction for each. Try your yagi from several different spots – they all should point towards the same source. You might even be able to determine which corner of the building the signal is coming from, although this is harder to do. Carry a pad and mark down the address, apartment number and name and any other information you can find. If you can find out what type of equipment is causing the interference, this would help greatly. Don't knock on doors or anything like that, but if it happens to come up in conversation, the information will be useful. We know that the Brother fax machines are notorious for loud signals on 145.15 MHz. It would be useful to know if there are other manufacturers with this same problem. When finished, move on to the next signal. Don't worry – there are hundreds of them to find – you'll never run out. Send me all of your data via E-mail. If there are enough people collecting information, I'll put a data entry page on the Web site.

Now, this is no joke. Besides getting valuable DF practice, you are helping to compile a list of interfering signals encroaching on the ham bands and on our repeater. Armed with this information, I hope to present it to authorities to attempt to correct the problem. It won't be easy to do, but without the data, we can't go anywhere with the complaint.

So, have fun DF-ing – and helping to protect the ham radio spectrum. Good luck in the Fox Hunt!

# ARRL FIELD ORGANIZATION

## Section Manager

by Paul Gayet AA1SU

As some of you may have heard by now, my continuing effort to inform Vermont hams of the many ways that they can help out in the ARRL Field Organization has garnished me the sole nomination for Vermont Section Manager. I initially turned it down, although I was quite flattered. However, I soon realized that if nobody ran for the position (*which they weren't*) then the League would have to appoint someone for a six-month period. I felt that this would not be healthy for our amateur community, and I graciously accepted the nomination. As I am running unopposed, I will be declared elected without opposition for a two-year term beginning July 1, 2002. I hope to serve you all to the best of my ability, and meet more of you at your upcoming club meetings from time to time.

This month I was going to write about two more boring appointments. I had picked out Net Manager and Bulletin Manager. But instead, I feel like talking about what the League will be expecting of me. That way you can keep a keen eye on me throughout my term (*ha ha!*).

One of the things that I will be doing is making section-level appointments in several key ARRL programs. They are emergency communications, message traffic, official observers, affiliated clubs, public information, state government liaison (*remember that one?*), technical activities, and on-the-air bulletins. Now, highly qualified people already fill some of these appointments, while others are open. This is the main reason that I started this series; to get more people interested in applying for an appointment, thus making Bob WE1U's job a little easier. Now it's your turn to make my job easier. By the way, all appointments are now up for renewal, so if you want to apply for a currently filled position, that is okay, too.

I will also be doing other boring managerial stuff, like making periodic reports to the Division Director. On the fun side, I will be making visits to club meetings and hamfests around the state. This where I hope to meet more of you. I will be available to answer your questions and concerns during my term. If I cannot answer them, I can refer them to someone in the ARRL that can.

The other thing that I will be doing is writing the Vermont *Section News* for QST magazine. This space is limited to 21 lines, so I'll have to be brief!

# MAY MEETING AT WULFDEN

by Brian N1BQ

RANV's May meeting will depart from the usual format. Instead, we will meet in Underhill Center at the QTH of Brian, N1BQ and Sara, W1SLR, for a presentation and an up close and personal demonstration and tutorial of solar powered off-grid living.

*Wulfden*, our home, is a 2000 square foot log cabin completely off the grid. The power system stores DC power from a 1.2 kilowatt solar array in a 12 volt DC battery bank. This produces 10 kilowatt-hours of energy to power the house, water pump, APRS digipeater and weather station around the clock. DC-AC inverters supply conventional AC power for the lights, TVs, stereos, and the computer network.

For the meeting, we will start to gather at 5:30 for food and drink and hold the meeting around 7. RANV will be picking up the tab for hamburgers and hot dogs, fixings and drinks. Deserts and extras will be potluck. Please contact Brian or Sara at 899-4527 or n1bq@wulfden.org to let us know if you are coming for dinner and to coordinate food. Wulfden has chairs for about 12-14 people with room for a lot more if people bring their own chairs. If you can, please bring one or two folding chairs.

Wulfden is at 101 Harvey Road in Underhill Center. From Route 15, go to Underhill Flats and bear right at Big John's store to go to Underhill Center. You will go 3 miles on River Road and come to a stop sign. The road goes to the left and becomes Pleasant Valley Road. Harvey Road is 2 miles further, on the right. For detailed maps and instructions, either call the number above or go to [www.wulfden.org/nvqs/n1bq-qth.shtml](http://www.wulfden.org/nvqs/n1bq-qth.shtml).

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## HAMS NEEDED FOR NCAA BIKE RACE

by Paul AA1SU

RANV has been contacted to provide communications for a new event in Vermont. It is the *NCAA Bike Race*, and it will be held in Addison County on Saturday, May 11, 2002. That is between Hosstraders and the Dayton Hamvention. For logistical reasons, I turned the event over to the *Addison County Amateur Radio Association*. They are much closer to the race-course, and they needed an event like this to keep the club up on their operating techniques.

However, their club informs me that they would like additional help from our club members. They will be using VHF, UHF, and HF for the 66-mile course which is a loop formed by Routes 17, 100, 125 and 116. The race is expected to take about 4 hours. Hams are expected to be in the mobile the whole time. If you would like to participate in this great new event, please contact John N1HLG at n1hlg@aol.com or 773-3091.

**NEXT MEETING:**  
**“Internet Repeater Linking Project”**  
**Tuesday, April 9<sup>th</sup>, 7 PM**  
**O’Brien Civic Center**

**HOSSTRADERS**  
**Friday-Saturday May 3-4<sup>th</sup>**  
**Hopkinton, NH**

**Mountaintop Hamfest**  
**April 1st, 2002**  
**Buell's Gore, VT**

**RANV**

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