



# Radio Amateur News & Views

The Official Journal of the Radio Amateurs of Northern Vermont

OCTOBER 2006

Vol. 16 No. 10

## PACKET RADIO – WHERE IT IS TODAY The October 10<sup>th</sup> RANV Meeting

In the mid 1980's Canadian hams petitioned for and received digital privileges. Soon thereafter U.S. hams received similar privileges, ushering in an era of wild expansion. The network grew so fast that half the activity on the air involved hams exploring the network across the continent and across the world. Bulletin boards sprang up everywhere and ham E-mail was all the rage. As the 1980's closed we saw the rise of the Internet. Previously only those connected to Universities and big research corporations or the government had access, now anyone one willing to spend \$30-50 a month could have access. Connection speeds rose rapidly and as they did, and as access became almost universal, ham packet radio slowly seemed to die out - but did it? Not quite - it is alive and well in a number of different forms.

At the October meeting, Brian and Carl will talk about what packet radio is, its rise and fall, and how it is still being used today. They will talk about *APRS*, *WinLink*, and other programs and show how a simple interface can get your computer connected to a radio to do packet, using your sound card in place of expensive packet equipment.

As always, activities kick off with dinner at Zacks on Williston Road at 6 PM. The meeting will be at 7 PM at the O'Brien Civic Center, 113 Patchen Road, South Burlington. Hope to see all of you there.

## RADIO AT CAMPOREE

The *Land of Champs Boy Scout Fall Camporee* will take place Saturday, October 7<sup>th</sup>. With all of the scouts present at this activity, it is a perfect place to show off amateur radio. Last year RANV participated in this activity and it was very popular and is on the list of activities again this year. This year, a group of hams from all of the various radio clubs are involved. Volunteers are still needed.

The event runs from 9:30 until 4:00 at the Ethan Allen Homestead in Burlington. There will be an HF station, VHF station and Fox Hunt exercise. If you can stop by to help with either activity it would be much appreciated. We can also use help in setup and/or teardown. Please let me know if you can help - John K1JCM at 899-2051 or [jmal@us.ibm.com](mailto:jmal@us.ibm.com).

## HOSSTRADERS

Time for the annual Fall Foliage trip to Hosstraders this Friday and Saturday, October 6-7<sup>th</sup>. 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 (*Warner Ave.*). The fest will be about a mile down on the left side. The trip is about 2 hours from Burlington.

The fest opens at 9 AM on Friday and ends 1 PM on Saturday. Exams will be given on Saturday at 9 AM. Admission is \$10 Friday before 3 pm, or \$5 afterwards. Sellers pay \$10 additional. There are plenty of hams and goodies on both days.

For communications, use 145.15 MHz into New Hampshire, then 145.33 and 146.895 MHz. At the hamfest, use the 146.67 MHz repeater to talk amongst our group.

## FOX HUNT OCTOBER 20<sup>TH</sup>

The final RANV Fox Hunt of 2006 will be held Friday, October 20<sup>th</sup> starting at 6 PM on the 145.15 Bolton Repeater. W1SJ once again jumps into the Fox Hole and promises to drive everyone mad.

This hunt requires preregistration before it starts. **There needs to be 4 hunter teams before it will commence.** No hunters - no Fox. Register via E-mail to W1SJ. The fox will be in Chittenden County, in a public accessible place. The Fox will transmit 10 seconds out of each minute and guarantees to offer of a lot of bad humor. First finder gets all the bragging rights and a free ticket to hide in the first hunt next year. Happy Hunting and Good Luck (*you will need it!*).

## OUR LAST RANV MEETING

by Carl ABIDD, Sec'y

The first meeting of the fall season was called to order at 7:30 by President Brian. He welcomed everyone back from the summer season. There were 14 members present.

The first order of business was announcements of upcoming events. First, Hosstraders Swapfest will be October 6-7<sup>th</sup> in Hopkinton, New Hampshire. Next, there will be the Scouting Camporee event on October 7<sup>th</sup> at Ethan Allen Homestead in Burlington. Help is needed with setting up a demonstration station for this event. Since it occurs at the same time as Hosstraders, Brian pointed out the need to plan ahead for these events. Bob W4YFJ announced that there will be a Simulated Emergency Test (SET) on September 23<sup>rd</sup>. Mitch W1SJ announced the fall fox hunt will be on Friday, October 20<sup>th</sup>. This will be the last one for the year.

Paul AA1SU volunteered to bring the snacks for the October meeting.

The topic for the night was Show and Tell. Four people brought something to talk about.

First, Carl ABIDD showed the 300-ohm twinlead 2 meter J-pole antenna that was used to work the International Space Station from the sailboat. This antenna was the subject of a winning entry in the recent QST "10 Best Homebrew Antenna Projects" contest.

Next, Jeff N1YD showed an animated GIF and other information on quartz crystals. He also had a "spinnny" thing that once spun like a top, would spin for a looong time.

Then Paul AA1SU showed a packet radio TNC and handheld combination. This was the cause of his learning about computers, DOS and to pursue using the Internet.

Lastly, Brian N1BQ showed a chip that could read a temperature probe, as well as read and decode an IR transmitter, such as you would

## DXIS...

by Ed N1UR

DXing at the turn of Fall is always fascinating. The daylight is rapidly decreasing and nighttime is extending. HF DX always gets interesting at this time of the year. I have been listening to Europe coming in LOUD on 80 meter by 7 PM at night this past week. All I have up in the air right now on 80 meters is my beverage listening antenna (*a 900 foot wire, 6 feet over the ground*). At 6:30 on Thursday, I was listening to a VK6 on 40 meters via long path (*I was beaming East*) working a number of U.S. stations quite easily. He was a solid 569 on my 2 element beam. Fall is fun for DXing. Take a listen, if you are interested.

Here at N1UR, my antenna work continues. I now have my second 70 foot tower up and the 40 meter beam and 10meter beam are on the tower. The rotor isn't turning yet. It appears to be a faulty control wire which I am de-bugging. Next, I am putting up 80 meter and 160 meter wire antennas. It is, after all, contest season.

The CQ Worldwide SSB contest is the last weekend in October (27/28). It is the BIGGEST worldwide DX contest by far. Over 10,000 individual DX calls are usually logged and 4,000 station logs are usually submitted. By Sunday afternoon and evening, some pretty darned good DX is usually begging for contacts - even in the General part of the phone band. Make a point to get on. You will have a blast and you might just catch the DX or Contest bug. If you hear me CQing, say hello. It is always fun to hear a familiar call.

find on a TV remote. These functions and more could be easily programmed via the PIC processor and associated hardware.

The meeting ended around 8:30, and the membership headed for the snacks.

## THE PREZ SEZ

by Brian N1BQ, President

Fall Hosstraders' is upon us and a few places have seen a frost already. Let me start things off by reiterating that you are running out of time to get your antennas squared away for winter. I frankly cannot think of any climate in the U.S. save for the Alaskan interior that is less forgiving to elevated metal objects than the Vermont winter. 'Nuff said!

Our September Show& Tell meeting was modestly attended and those of you who did not come missed some interesting presentations. Quite frankly I had hoped that meeting attendance would pick up as summer ends.

We have a full schedule for the fall and are working on next year's programs now.

Speaking of the Internet - I will put my periodic plug in for the RANV reflector. It is a way to get timely information with regard to the club. It is a place to find help for a project on short notice. It is a place to offer some gear for sale and have a select audience. It is a low volume list and it will not burden your E-mail system. You benefit and the club benefits. Best of all it's absolutely free!

### Contacting RANV

In Person: Meeting, October 10, 7pm,  
O'Brien Civic Center  
113 Patchen Rd, So. Burlington  
By Mail: PO Box 9392,  
So. Burlington, VT 05403  
By Radio: 145.15 repeater  
WW Web: <http://www.ranv.org>

President: Brian N1BQ 899-4527  
n1bq@wulfden.org  
VP/Tres Bob KB1FRW 434-2517  
mcamp@gmavt.net  
Secretary: Carl AB1DD 482-3878  
ab1dd@arrl.net  
Editor: Mitch W1SJ 879-6589  
w1sj@arrl.net

Please send submissions for the newsletter to the editor, W1SJ.

# WORKING THE ROCKS

by Mitch WISJ

During this past VHF QSO Party, I decided to try a mode which I have never tried before – Meteor Scatter. This mode is based on the fact that when meteorites burn up in the atmosphere, they leave an ionized trail which will refract VHF signals back to earth, thus extending their range by a great deal. In theory this works fine, but in actual practice, one has to wait for a suitable meteorite to burn up in the right spot and even then, the signal is enhanced for a precious short duration – often fractions of a second. In the old days, very elaborate calling/receiving schedules and HF liaison frequencies were set up in order to get a chance of hearing a few bursts containing enough information to form a QSO. This is certainly not a mode for rag chews! By choosing to operate during known meteor showers, ping jockeys can dramatically increase their chances of completing a contact. Meteor scatter is referred to as “working rocks”. The short bursts of signal are known as “pings”, and the hams who work this mode are called “ping jockeys”.

Over the years, I have heard some examples of this mode. In my days of DXing the FM broadcast band, I would be listening to a very weak station and then another station would pop right on top for a second or two and then go away. I’ve also heard signals literally pop out of the noise on 6 and 2 meters and pop right back in again before any call sign was heard. However, I’ve never considered the insanity it required to maintain meteor scatter schedules.

In the last few VHF contests, I’ve heard what sounded like industrial machinery running on the low end of 2 meters. This was nearby W2SZ using a digital mode called WSJT. This digital mode was written by Joe K1JT to optimize picking up the bursts from meteor scatter. I installed the program on my laptop and de-

coded a few local stations, but didn’t do much beyond that. This past January, I operated at K3EAR in southern Pennsylvania. After tremendous runs all evening, they threw the 6 and 2 meter operators off around 1 AM and switched to WSJT. And there, I observed them working people all over the country on closed VHF bands! I was starting to get hooked.

To be successful on meteors, one must make lots of skeds. This is generally not a CQing mode. So I logged into the pingjockey web site the week before the contest and put out my CQ there. I was able to set up 6 skeds – about 90 minutes worth, at 15 minutes per sked. In a contest, the meteor work is done in the wee hours because there essentially isn’t anyone left to work via normal terrestrial modes. It is otherwise sleep time.

Following the clock is essential for meteor work. The computer clock must be right on the money because these are synchronized schedules. The further west station goes first at the top half of the minute calling for exactly 30 seconds. Then the other station goes on the bottom half of the minute and this cycle repeats until a contact is made or you give up. All the time you are listening, the WSJT decoder is looking at the audio to see if something is there. Often, it is a flat line – nothing. But then, all of a sudden, a burst of information is there and WSJT tries to read it. The results may be gibberish, some gibberish mixed in with what appears to be a call sign, or in the best scenario, a near perfect copy of the call. When the call sign is copied, you switch to the report and when that is copied you send a series of “R’s” (*received*). Etiquette calls for all three of these elements to be in place before a QSO can be logged. Many operators are on the ping jockey website and can discuss the QSO before and after (*but not during*)

the contact. On the mountain, I had no internet, so we relied entirely on scheduled sequences.

My first try was on 2 meters with WE9Y in Michigan. I actually copied his call sign on 2 of the 15 minute sequences, but he didn’t hear me. He runs a kilowatt, I run 150 watts! A couple of other 2 meter skeds with other stations produced nothing. Others told me it was not a good night for rocks! Perhaps it was good for rocks in one’s head, but not ones which result in contacts. Later I had a 6 meter sked with N5SIX in Mississippi. That required switching radios and switching modes. The 6 meter WSJT has a distinct bee-boop sound compared to the industrial machine noise on 2 meters. On the second sequence, I saw a clear copy from N5SIX. On the next one I saw his grid square, EM42. In all, I had some level of copy on ¾ of the sequences and it appeared that he rogered my information. We spoke later via E-mail and he did indeed hear my 150 watts. All this took place while 6 meters was quite dead (*as it was all weekend long*).

I can’t wait for the next VHF contest to try this again, and just might do some of this from home. Mike N1JEZ tells me that he has many WSJT contacts using 150 watts and 11 elements on 2 meters, so a kilowatt or high location is not really needed. The working range seems to be around 500-2000 miles – too far or too short doesn’t work all that well. While there are meteorites hitting the atmosphere all the time, many more appear during the known meteor showers which take place throughout the year and this will certainly increase your chances of a contact. Consult an astronomical reference for dates and times.

So there you go! Tired of the boring contacts on FM and SSB? Try something really crazy. **Work the rocks!**

**NEXT MEETING:**  
**“Packet Radio - Today”**  
**Tuesday, October 10<sup>th</sup>, 7 PM**  
**O’Brien Civic Center**

**FOX HUNT:**  
**Friday, October 20<sup>th</sup> on 145.15**

**Elections next month!**

**RANV**

P.O. Box 9392

South Burlington, Vt 05407

**<http://www.RANV.org>**