PARTicles

The newsletter of PART of Westford, MA – WB1GOF

May 2011

Field Day Planning at it's best!

Upcoming PART Meetings/Events

May 7, 2011
- PART monthly breakfast. Westford Regency. 8-10 AM ($14 & &7)
May 14, 2011
- PART Apple Blossom Parade (comm staff meet @ WPD 0730-0800)
May 17, 2011
- PART Meeting. 7:30 -9 p.m. Club dues were due in January
June 4, 2011
- PART monthly breakfast. Westford Regency. 8-10 AM ($14 & &7)

Treasurer's Report

PART Treasury 16-Mar-2011 thru 18-Apr-2011

	General Fund	Repeater Fund	Checking Total
Old Balance	3726.67	880.71	4607.38
Income	175.00	6.00	181.00
Expenses	(290.56)	(774.90)	(1065.46)
New Balance	3611.11	111.81	3722.92

PART Membership Demographics as of 6-Feb-11

	Households (New + Renew)	Individuals (New + Renew)
Full ($25)	30 (5 + 25)	30 (5 + 25)
Senior ($15)	21 (1 + 20)	21 (1 + 20)
Family ($30)	7 (1 + 6)	15 (2 + 13)
Student ($15)	0 (0 + 0)	0 (0 + 0)
Associate ($10)	0 (0 + 0)	0 (0 + 0)
Grand Total	58 (8 + 50)	66 (8 + 58)

Latest new member: Anita/KB1VMQ (Hollis, NH)

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        ***** Dues are due *****
PART, P.O. Box 503, Westford, MA 01886-0015
        -or-
Meeting, Westford P.D., 7:30PM, Tuesday, 19-Apr. '11
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Monthly PART Breakfast

   Don't forget the monthly PART breakfast the 1st Saturday of each month at the Westford Regency Inn at 8 AM. The full hot & cold buffet breakfast costs about $14 (includes tip) per person, a cheaper, lighter fare is available for adults and children. **NOTE: PLEASE let the folks who are settling the bill with the staff know whether you had a full or continental breakfast!**

Upcoming Events

- May 14th – Apple Blossom Parade Westford. Need radio operators! info@wb1gof.org for more info
- May 15 – MIT Flea (http://w1mx.mit.edu/flea-at-mit)
- May 20-22 Dayton Hamvention, Dayton, OH (http://www.hamvention.org/)
- Field Day June 25/26 (http://www.arrl.org/field-day)
- Every Wednesday, 6 AM, Owl Diner Lowell – Breakfast
- Every 1st Saturday, 8 AM, Regency Inn Westford – PART Monthly Breakfast

Repeater Nets

146.955 Nets – There are a number of nets that are regularly scheduled on the 955 repeater.

- Sunday night at 2000/8:00 PM Sunday Night PART Net – every
- Sector 1C RACES Net – this net occurs the 1st Monday or every month (except when it is a holiday).Skywarn and ARES Nets – these nets are spontaneous when local conditions warranted.

442.450 D-Star Nets – There are a number of nets that are regularly scheduled.

- Sunday 8:00 PM Ozark Mtn D-STAR Net – Reflector 001C
- Tuesday 8:00 PM New England Amateur D-STAR Net – Reflector 010C

Public Service Events

Apple Blossom Parade – May 14th

The Westford Kiwanis will Sponsor the 43rd annual Apple Blossom Festival the week of May 11-15 2011 with the parade and crowning of this year's Apple Blossom Queen on Saturday May 14th 2011. We cordially invite PART to participate in the parade and festivities. Individuals and Organizations should gather between 8:00 - 8:30 AM Sat. May 14th. The Parade will kick off at 10:00 AM sharp rain or shine.

PART has supported this event for a number of years by assisting with parade route staffing at key locations for safety and operational services to the Kiwanis. Please consider volunteering this year for the event. Contact info@wb1gof.org if you'd like to volunteer or learn more about the parade activities.

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Think about this!

Here is a puzzler for you: What do the Icom 703, 706, 718 & 746 have in common with the Yaesu 450, 950, 817 & 857?

From the "net":

Because of the speed at which Earth moves around the Sun, it is impossible for a solar eclipse to last more than 7 minutes and 58 seconds.

In 2011, July has 5 Fridays, 5 Saturdays, and 5 Sundays. This apparently happens once every 823 years!

(It is perfectly true that July 2011 has 5 Fridays, 5 Saturdays and 5 Sundays. However, such a combination occurs far more often than every 823 years. The last occurrence was in July 2005 while the next occurrence will take place in July 2016. The message is just a revamped version of very similar- and equally erroneous - messages about August and October 2010. Just goes to prove, not everything on the net is true!)

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PART Field Day - 2011

Well, Field Day is only two short months away, but time flies and before we know it, it will be upon us. This year, Field Day will be held at the Concord Rod and Gun Club, who have generously offered us their fantastic facilities free of charge for the entire weekend (thank you, Joe!). Field Day is always the fourth full weekend of June, beginning at 1800 UTC Saturday (that's 2pm EDT) and running through 2059 UTC Sunday (4:59pm EDT). Field Day 2011 will be held June 25-26, 2011. (In past years, we have not stuck to these times too exactly, though...)

1. PRIMARY GOALS:
* Have fun
* Become exposed to new aspects of Amateur Radio
* Help expose others to new aspects of Amateur Radio
* Did I mention, have fun?

With this in mind, I would like to challenge every member of PART to either:
* Spend some time exploring an aspect of Amateur Radio you have not experienced in the past or use seldom on Field Day.
* Bring some aspect of amateur radio to others who would like to explore new modes/techniques.
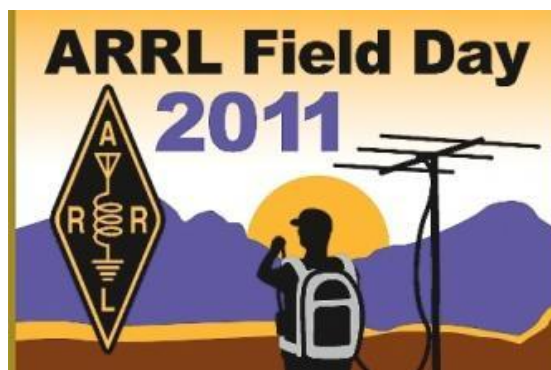
If you are primarily an HF phone operator, try digital modes. If you are CW, how about satellite (assuming we can set up such a station - see below)?

2. IDEAS:
This is *your* day as much as it is any one else's - so I invite you to be creative and think of ways to make this year's Field Day new and interesting. Just so long as the ideas are safe, inexpensive and cool - and you can help! Off the top of my head, here are some possibilities (not all equally cool, but designed to get you thinking):

Apart from the standard HF phone, CW and VHF/UHF phone stations:
* A satellite installation with computer tracking of various 'birds';
* An emergency station running off nothing but solar/battery/generator;
* A GOTA station which non-amateurs may use under the supervision of a control operator to try some hands-on communications;
* A D-STAR setup highlighting some of the unique capabilities of this technology;
* A miniature fox-hunt, in which a low-power fox is placed somewhere around the property, and some hunting techniques are demonstrated and practiced. We could give prospective participants some ideas on what to bring;
* Demonstration of competitive DX'ing - how its done, techniques, etc.
* QRP - lets see how far we can get on 1W!
* Microwave point-to-point demonstration, anyone?

Other possible activities:
* Technical talks (of course) - think of topics and of some unique or knowledge you can bring to others.
* Sunday Breakfast - CRGC have a full kitchen, so for a nominal fee, we could turn this into an event of some sort - perhaps a fund-raiser for the Repeater Fund?

* Incentives/prizes for participants who achieve certain goals, or win on certain criteria aimed at encouraging participation on Field Day itself.
* I recall seeing a CW/texting speed competition on TV once... How about a CW/cell phone texting speed challenge?

    Ok, so now I have got you thinking/dreaming, what else might we do? Please send your ideas to me and lets see what we can make of it. Remember, it must be safe and reasonably feasible with little cost (unless you are also volunteering to foot the associated bill). Of course, if you can help make any idea happen, then I really do want to hear from you! The club may be able to help with the purchase of some equipment if needed, but that will be decided on a case-by-case basis.
    We have plenty of space and a secure location, so lets make good use of it.

3. VOLUNTEER:
    Think seriously about becoming involved. Please mark Field Day in your calendar NOW - before you forget and double-book it with a visit to your in-laws! June 25-26, 2011.
    Ok, now that you have done that, invite your in-laws to come along.
    If you are in a position to demonstrate and/or provide amateurs with a hands-on experience with some unique area of amateur radio, please think of setting something up for Field Day, be it for one afternoon or the entire weekend.
    So far (so I am told), we have the following volunteers:

Assistant Field Day Chairman (and site coordinator): Joe KB1SSA
Food chairman: Rick W1RAG
Tool Box Talks chairman: Rich AB1HD
QSL chairman - Andy KB1OIQ
(Would you be so kind as to confirm to me and send me your e-mail address so I can coordinate with you directly, and thanks in advance!)

Other positions which need volunteers:
Publicity
Media (photos, videos)
Safety
Signage
Station Chiefs (for each operational station)
Antenna Coordinator

Equipment volunteers:
Antennas
Radios
Mics, headphones, laptops (for QSL logging)
Power supplies
Coax cables (with connectors, please)
Computer running Windows on which we can run satellite-tracking software, and a large monitor to go with it.

Break down volunteers:
Although most of the equipment and stations will likely be broken down on Sunday, some items (such as the antennas) may need to be taken down the following weekend.

4. PREPARE:

If you are bringing equipment, get it ready in good time, and test it out in the configuration you will use beforehand. This will help you find the bits you will need to set it up in good time (cables, power supplies, keys, antennas, etc.)

5. COME ALONG AND HAVE FUN

This is a two-day event. Bring your friends too! When you give your apologies for not being able to join your friends on other things that weekend, invite them along!

Thanks for your enthusiasm, and lets make this the most participated-in Field Day yet for PART!

73
Kim - K1ZA
k1za@arrl.net

Local Public Service News

Volunteering at the 2011 Boston Marathon

- *Alan Lewis (K1ALL)*

This was my fifth year as volunteer as ham radio operator at the Boston Marathon on Patriots' Day. Several other PART members also regularly contribute their time and skills to the Marathon. Each year I have had a different assignment – net control, medical sweep, bus gate controller, VIP Lounge (great food!) and, this year, medical bus communications. All of these positions are coordinated through the Finish Line Communications Supervisor (Paul Topolski W1SEX) who does a marvelous job of placing the nearly 60 hams who volunteered for finish line duties in 2011. Other Supervisors coordinate the amateur radio operations at the starting line and along the 26 mile course. It's a long day, starting with an "all hands" meeting at the John Hancock Building at 0645 and not ending until about 1700 as the stragglers continue to limp across the finish line at Copley Square.

The logistics of the radio operations for the Marathon are mind boggling, with dozens of frequencies and repeaters being employed and several bands utilized. Each function has a specific frequency (or, if required, frequencies) on which to communicate with dedicated net controllers who operate out of a trailer adjacent to the Medical Tent on Dartmouth Street. Virtually all of the Finish Line hams are in support of medical operations which monitor and treat any runners, and occasionally spectators, needing assistance. Some hams are also assigned to shadow race officials who might be needed to make on site decisions on any planning changes that circumstances require. Hams assigned to Medical Sweep duties handle communications to teams stationed throughout the Finish Line area which consist of two or three volunteer nurses, EMT's, or paramedics and four to five wheelchair "drivers" who ferry injured or exhausted runners to the medical tents for treatment. In addition, a ham is stationed on vans which circulate along the race route to pick up runners who are injured or drop out and deliver them to collector buses (yellow school buses) which take them to the Medical facilities at the Finish Line. Each van or bus also is staffed by one or more medically-trained volunteer. This all requires constant coordination and communication which the hams provide.

This year there was a distinct shortage of volunteer ham operators which left a number of stations unsupported. Even more disruptive was the fact that a few hams who had volunteered failed to appear, making last minute reassignments necessary. Because some assignment require special equipment (e.g. mag mount antennas for those assigned to vans and busses), these last minute changes can be confusion and disruptive. Fortunately, most hams take the reassignments in stride and with good humor and, in the tradition of amateur radio, make it all work.

Public service is one of the benefits of being an amateur radio operator and volunteering for one of more of the opportunities to assist the many deserving organizations that sponsor events throughout the year usually provides a very rewarding experience. Not only do you obtain valuable communications expertise, but you also serve the community. Whether it's local, such as the Apple Blossom Parade in Westford or the Patriots Day parade Concord, or it's regional such as the Boston Marathon or the Head of the Charles Regatta, volunteering to serve is a wonderful way to use your radio skills and to provide a needed and greatly appreciated service.

Member Contribution

Custom Panels for your Rig

- *Bill Principe, K1NS k1ns@comcast.net*

Laser printers make it much easier to create custom panels for home-brewed or modified equipment, but you still have to choose an appropriate medium. Paper self-adhesive labels are the most common choice, but they wear out with use, and may not stick well to metal, plastic, or painted panels.

Avery makes a line of labels called White WeatherProof™, made of polyester instead of paper. They take laser printer toner very well, producing dark, even colors. They have a permanent adhesive that sticks tightly to most surfaces, and the dull lustrous finish matches the panels of most rigs. Best of all, they do not seem to abrade or peel off after prolonged use, so your equipment remains looking new and professional. Avery White WeatherProof™ labels are available in a variety of sizes, up to 5½ × 8½" (2 per sheet), which should handle the most ambitious of projects. I use programs such as PageMaker, Illustrator or PhotoShop for precision placement of text and symbols, but there's lots of software that will do the job.

You can also use White WeatherProof™ labels to make great bumper or window stickers. I have had some on my car for several years, and they do not fade or peel even after many car washings and snowstorms.

PHOTO CAPTION: The panel of my Dentron tuner is brushed aluminum with a painted background, making the white letters on my label appear slightly brighter.

A visit to the hurricane Hunter P3 (N1QGE)

This SKYWARN message is to serve as a final reminder on the Hurricane Awareness Tour, P3 Hurricane Hunter Aircraft, which will be going to Otis AFB in Falmouth, Massachusetts this Monday May 2nd, 2011 with public tours from 230-530 PM.

On May 2nd 2011 the XYL and I visited Otis Air National Guard base to take in a display of Hurricane preparedness. The Hurricane Hunter P3 aircraft was the star of the show.

Coast Guard rescue teams were displaying their equipment as well as FEMA and MEMA with their communications teams. Altogether an interesting and informative day.

The Falmouth ARA provided
Communications for the event

The XYL gets a Coast Guard
Rescue Helicopter Flight briefing

The under belly C band radar

Laser Cloud density instrumentation

K2GXT HAB Launch Photos

- Brenton (KB1LQD) and Bryce (KB1LQC) Salmi

I have provided a link to the official highlight photos of K2GXT's first high altitude balloon launch on May 7th, 2011. These are the highlights of thousands of photos taken, reaching above 96,000 feet.The systems worked flawlessly during the entire flight, even after falling through a storm cloud and rain, the payload was soaked but through careful planning of this event the systems continued to work 100%. An overwhelming majority of the electronics and all other parts of the project were designed and built by the club, we even hand etched our own double sided PCB's. Many K2GXT members, including Bryce and I have invested hundreds of hours into this project as this was not a simple balloon payload. We used engineering practices and long term planning to create a a reliable and modular system that could be easily improved and reliable enough to guarantee the best possible recovery chances that we could control. Construction photos will be provided in the near future.

http://www.flickr.com/photos/62621941@N02/sets/72157626674875178/

Enjoy!

D-Star Related Member Contribution

The D-STAR Digital Voice Access Point ~ DXing with your HT

- B. Scott Andersen (NE1RD)

It is easy to be numb to it. Most of us are busy rushing here-and-there for work, for our family, and for all the other responsibilities either imposed upon us or voluntarily assumed. In case you have not noticed: this is a very exciting time to be a ham! When amateur radio began, people dreamed the future would have antigravity pads and flying cars. We did not get those things; we got something much more exciting instead: computers.
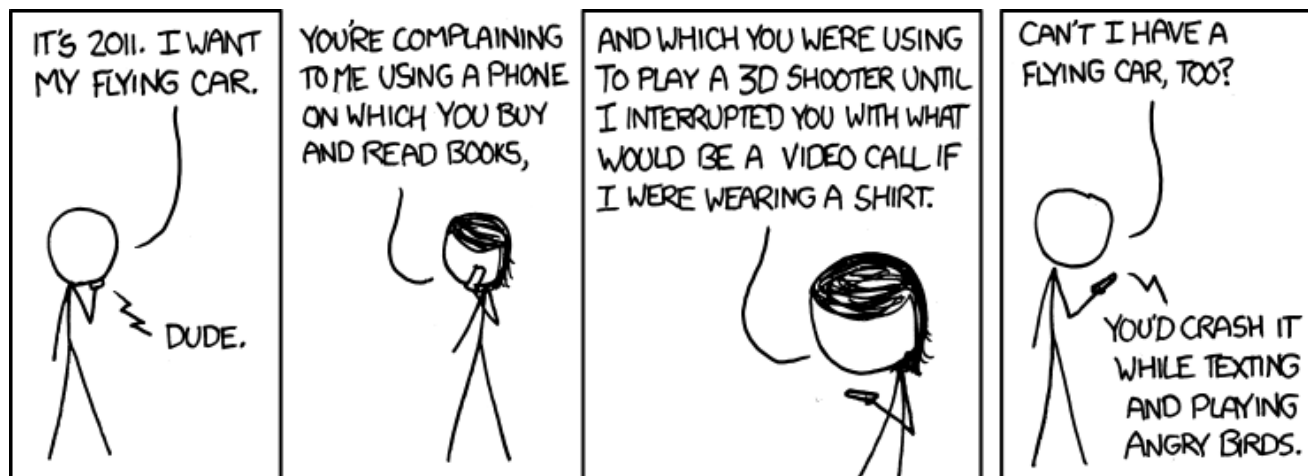
Drawing courtesy xkcd published under a Creative Commons license. http://www.xkcd.com

Buried in your modern HF radio, whether it be a RockMite from Small Wonder Labs, an Elecraft Kit, or commercially built radio, is a processor that does everything from providing support for iambic paddles to producing a spectrum display of band activity. With the advent of D-STAR processing power is now also involved in the encoding and decoding of artifacts that go over the air.

The word *artifacts* may seem unnecessarily tortuous but it describes what is transmitted and received by a D-STAR device. When a typical FM transceiver sends voice those sounds are captured by the radio and sent as an FM signal. Only the voice is sent; no routing information or other data is included during the transmission. This is not the case with D-STAR. A D-STAR device sends *data* that can include an encoded voice, GPS information, and routing data. In fact, other general data types can also be sent, but that is just gravy and not central to the point of the article. The interesting thread to pull on here is: routing data.

Routing, at least *automatic routing*, is relatively new to amateur radio and requires computing power to accomplish. It could be argued that a phone patch was "routing" information but in that case the intelligence was largely located at the telephone company switching office and the amateur radio gear was serving only as a "bridge" to the telephone network. EchoLink provides more than the phone patch technology in that the establishment of connections between repeaters is done by a user and through amateur radio technology. DTMF codes can be sent from a transceiver that can connect a local repeater to another in any of 162 different countries. Once the connection is established any audio sent on either repeater is streamed over the Internet to the other.

D-STAR takes this concept further in two ways: [1] connections can be made and routing established in a much richer way, even to a particular individual (by call sign), and [2] one can operate their own private repeater for under $250 that provides nearly all the features of a traditional repeater. We will visit that idea in a moment.

There are two questions to be answered when you key-down on the transmitter: what system do you want to receive your transmission and where do you want your transmission to ultimately go? A traditional FM HT only requires one of these questions answered and that is done implicitly by virtue of the selected frequency. The only means of disambiguating multiple receivers on the same frequency (such as the WB1GOF 2-meter repeater and the Barnstable repeater on the Cape) is with a sub-audible tone or similar mechanism mixed into the transmission. There is no way with an FM HT to indicate, "I want to talk only to WB1GOF." Such selection is possible and required with D-STAR.

The routing and target selection is done with text field settings within the D-STAR radio. There are four such fields that will be discussed below. They are:

- MYCALL
- URCALL
- Repeater 1 (often abbreviated RPT1 or R1)
- Repeater 2 (again, often abbreviated RPT2 or R2)

Many of us have programmed radios to have memory names show on our display when a particular entry is selected. That memory name is visible only to the user and is not transmitted. On D-STAR radios these text fields are in addition to the memory names and are very much used during transmission. The two fields have unfortunate names (in the opinion of the author): Repeater 1 and Repeater 2 (RPT1 and RPT2). What they really are is this:

- Which repeater do you want to hear your RF signal? (Repeater 1)
- How far do you want this data to ultimately go? (Repeater 2)

Typically, one would wish to have their local repeater hear their signal. Repeaters are named by call sign. But, what if the local repeater has several bands available (as we do in Westford)? A letter indicating the "port" (band) is also supplied to differentiate between the 2m, 440, and 1200 MHz repeaters. A "C" indicates 2m; a "B" indicates 440 MHz; an "A" indicates 1200 MHz. A fourth letter, "G", has a special meaning. The "G" port is used to indicate the "gateway" that forwards packets received over the Internet to anyone currently connected. So, if you wished to access the WB1GOF 440 MHz D-STAR repeater the string "WB1GOF B" would be used in the Repeater 1 field.

There are two other fields that are important that have not yet been discussed: MYCALL and URCALL. The MYCALL field should contain your call sign (possibly with an additional character to differentiate between your many radios). The URCALL field identifies the station you would like to contact. It could be a call sign of a particular ham or a general call to anybody by using the special string "CQCQCQ". Combined with the other two "Repeater" fields described above these fields provide a very rich mechanism for routing between you and anybody on the D-STAR network. Yes: you can call a specific person by call sign without knowing where they are. The D-STAR network has a lookup service that will automatically route your data/voice through the Internet to the repeater where that call sign was last heard.

That last letter (the 8th letter in URCALL field) can also be used to issue a command to the repeater. Here are some of the common commands:

- L ~ Link this repeater to another repeater or collection of repeaters. In this command the port selection for the target repeater or set of repeaters is set in the 7th character.
- E ~ Echo this transmission back to me (it records it then plays it back)
- I ~ Give me information about this repeater and where it might be linked
- U ~ Break the connection (unlink) between this repeater and the other repeater(s) that might have been linked to it previously

A couple of examples may help illustrate how these fields are used. Consider the following:

Goal	Repeater 1	Repeater 2	URCALL
Use WB1GOF's 440 repeater locally	WB1GOF B		CQCQCQ
Use WB1GOF's 440 repeater but allow anybody connected to it to also hear me	WB1GOF B	WB1GOF G	CQCQCQ
Use WB1GOF's 440 repeater to call AB1HD specifically where he was last heard	WB1GOF B	WB1GOF G	AB1HD
Link the WB1GOF's 440 repeater to K1HRO port C repeater	WB1GOF B	WB1GOF G	K1HRO CL
Unlink whatever is linked to WB1GOF's 440 repeater	WB1GOF B	WB1GOF G	U

As fascinating as this direct routing to a person might be, this also isn't the point of the article. (But it is cool, isn't it?!) Instead, return to the idea that a repeater can be connected to another repeater (or group of repeaters) anywhere in the world. Do you wish to talk with someone in Germany? Perhaps you would wish to connect to the DA5SAT repeater in Hamburg. Linking is easy (as shown above) and once the link is established you need only use the CQCQCQ URCALL to talk to anybody on that linked repeater.

Goal	Repeater 1	Repeater 2	URCALL
Use WB1GOF's 440 repeater to link to DA5SAT 440 repeater	WB1GOF B	WB1GOF G	DA5SATBL
Talk on the WB1GOF 440 repeater and be heard in Germany	WB1GOF B	WB1GOF G	CQCQCQ

In the first line of the table above the URCALL has the command in the 8th position (L ~ for "link"), the specific port of the desired repeater in the 7th position (B ~ the 440 repeater), and the call sign of the repeater in the first four to six characters with one or more spaces between the call sign and other letters to make the formatting correct. Just have a memory programmed into your radio with these values, key down for a moment, and the link is established. It is that easy!

Note that the only device you need to accomplish this is a D-STAR compatible radio. An HT properly programmed with just a couple of commands in memory slots will enable you to talk with hams halfway around the world. It gets more amazing.

In the above scenario the WB1GOF 440 MHz repeater had to be tied up with your linkage for this exercise. When the repeater was linked to another repeater in Germany it wasn't just for *you*; it was linked for *everybody*. Wouldn't it be nice if you had some way to do all this privately? You can.

A *Digital Voice Access Point Dongle* (or DVAP) is a tiny (smaller than a deck of cards) milliwatt-power repeater that can connect to a computer and provide nearly all the features of a big repeater like the WB1GOF D-STAR repeaters. This small device is connected to a computer running MacOS X, Windows, or Linux and provides the repeater and gateway capabilities needed to have a D-STAR capable radio connect to another D-STAR repeater anywhere in the world. (The computer must also be connected to the Internet, of course.)

I had a DVAP on my recent trip to St. Thomas in the US Virgin Islands and was able to connect back to the WB1GOF 440 repeater easily. My first contact was with the Pelham, New Hampshire Fire Department (my home town). They were testing their newly installed D-STAR radio in their facility. They seemed a little confused when I tried to explain I was on St. Thomas!

Having a DVAP is like owning your own private repeater—because it *is* your own private repeater. Though it only puts out a few milliwatts of power it has plenty of punch to allow you to get a few hundred feet away without dropping out. And, best of all, you can crank down the power on your HT to a very, very low level which can conserve battery power (and reduce heating of your transceiver). Everything described above (linking to another repeater, calling a specific ham, and so on) can be done with the DVAP just as easily as with a big repeater like WB1GOF. And, you can take it with you.

Things are a bit simpler when you use a DVAP to talk to other D-STAR users. Because it is your own local, private repeater we can omit some of the tedium with the Repeater 1 and Repeater 2 fields. You talk to the DVAP over a single 2m simplex frequency such as 146.55 and use only the MYCALL and URCALL fields. The MYCALL always has your call sign in it (that never changes). The URCALL field is used for commands and linkage. Here some of are my memories that I have programmed into my IC-92AD:

Memory name	URCALL	Description
DVAP I	DVAP I	Tell the DVAP to say, "DV Access Point Dongle" (shows it is working)
DVAP E	DVAP E	Tell the DVAP to echo my transmission back to me (a nice test)
DVAP U	U	Tell the DVAP to disconnect from whatever we are linked to
DVAP WB	WB1GOFBL	Tell the DVAP to link to the WB1GOF port B repeater (70cm)
DVAP WC	WB1GOFBC	Tell the DVAP to link to the WB1GOF port C repeater (2m)
DVAP CQ	CQCQCQ	Transmit my voice through the DVAP and to anything connected
REF010C	REF010CL	Tell the DVAP to link to the REF010C D-STAR reflector

A typical session goes like this: I pick up my IC-92AD HT with these memories programmed into them. I select the "DVAP I" memory and press PTT for a moment. The DVAP transmits back to me a voice that says, "DV Access Point Dongle." I now know the system is working!

I normally use the WB1GOF port B (70cm) repeater. To connect to this machine I just select the "DVAP WB" memory and press PTT. This sends the command (in the URCALL field) "WB1GOFBL" which tells

the DVAP to link to the WB1GOF port B repeater. The DVAP responds with a voice that says, "Remote system linked."

I am now connected to the WB1GOF port B repeater. I listen to see if the repeater is already busy. When it is a good time for me to talk I select the "DVAP CQ" memory and talk. This sends my voice (with the "CQCQCQ" command) to the place where we linked. I will leave it on "DVAP CQ" until it is time to disconnect.

Disconnecting from the repeater or reflector (a hub where many people or repeaters can link together) is always done with the "U" command that I happen to have programmed in my "DVAP U" memory. As with all commands, this lone "U" is in the 8th character position of that URCALL field.

The DVAP is $250 and available at Ham Radio Outlet and other retailers. Combined with a D-STAR capable radio this device allows you to communicate over the world. It isn't a flying car—but it is still pretty wonderful.

References:

EchoLink, http://www.echolink.org, an amateur radio-based connection and streaming audio technology.

DV Access Point Dongle, http://dvapdongle.com, a device for providing and RF to Internet bridge under local control of a single user.

DStar Linking Hints

- Ernie Bauer (N1AEW)

How are you doing with DStar? Are you working much DX or connecting with distant friends?

The other morning Rick (W1RAG) and I were chatting on GOF Port B. After we signed a call came in from a station in Chesterfield, England. He said he was calling N1AEW and using callsign routing. So likely what he did was he checked the DStar user's status page and saw Rick and I at the top of the list (most recent transmissions) and decided to call one of us. This could easily happen to anyone using the DStar repeater because unlike GOF lots of DStar repeaters do not allow full command (open machine) by their users, but do allow them to insert a call sign in their URCALL which will tell their gateway to "callsign route to where N1AEW last transmitted".

So what do you do to answer his call? While he is transmitting you press and hold the CS-RX (callsign receive button on lower right corner of the IC-91) keypad. This will transfer the stations callsign from the receiver to your UR Call memory. On your next transmission you give him a call and your signals continue to be repeated on GOF Port B but are also routed over the internet to Chesterfield England as well. All operators on both repeaters will hear your call and you can carry on a QSO with this station now.

What happens if someone else wants to join in? Let's assume W1RAG hears us talking and wants to join in. If Rick transmits with his UR CALL set to CQCQCQ (Standard repeater 1 & 2 for GOF B, GOF G) only people on the GOF Port B repeater will hear his call. What rick needs to do is to wait until he hears the UK station transmitting and to press and hold his RX-CS button. Then the next time there is a lull he can join in the QSO and people on both repeaters will hear his call and in effect he is in a round-table across the Atlantic!

When you are finished with the QSO you must clear the URCALL setting. If you don't and you transmit again, even the next day; your sigs will come out on GOF and be callsign routed to where ever that G3 station last transmitted. Clearing the setting is really easy. Just advance the memory channel one detent to the next memory and then return it to the GOF B CQCQCQ memory. The contents will be reset to your original memory channel setting and you are back on GOF port B normal repeating.

Lots of us are dedicating memory channels to hold commands for each DStar repeater we use. So in my IC-91 I have about 50 memories for commands on GOF Port B, another 50 for GOF port C, and another group for my DVAP, and so on. One other cool thing I tried out recently was to put some of the standard commands and links into the URCALL memories. On the IC-91 there are 60 URCALL memories. So I entered all the reflector links (eg. REF001CL, REF010C, etc), instead of putting them into a separate memory channel for each repeater. Before changing the CQCQCQ to a command please make a brief transmission with your callsign and indicate that you are about to setup a link. That tells everyone to standby while you execute your command. To use one of the URCALL memories here is how it works: Say you are sitting on the memory channel for GOF Port B CQCQCQ. Select the Menu button: then rotate knob to CALL SIGN: then right arrow; UR:CQCQCQ, right arrow, turn memory selector knob until you find the command you want in the 60 URCALL memories; then press the carriage return (5 key); now you should see the UR CALL, R1,R2, & MYCALL summery. If you like what you see, press the menu button to go back to normal screen. Press the transmit key for a second or so to initiate the command and on returning to receive you should hear or see text for an indication that the command was executed. Like a voice saying "Link Established", etc. Then step your memory selector up or down a memory and back to reset to the CQCQCQ state for that repeater memory channel. Then you are ready to use the link. I would still recommend that you install a hard coded memory with the U in the last position of the URCALL: which will unlink the system. Please execute the UNLINK Command when you have finished using the link.

Examples of call status screens on the IC-91:
Call Sign:

UR:CQCQCQ	UR:REF001CL	UR:G3BVU	UR: U
R1:WB1GOF_B	R1:WB1GOF_B	R1:WB1GOF_B	R1:WB1GOF_B
R2:WB1GOF_G	R2:WB1GOF_G	R2:WB1GOF_G	R2:WB1GOF_G
MY:N1AEW	MY:N1AEW	MY:N1AEW	MY:N1AEW

73's Ernie – N1AEW

ARRL News

ARRL Changes Insurance Plan Administrators

Effective May 1st, the ARRL has changed program administrators and insurance companies for its ARRL-sponsored Equipment Insurance and Club Liability insurance plans. The League has signed an agreement with Hays Affinity Group to serve as the program administrator to provide equipment insurance to its members who choose to elect coverage. In addition, Hays will also provide club liability insurance to ARRL Affiliated Clubs for those clubs that wish to take advantage of that program. Hays will be replacing Marsh Affinity Group Services as the program's administrator and will be introducing new policies for both plans, underwritten by the Hanover Insurance Company.

Members who are currently insured under the old plans are likely to receive a notice from Marsh, announcing the change. Be assured, if you currently have equipment or club liability insurance provided through Marsh Affinity Group, your coverage will continue through the end of the current policy term. But keep in mind that when your policy expires, your coverage will not automatically be switched over to Hays. In addition, beginning May 1, the ARRL will no longer be able to help you resolve any issues you

may have with Marsh, the insurance company or their claims paying agent. Our contractual agreement with them has been terminated.

If you wish to enroll in the new insurance plans, you must do so with the Hays Affinity Group. You can sign up online and even schedule your radio equipment online, too. With Hays Affinity Group, you can have all your radio equipment covered, even the computers, hard drives and printers in your shack. There are several provisions in the new equipment insurance plan that we believe are improvements over the old plan. Coverage for towers and antennas is now up to $15,000 of replacement cost, 50% more than the old policy. In addition, any newly acquired equipment during the policy term, up to a value of $2,000, will be covered until your next policy renewal (you must notify Hays within 60 days of acquisition). The low deductibles on the policy have also been retained. There is a $50 deductible for replacements and $25 for repairs. The coverage is as comprehensive as the old plan including fire, theft, lightning, wind and flood damage to your equipment. The new premium is $1.40 for every $100 of replacement value insured. This is slightly less than in the past.

The Club Liability insurance plan now provides the same general liability insurance for most clubs for only $200 per year (add $100 per year if the club wants to include non-owned or leased auto liability coverage). The standard limit for the policy is $1,000,000 per occurrence ($2 million in the aggregate) but if your club needs a higher limit, you can call the Hays Affinity Group for a quote.

To have your equipment covered under the new policy, you will have to enroll with Hays to continue coverage under an ARRL-sponsored plan. If you wish to switch to either of the new insurance policies now, you can either cancel your policy with Marsh and sign up with Hays, or wait until your policy with Marsh is due for renewal and then sign up with Hays for coverage. If you choose to cancel with Marsh before renewal, you will receive a pro-rated refund of any unused premium fees you have paid. For more information you can contact the Hays Affinity Group at:

Hays Affinity Group
Attn: ARRL Insurance Program
1400 Renaissance Drive, Suite 300
Park Ridge, IL 60068
Phone: (866) 819-0209
E-mail: ARRL@hayscompanies.com.

The ARRL has been providing opportunities for equipment insurance to its members for more than 25 years. We believe that the programs administered by Hays will offer ARRL members the coverage they need and excellent customer service.

Maine Honors Hams on World Amateur Radio Day

May 07, 2011, 12:44:00 PM

In a joint resolution released on April 14, the Maine House and Senate recognized the nearly 5000 licensed ham radio operators in Maine and their service to the state. The resolution proclaimed April 18 Amateur Radio Day in the state. April 18 was also World Amateur Radio Day, marking the 86th anniversary of the founding of International Amateur Radio Union (**IARU**).

"At times of emergency or nat...

Noted DXer Ben Stevenson, W2BXA (SK)

May 06, 2011, 3:47:00 PM

Ben Stevenson, W2BXA, of Colonia, New Jersey, passed away on May 5, 2011. He was 97. An ARRL member since 1934, Stevenson was also a charter member of the North Jersey DX Association (**NJDXA**)

since 1957, serving as its first president. Stevenson held Satellite DXCC #1, Mixed DXCC #6 (390 countries confirmed) and Phone DXCC #6 (388 countries confirmed).

Only missing two deleted entities -- French ...

The K7RA Solar Update

Friday, May 06, 2011, 1:40:00 PM

Currently, there are seven sunspot groups that are visible. But even so, the average daily sunspot number is down more than 7 points over the past reporting week (April 28-May 4), when compared to the previous seven days. The average daily solar flux was off nearly 5 points, compared to the earlier period. Sunspot numbers for April 28-May 4 were 71, 70, 76, 57, 51, 77, and 72 with a mean of 67....

Surfin': Two Weeks 'til Dayton

Friday, May 06, 2011, 1:25:00 PM

By Stan Horzepa, WA1LOU
Contributing Editor

This week, Surfin' gets ready for the Dayton Hamvention.

Two weeks from now, tens of thousands of hams will converge on the home of Orville and Wilbur Wright to attend ham radio's big show: the Dayton Hamvention®.

Among those converging on Dayton are Tom Medlin, W5KUB, and his fellow travelers, who will drive from Memphis with live streaming video covera...

Northern Florida Hams Respond to Aftermath of Alabama Storm

Wednesday, May 04, 2011, 6:50:00 PM

After the **devastating storms that swept through Alabama last week**, radio amateurs from the ARRLs' Northern Florida Section -- at the invitation of ARRL Alabama Section Emergency Coordinator Greg Gross, K4GR -- are making their way to Alabama to provide assistance.

"We contacted Greg and worked out a disaster operation assignment," ARRL Northern Florida Section Manager Paul Eakin, KJ4G, told the ...

DXCC Desk Approves 2011 Revillagigedo DXpedition

Wednesday, May 04, 2011, 3:52:00 PM

ARRL DXCC Manager Bill Moore, NC1L, reports that the 2011 4A4A DXpedition to Revillagigedo has been approved for DXCC credit. If you have any questions about this operation, please send an e-mail to the ARRL DXCC Desk.

[The ARRL Ham Aid Fund Needs Your Help to Support Radio Communications in Alabama](#)

Tuesday, May 03, 2011, 6:57:00 PM

The ARRL's Ham Aid Fund has been tapped to aid Amateur Radio operations in Alabama, following the **wake of destructive killer tornadoes that ravaged the state last week**. According to ARRL Chief Development Officer Mary Hobart, K1MMH, hams in Alabama have requested radios and antennas, since cell tower sites and repeaters have been damaged and are not yet back up. "The ARRL has already shipped fi...

[FCC Seeks to Raise the Fee for Vanity Call Signs](#)

Tuesday, May 03, 2011, 6:14:00 PM

The FCC released a *Notice of Proposed Rulemaking* (**NPRM**) on May 3, seeking to raise the fee for Amateur Radio vanity call signs. Currently, a vanity call sign costs $13.30 and is good for 10 years; the new fee, if the FCC plan goes through, will go up to $14.20 for 10 years, an increase of 90 cents. The FCC is authorized by the *Communications Act of 1934 (as amended)* to collect vanity call sign ...

[Georgia Hams Hasten to Help During Storms](#)

Monday, May 02, 2011, 7:20:00 PM

Hams in Paulding County -- located in Georgia's northwestern corner -- activated for the tornadoes and thunderstorms that swept through the South last week. According to Paulding County ARES® Public Information Officer Lee McDaniel WB4QOJ, the County's Emergency Management Agency invited ARES® members to gather at the county's Emergency Operations Center on the evening of April 26 to help provi...

[College Students Attempt High Altitude Balloon Launch](#)

Monday, May 02, 2011, 6:51:00 PM

The Amateur Radio club at Rochester Institute of Technology will be presenting display of modern technology and applications with ham radio at the university's annual **Imagine RIT** festival on Saturday, May 7. Members of the RIT Amateur Radio Club, K2GXT, have **constructed a custom High Altitude Balloon** that will be suspended below a weather balloon and launched up to 100,000 feet during the festi...

[Kenwood Donates HF/6 Meter Transceiver to W1AW](#)

Monday, May 02, 2011, 5:14:00 PM

Thanks to the generosity of Kenwood USA, W1AW, the Hiram Percy Maxim Memorial Station, now boasts a new HF plus 6 meter transceiver -- the TS-590S. "Hams from all over the world come to operate

at W1AW, the flagship station of Amateur Radio," said ARRL Business Services Manager Debra Jahnke, K1DAJ. "We are delighted that Kenwood's generosity makes it possible for visitors to W1AW to experience ...

Hays Affinity Group to Provide ARRL Members with Equipment Protection, Club Liability Insurance Plans

Monday, May 02, 2011, 2:17:00 PM

Effective May 1, 2011, the ARRL begins a new partnership to provide its ARRL-sponsored Equipment Insurance and Club Liability Insurance plans. The League has signed an agreement with **Hays Affinity Group** to serve as the program administrator to provide equipment insurance to its members who choose to elect coverage. In addition, Hays will also provide club liability insurance to ARRL Affiliated ...

ARRL In Action: What Have We Been Up to Lately?

Monday, May 02, 2011, 1:48:00 PM

Compiled by S. Khrystyne Keane, K1SFA
ARRL News Editor
k1sfa@arrl.org

This feature -- including convenient Web links to useful information -- is a concise monthly update of some of the things ARRL is doing on behalf of its members. This installment covers the month of April.

The FCC has given radio amateurs a **partial victory** in response to the ARRL's challenge of a rules waiver that permits the cer...

Lou Burke, W7JI, Wins April QST Cover Plaque Award

Sunday, May 01, 2011, 11:55:00 AM

The winner of the *QST* Cover Plaque Award for April is Lou Burke, W7JI, for his article "The W7JI Low or Lower Power 40 Meter Transmitter." *Congratulations Lou!* The *QST* Cover Plaque award -- given to the author or authors of the best article in each issue -- is determined by a vote of ARRL members on the *QST Cover Plaque Poll Web page*. Cast a ballot for your favorite article in the May issue today.

BP Pumps Up High School Hams

Friday, April 29, 2011, 3:07:00 PM

Seven Texas high school students received their first radio as a result of a generous donation from BP, one of the world's major oil refining companies. The students are enrolled in a new class offering of Telecommunications and Networking at Pine Tree High

Repeater Information

Repeater Interference

The 146.955 repeater continues to see interference to existing conversations as well as at random quiet times throughout the day and night. The repeater interference committee needs your help in collecting data. If you hear any type of interference, please report the following info to "**repeater**" at "**wb1gof.org**":

- Time: When did the event happen?
- Observing location: Where were you? Were you mobile?
- Frequency: Input only (146.355 MHz)
- What you heard: Voices, tones, kerchunking or whatever.
- Signal strength: Either by ear (noisy, quiet or full quiet) or S meter
- Radio: To get an idea of the reporter's radio situation.

* Most important - what direction: How did you determine direction? This is the most essential piece of information. Even if it's an estimate as in "Roughly east" or "from the Northeast" it's useful. NEVER EVER reply or direct any thing to the sick person causing the interference. Because some of us have answered this person, he knows we are aware of him and that is what keeps him doing it. Also since you are communicating with a non IDing station you are operating just as illegally as he is. YOU ARE BROADCASTING! NEVER TALK ABOUT INTERFERENCE on air. NEVER

If you are interested in assisting in helping us identify the sources of interference, contact Terry-KA8SCP.

EmComm events and repeater use

Most everyone knows that the 146.955 repeater is used during times of emergency situations, drills and exercises. Skywarn and the monthly RACES drills are the normal events.

So what does this mean to those that are just looking for regular QSOs with other users? It means that if you are in a regular QSO and there is a significant weather situation that has been getting press/air-time lately, you can expect that if severe weather develops in our area, the folks from Taunton-WX1BOX may interrupt a QSO and ask anyone on frequency what may be happening weather wise. The BOX operator will probably ask for specific information, hail, wind damage, property dame from lightning or wind, etc. Please give him the information he needs or tell him that you've not heard of any such activity. You don't need to tell him it is sunny in Nashua!

There may come a time when an unexpected emergency situation arises. These will significant events that may affect life and property. This is where ARES/RACES activity may step in. Usually an NCS will interrupt a QSO and announce the situation and ask for a QSO to cease or to be "aware" of the possibility of priority calls/traffic. Please make sure you leave breaks between transmissions so stations with traffic can get in between QSOs. If there is enough traffic, it may be necessary for your existing/interrupted QSO QSY to another frequency. You should use your best judgment or check with the NCS on what he feels is best.

If you have any questions, please feel free to correspond with either Hugh-N1QGE (Westford RACES Officer and Skywarn NCS) or Terry-KA8SCP (regional RACES Officer and Skywarn NCS) . They will be more than happy to talk about these programs with you.
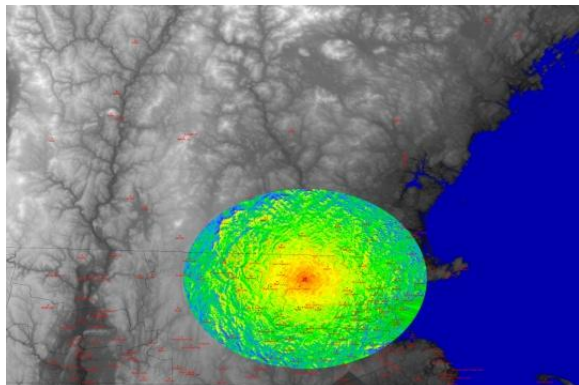
New additional repeater info is now available on the PART website. Check out the links to the summit information as well as coverage and plot plans maps for the WB1GOF repeaters. Also our PART/WB1GOF Forums are found at http://wb1gof.net/forum/

PART Gear

The PART Quartermaster has lots of great PART-ware for sale including hats, mugs, and shirts. You can get information how you can obtain your PART-ware at the monthly club meetings.

Club members are also encouraged to obtain an official PART badge from The Sign Man (http://thesignman.com/clubs/part.html) PLEASE NOTE: There is a new PART badge available if you'd like to order one. Price for badge is $15 which includes shipping and handling.

EmComm

RACES – The WB1GOF 146.955 repeater is used on the first Monday of every month (except federal/state holidays) for RACES starting at 1930 local time. If you are interested in being part of the local emergency communications team in your community, feel free to contact any of the following folks:

Terry Stader – KA8SCP, MEMA Region 1 RACES Officer
Hugh Maguire – N1QGE, RACES Officer, Town of Westford
Bill Ohm – W1OHM, RACES Officer, Town of Chelmsford
- We need radio operators that can pass messages on to the local emergency management directors in several towns in northern Middlesex County.

Skywarn - The WB1GOF 146.955 repeater is also used for reporting significant weather events to the National Weather Service from our local spotters. We expect to have a local Skywarn training class in 2010, more information as it becomes available. You can provide valuable information even if you have not attended one of the training sessions. Listen to the Skywarn Net Control Station for reporting criteria, when you have information that qualifies, please advise him with your report.

Situational Awareness – Recently, the Massachusetts Emergency Management Agency has asked the Amateur Radio community to provide situational awareness and disaster intelligence information within your local community via RACES, ARES and/or Skywarn stations. Significant events such as widespread power outages can be reported and by agencies such as MEMA to evaluate the scope of a blackout for example. Initially, you should try and contact RACES or ARES operators on the Westford 146.955 repeater to pass this information. More on this new program will be forthcoming.

PART Sunday Night Net – The PART Net each Sunday night is an IMPORTANT part of our regional EmComm function. With each station that checks in from the surrounding communities, we test our ability to communicate vital information to the ham radio community. Sure we announce club info but we can also communicate regional disaster news and serve as a "hub" for news of situations in our communities. The repeater is on a generator, so even if we loose power in the region, an HT with a supply of batteries will reconnect you to other local hams.

PARTicles © 2010, a publication of PART of Westford, MA – WB1GOF

This month's editor: Terry Stader – KA8SCP

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Contact us at: info@wb1gof.org