Bulkley Valley Amateur Radio Society

Affiliated with Radio Amateurs of Canada

Hazelton 146.80, Smithers 146.88 and 444.9 (79.7Hz tone), Houston 147.06. IRLP 147.33, APRS 144.39 (no tone). All repeaters, except as indicated, require 100Hz access tone. See www.pgarc.org for wider network information. BVARS membership is open to all interested persons, licenced or unlicenced.

Newsletter – Spring 2011

(Editor: Doug Steventon, VE7EPT)

BVARS Officers/Directors:

President: Bob Haslett, VE7CE
Vice-President: Rick Friesen, VA7RDF
Secretary/Treasurer: Doug Steventon, VE7EPT
Director: Gary Lobley, VE7LCP
Director: Brian Butler, VA7BBG (formerly VY1BB)
BVARS Email: ve7rbh@rac.ca

Society News

Some Upcoming Dates/Events of Note

May 22 (tentative): Spring BVARS meeting
June 25-26: Annual Field Day with Prince George ARC (McBride area)
July 1st weekend: Terrace Hamfest (details coming)
July 10: Annual Tyhee Lake Triathlon (we provide communications)
Various Dates (TBA): Repeater upgrade/maintenance trips
August: Submit grant applications
September 3 and 4: Northern Net meeting (Riverside Park)
Every Sunday at 09:30 is the VHF Net

The BVARS is an affiliate club of Radio Amateurs of Canada (RAC). RAC (www.rac.ca) is the volunteer-run national organization that represent our interests to Industry Canada and internationally. RAC provides many services (including the *callsign@rac* email address) and publishes TCA (The Canadian Amateur, an informative magazine). The BVARS directors encourage you to consider joining RAC.

The BVARS needs liability insurance for its amateur radio activities and to hold its own repeater site tenure. RAC provides this at very reasonable cost to affiliated clubs. They have had to change insurance companies and revise the fee structure for 2011 (RAC only breaks even on the insurance program). The cost of the insurance differs with the number of our members that are also RAC members vs. not RAC members. To be covered individually (no additional cost), RAC members must now also be members of an affiliated club (i.e., insurance is only available

through an affiliated club). The cost for 2011 turned out to be $344 vs. the $250 we originally estimated.

The Directors emphasized at the last AGM the need to consider restructuring our annual dues (presently a mere $5). To cover the cost of basic Society operations currently requires about $500 (Society Act annual report of $25, insurance of about $350, and Hydro of $125) or about $25/member (assuming 20 members). Each non-RAC member (about half our members) costs an additional $10 for the insurance (except for students), meaning we lose money for each new non-RAC member we recruit. We want to keep dues down as much as possible, but a break-even dues level would be something like $20 per RAC member, $30 per non-RAC member. Funds raised from other activities would then go to projects. This is great value for the radio system we maintain and the $10 million liability insurance for your radio activities. This is presented here as food for thought, and prior to the next AGM (in the fall) the Directors would like the views of the membership on revising the dues structure.

Licencing Course and Mentoring

The BVARS is using a mentoring approach versus formal courses at present for those wishing to get their Basic licence. Students can self-study using the excellent on-line course at www.emergencyradio.ca and we will arrange mentors and tutoring sessions as needed. We also purchased two copies if the RAC Basic Licence Study Guide that are available as reference books. At present we charge $20 for the licence exam, which includes BVARS membership for the current year.

Public Service and Emergency Preparedness

The primary reason the Amateur Service maintains its spectrum allocation and gets grant funding for projects like our repeater network, is our contribution to emergency preparedness and public service. The BVARS works in affiliation with PERCS (Provincial Emergency Radio Communications Service).

'BC Shakeout'

The BVARS was a participating organization in the first ever 'BC Shakeout' earthquake preparedness drill, January 26th. We had great on-air participation by 13 of our members (37 volunteer hours). VHF and HF nets were called, contact made with the Terrace and Victoria PEP

headquarters, and test messages to emergency officials passed the WinLink2000 digital email system via HF, and by voice radiogram. Thanks to everyone who was able to participate.

'PEP Air' Exercise

VE7LCP and VE7EPT joined in a training exercise with the Northwest PEP Air group, April 16th. PEP Air is the volunteer air search group affiliated with Emergency Management BC. Unfortunately, the aircraft (piloted by Rick, VE7YJM) was weathered-in at Burns Lake, but we had a good 'table-top' session including demonstrations of our voice repeater system and APRS capabilities. Gary and I in-turn gained a better appreciation of what PEP Air is all about (and a nice lunch!). They were very interested in our capabilities, and we agreed to stay in closer contact.

PEP Air Table Top exercise (VE7LCP, front left). Computer in foreground displays tracked APRS stations.

Sunday Morning Net at 09:30

The Prince George club runs the Sunday morning (09:30) Northern BC VHF net on the repeater network. The net allows us to check operability of the linked repeater system. We can count check-ins as volunteer hours in our grant applications.

Member Happenings/Profiles

Bob Haslett, VE7CE, is one of our longest-serving (current BVARS president) and active members (when he is isn't fishing or riding his hog). He is known as the 'Voice of the Bulkley Valley' on the HF nets.

We would like to congratulate/welcome Mark Capewell, VE7MNV, who aced the exam (with honours) and is on HF CW already!

Hank Vandermeulen, VE7TA, is now back on the HF bands with his new "Balcony Loop" antenna he invented – ask him about it!

Bob (VE7CE) working at the top of his tower (photo by Mark Capewell, VA7MNV).

Repeater Upgrade Project

This summer is phase two of the upgrade. We have new VHF repeaters for the Houston and Hazelton sites, and a new link radio for Hazelton. We have also been invited by the Skeena Rebroadcast Society to move from our wooden shack at the Hazelton site into their more secure concrete block building next door. This will likely also mean putting up a short tower, as theirs is rather crowded. We have one new 4-dipole antenna array for either Hazelton or Houston. I suggest it go to Hazelton, and we use the 2-dipole array from there in combination with the existing 2-dipole array at Houston. We are waiting for road access to Hazelton and Houston sites so we can get started.

APRS Network

We are rapidly expanding the APRS network as part of the upgrade. It is quite easy and affordable to get on APRS! Check out http://aprs.fi/ (try ve7ept-1 or ve7hfy-9) and http://www.nwaprs.info/ for lots of info. There are also APRS smart-phone apps.

APRS is much more than just blindly reporting positions. It is capable of two-way exchanges of data (e.g., weather reports) and text messages. Exchange can be in 'real-time' between stations over RF, or via email and internet services.

One email system dedicated to ham use is Winlink, which includes a cross link to APRS (called APRSLink) allowing sending and receiving text emails via APRS (http://www.winlink.org/aprslink). You can send me a text email (keep it short!) at ve7ept@winlink.org putting //WL2K followed by a space at the front of the message subject line. I check it at least once per day.

Installing APRS (Automatic Packet Reporting System) digipeaters (digital repeaters) at the sites is part of the upgrade. We will need some antennas constructed for the APRS digipeaters (collinear verticals are a good prospect). I can provide antenna plans (or check out http://www.hamuniverse.com/2m440collinearvertical.html) to anyone willing to tackle this (counts as volunteer hours for our grant).

Message Centre (Club Station) Project

This project is to set up an automated station at Ranger Park (see last newsletter). We did not receive grant funds for this project, but can start with existing equipment. First task will be to move the APRS I-gate from Gary's house, then see about a HF digital messaging gateway there. Stay tuned.

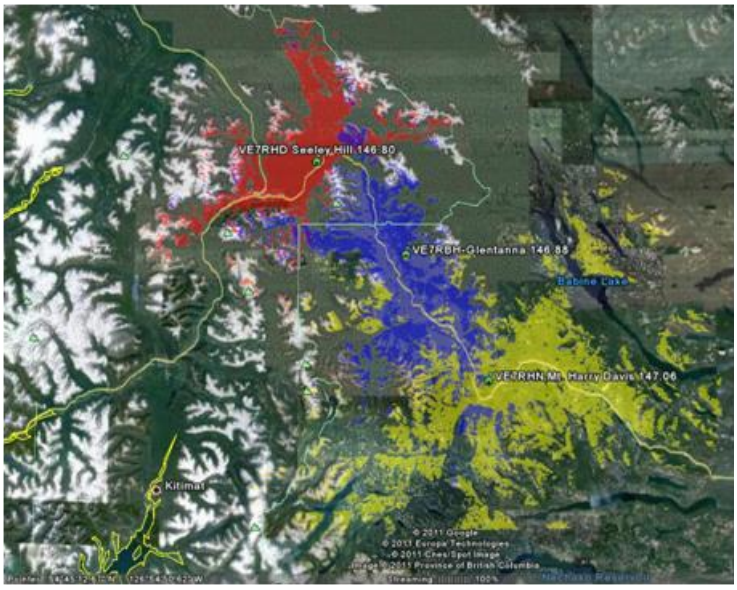
The Hi-Tech and Equipment Corner

There is much more to Amateur Radio than only the 'traditional' modes and operation (as much fun as those are). Amateur Radio these days includes integration with the internet and other computer-based activities/modes.

VHF/UHF Mobile Radio Coverage Prediction

Brian, VA7BBG, has been working with the free '**Radio Mobile'** software (http://www.cplus.org/rmw/english1.html) that can be used to predict radio paths and coverage using terrain maps and equipment installation parameters.

As Brian told me... "The application **Radio Mobile (free!)** is used to represent coverage and path calculations for VHF and UHF repeater systems. It is possible to produce an overlay image that can be used in Google Earth. The value of the software is in the 'interesting things' we can see. Things like areas with no coverage or overlapping coverage. The software will also give headings for aiming link yagis, etc." ....



This Google Earth image shows the predicted coverage of the BVARS VHF repeaters for a minimum S3 receive level for a typical mobile radio and omni antenna at ground level. The red is the Hazelton repeater, the blue is the Smithers repeater, and the yellow is the Houston repeater. The lighter blue is the overlap of the Smithers and other repeaters, the purple just above the hump of hwy 16 is Nine-Mile Mtn where Hazelton and Smithers strongly overlap, and we 'bounce' the uhf link signal around the corner. Just outside the predicted coverage area, expect spotty mobile coverage and/or use better antennas, portable relay repeater, etc.

It would be interesting to supplement this type of modeling with some field measurements of signal strength with lat/long coordinates from GPS (perhaps via APRS) when we are out and about, especially outside the main highway corridor.

Brian has offered to present the Radio Mobile software at a meeting, so look forward to that!