OLE VIRGINIA TIMES

Renew your OVH membership now!

February 2016

Next Meeting: Monday, February 15, 2016

PRESIDENT'S LETTER:

Hello to all and I hope this message finds you all healthy and well. The month of January seemed to fly by with not so unusual cold weather but which seemed quite cold because of how warm it was in December. Then we all had to put up with the Snowzilla snow storm which closed down Prince William County schools for a full school week, and made digging out and traveling around in the area quite difficult due to snow depths as much as 30" in some areas.

Nevertheless, time flows onward, and it's time again for club elections for the OVH's officers. We will be voting at the February meeting for new (or continuing) club officers and the new elected officers will be seated at the March meeting. Serving as club officer is a great way to give back to the club we all know and love.

It's still early in the New Year, I must remind all of the OVH members who haven't done so already, to please renew your memberships for 2016! To make this very easy to do, a mail in form is provided later in this newsletter. It is also possible to renew online. Go to the OVH Club web site (W4OVH.NET) and there to the OVH Membership Application tab to do that. No matter, how you do it, be sure to renew. We appreciate everyone's support as the Club does depend upon the modest annual dues each year from its members. You will need to be a member in good standing, with dues paid, to vote at the February meeting.

Did you catch the Frostfest Hamfest earlier this month in Richmond last weekend? Several carloads of OVH members always goes there. If not, there's the Vienna Wireless Winterfest scheduled for March 20th in Annandale which is close by and very easy to get to. Also during the weekend of March 19th and 20th, the Virginia QSO Party will take place! That provides a good excuse to get on the air, and there is always a lot of activity on the HF and the VHF/UHF bands.

As always, if there is any subject that you as club members would like to

Ole Virginia Hams Amateur Radio Club, Inc.
Post Office Box 1255
Manassas, Virginia 20108

The OVH ARC regular monthly meeting is at 7:30 p.m. every third Monday which is held in the Main Conference Room in the Manassas Public Works Building, 8500 Pubic Works Drive, Manassas, Virginia. Members, prospective members and other interested persons are invited to attend without obligation. Local information can also be obtained through the OVH's FM repeaters on 146.970-, 224.660-, 442.200+ and 443.500+ MHz. The OVH's two D-Star repeaters on 146.865- and 442.5125+ MHz are temporarily off the air due to maintenance work beyond the OVH's control. Up to date information about OVH activities and its meetings is also available during the OVH's nets on its FM Repeaters each Thursday night at 8:00 p.m. or on 80 meters (3710 KHz) LSB each Sunday night at 7:00 p.m. (8:00 pm in Summer) or through the OVH's web site at **http://w4ovh.net**

Articles and quotations in the OVH Times newsletter may be reprinted if credit is given to the OVH ARC and any other noted source. Proposed materials for publication including pictures, articles, letters to the editor, classified ads, notes about specific errors, complaints or the like are solicited from all readers. Forward such items to the OVH Times Newsletter Editor: PAUL@W4ZB.COM as soon as available at any time, but the cutoff deadline for the OVH Times each month (usually the second Monday of the month) may preclude publication/correction until the following month.

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give a presentation about, please let me or Jeff / WB6UIE know and we can get you on the schedule. At our upcoming OVH club meeting on Monday, February 15th, Ina Nenninger will present information about the George Mason Tri-It Now Races. As most of you know, even if you haven't participated directly, OVH has been providing communications support for those min-Tri events for years.

I hope to see you all at the upcoming OVH meeting, 7:30 pm at the Manassas Public Works, 8500 Public Works Drive, Manassas, Virginia on Monday, February 15, 2016.

Keep the thoughts and ideas coming to me at: N7QLK@ARRL.net.

73   Wayne   N7QLK

Sunshine Corner:

Happy Birthday to all of our club members celebrating in February – Roland / WB4NWG, David / W5DRR, Scott / KK4GWU, Gavin / KK4MXT, Stephen / KK4UZC, Patty / KI4FQF, Norman / KK4HDL, Art / W1CRO, Branch / KI4KEX and Katie / NoCall!

Well I guess we have to give the weather forecasters credit for having an accurate forecast for the Snowzilla "blizzard." I hope everyone was safe during that storm in January; that electric power stayed on for almost everyone during the storm made it a lot easier to take.

Please send some good thoughts to Steve / N4OGR and Jan / KE4TMW, Steve landed in the hospital for a few days.

I am very sorry to report the passing of OVH member, Emmett "Doc" Greenleaf, K2DJG, on January 28, 2016. He became re-licensed and revived an intense and very active interest in ham radio a few years ago, attending many OVH club meetings and events despite his physical difficulties. We will always think of Doc whenever we hear one of his oft repeated sayings: "Knowledge not shared is lost!"

Also warm wishes for a speedy recovery for Megan, Wayne N7QLK's daughter, who recently had an unexpected back surgery.

Ken / KJ4VTP is now home again after an unexpected hospital stay.

Thank you to everyone that attended the sale at Alan's WA2GTT(sk) residence, Alan's family was very appreciative for the turnout from the club, and most of his radio and electronics related items have been sold. Those items that weren't sold will be offered at the estate sale table during the Manassas Hamfest in June.

Thank you to David / KD4DEE for the CERT program at our January meeting. David's presentation was informative and well received.

Special thanks to our OVH club officers for the past year: Wayne / N7QLK, Clarence / K4CNM, Byron / AK4XR and Terry / KC4DV for all of the work done during a very busy and successful year. It will election time again at the upcoming meeting!

Congratulations to John / KG4NXT on his recent retirement; no more hassles of commuting and hopefully a lot more ham radio activities in the near future!

Hamfest & Field Day planning meetings are well under way but it's not too late to participate in the planning. Contact Terry KC4DV for Hamfest and Byron AK4XR or Ken KD4VA for Field Day.

Be sure to check in on the Thursday night net, see http://w4ovh.net "Nets" tab for details. Please email me with your news at kg4tvm@hotmail.com

73   Theresa   KG4TVM

Minutes of the Ole Virginia Hams Amateur Radio Club Meeting January 18, 2016:

Our OVH club Vice President, Clarence / K4CNM, called the meeting to order at 7:30 pm. The meeting was held at the Manassas City Public Works Building in Manassas, Virginia.

After the Pledge, all present stated their names and call signs. There were 28 OVH members and 4 guests present.

Presentation with slides, etc.: CERT by David / KD4DEE.

BUSINESS MEETING

Minutes from the December meeting were sent out in the January OVH Newsletter. Motion to accept November's minutes as printed by Butch / W4HJL; Al / KB4BHB seconded the motion. The motion passed.

Treasurer's report –Terry / KC4DV gave the report and reminded everyone that dues for the 2016 OVH Club Year are now due and can be paid during or after the meeting, via a mail-in form on the OVH's web site at W4OVH.NET or via online using a link on the club web site. Motion by Terry / WA5NTI, to approved the Treasurer's report as presented. Stuart / W4PR seconded the motion. Motion passed by vote of all members in attendance.

Membership –There were no new membership applications this month. Luther KJ4FDK,made a motion to vote in Chris Nelson / W0EU who was read in last month. The second for the motion was by Ken / KD4VA. The motion passed.

ARES – No report.

Repeaters - The new equipment shed at the Mt. Pone site has now been set in place. The next steps will be to get the shed insulated and get electric power into it, and then is to get the D-STAR repeaters and antennas back up and running. All that will probably take a few more months.

Training- Mark / WA4KFZ will be using a tablet for drawings shown with the projector for his next license training class which has not yet been scheduled.

Scholarship- No report

Hamfest – The 2016 Manassas Hamfest date has been finally set for Sunday, June 19, 2016. Due to the change, the Quicksilver vendor will be there. Jeff / WB6UIE volunteered to be the program coordinator this year. There was some discussion and a motion was made by Bob / K4HJF to try and schedule the 2017 Manassas Hamfest on the first Sunday in June in

2017, seconded by George / K4GVT and motion passed. The next Hamfest planning meeting will be in February. Keep an eye out for it on the reflector.

Field Day- The OVH will have its joint OVH/ARRL Field Day at the Nokesville Park again this year. The application to the park has been submitted. Assignments are being made. The next Field Day committee meeting will be in February, one week after the Hamfest committee meeting. Contact either of the co-chairmen: Byron / AK4XR or Ken / KD4VA for more information or to participate in planning, etc.

Sunshine Corner – Theresa wished all those with birthdays in January a Happy Birthday. This coming Saturday, January 23, 2016, there will be an open house at Alan's (WA2GTT) residence to sell his radio and electronic equipment and tools. Thanks to John / KG4NXT, Bob / K4HJF and Al / KB4BHB for inventorying and cataloging all the tools and equipment.

JOTA- no report

Web page – Paul / W4ZB reported all is working well. A question was raised by Terry / KC4DV about updates which are needed on the "public" club members page at W4OVH.NET ("Club Members" tab) which currently lists several individuals who are no longer active OVH members. The "public" members list page only lists first names, callsigns and email addresses and has not been updated in quite a while; however, that page remains on the web site so that non-members seeking information about the club can see a partial list of members who they may contact via email. Other very specific contact information for the Membership Chairman and OVH officers is also provided. The most complete and up-to-date listings of the current OVH members, with detailed contact information for each, are available to active (i.e., dues paid up) OVH members on the "Members Only" web page where a user name and password is required for access. That detailed member contact information can be accessed by First Name, Call Sign or Last Name for each listed member. Unfortunately, those "Members Only" lists are also only sometimes completely up to date because membership changes occur almost every month and updates by the club's Member Database maintainer to the "Members Only" lists are only made from time to time. Regular inputs from the Membership Chairman, the Treasurer, the President and the Secretary are needed to keep the Member Database completely up-to-date. A renewed effort will be made to update (and correct) the "public" and "Members Only" membership lists in February.

4-H – nothing new to report.

Old business Reminder about the STEM EXPO. Check the reflector for the latest date and time info.

New Business - Clarence / K4CNM - MARS COMEX is coming up again. The owner operator of the Mini Tri that we have been helping out with will be giving February's Presentation. Elections are next month. You need to have your dues paid for this year to vote.

Break

50-50 Chris Nelson / W0EU won the drawing and donated the cash back to the club for the scholarship fund. There was additional drawings for a calendar and book from Alan's (WA4GTT) estate. Ron / N4RDZ won the calendar and Mark / WA4KFZ won the book.

Theresa / KG4TVM made a motion to adjourn; Al / KB4BHB seconded and the motion passed.

Reminders about some upcoming events / calendar dates:

UPCOMING HAMFESTS:

Sunday, March 20, 2016 - Vienna Wireless' Winterfest at the close by George Mason University Annandale Campus in Fairfax County. OVH usually has a table at this Hamfest.

OVH HAMFEST COMMITTEE MEETING:

Early March 2016, evening in Manassas, date, time and place to be announced for the Sixth Hamfest Committee meeting for the June 2016 Manassas Hamfest which will take place on June 19, 2016. Check the OVH email reflector for more details, date, time and place. All are welcome to attend.

SPECIAL HAM RADIO EVENTS:

Third Thursday evening each month - AMRAD meets in McLean, Virginia - meetings usually consist of high level amateur radio related technical presentations on specific topics. Check the http://amrad.org web site for upcoming topics, and exact dates, times and places.

HAM RADIO OPERATING CONTEST EVENTS:

Saturday/Sunday - March 19 - 20, 2016 - The Virginia QSO Party. More information and all of the details at http://www.qsl.net/sterling/VA_QSO_Party/2016_VQP/2016_VQP_Main.html This is a fun radio contest event each year and a very easy for any of us to participate in.

The ARRL has a Contest web page at its web site, but a much more comprehensive, up-to-date, and long range planning contesting calendar with links to the rules for the various events is maintained by WA7BNM at http://www.hornucopia.com/contestcal   If you get the radio contesting bug or just want to find out what and how much is going on, that is a good place to look!

PUBLIC SERVICE / TRAINING / ARES EVENTS

Always check the online Calendar by David / KG4GIY at http://www.pwcares.org for the latest updates. David maintains a comprehensive calendar for upcoming events at that web site. Complete direct contact information for David appears on page 2 of this Newsletter.

Some Possibly Useful or Interesting Information

1. Improving Antennas. Do you know any active radio ham who is not interested in antennas? Improving or optimizing his or her antenna system is usually the most cost effective way to increase station performance so just about everyone has some interest. How does one learn how to improve a ham radio antenna system? There are lots of ways, some of them are: A. ask around or seek advice from a more experienced local ham (there are plenty of "experts" in the OVH), B. read about this subject in the available ham literature; this particular subject area has appeared in QST (and other ham magazines) since their earliest days and has been a separate topic in ARRL Handbooks (since 1926) and is the subject of the ARRL Antenna Handbook. The ARRL and other ham radio publishers also publish numerous books on how to improve antennas and antenna systems. More books and articles come out each year with new designs and techniques even though the physical laws of nature for electromagnetic radiation (e.g., as expressed by Maxwell's Equations) remain unchanged. C. While most ham literature about antennas is practical in nature and does

not require study of Maxwell's Equations or any learning of how to solve those equations to determine antenna radiation patterns, the more technically inclined and capable hams can also access the extensive and complex professional and engineering literature relating to antennas and antenna systems. D. Another approach is to explore and use Antenna Analysis Software to learn about and improve antenna systems.

 2. Antenna Analysis Software. Several very technically astute hams have developed and offer software packages which allows the much less technically inclined hams (like most of us) to analyze and accurately predict the performance of alternative antenna arrangements without actually first constructing and testing those antennas. To learn to do effective analysis of antenna configurations with such software, it will be necessary first to invest time and effort to read and study the user manuals, work through sample problems, etc. The premier ham antenna analysis software is EZNEC which has been available and under continuing development by Roy / W7EL for nearly 30 years. This is the most capable of the group and is well supported with an excellent user manual and book about it published by theARRL EZNEC can be downloaded at EZNEC.com upon purchase for a very modest price; a more expensive, very high level professional version is also available. There are also two main freeware ham antenna analysis software packages available: 4nec2 and MMANA-GAL. To find out more about those and where to find them for download, do a Google search with each package name. Both have freeware support communities which are active. If you are into antenna experimentation or want to improve your antenna system, be sure to try one of these software packages!

Recent Communications About Local BBHN (Broad Band Ham Network) Developments
[from the local BBHN mailing list (with minor editing) thanks to clear writing by good authors]

 Hi Clarence / K4CNM and local BBHN group (Feb. 6, 2016) from Ken / KE2N:

   I have not heard anything lately about the mesh group, so I thought I would "stir the pot." For those not following AREDN too closely, I would like to mention that, as promised, they have now released a new (beta) version that does the 802.11n protocol.

   This means - on single-channel radios - the max bit rate goes from 54 to 65 Mbps. If the radio is MIMO capable, it uses two channels to get as much as 130 Mbps in a standard 20 MHz BW while running mesh. Unlike standard 802.11n, this works on 10 and 5 MHz-wide channels (the data rate scales with the BW). There are some other features too (see: http://www.aredn.org/)

   One interesting development is AREDN support of the Ubiquiti "airRouter" - which is a modern incarnation of the venerable Linksys router. It has 5 Ethernet ports and a detachable antenna. The difference from Linksys is that it will run on channel "-2" and the "HP" version puts out +28 dBm, or ten times the power of the Linksys. I have seen it advertised as low as $35 (although that may be a misprint and is the low-power version).

   Anyway - most of the devices that AREDN support are for outdoor installation (intentionally) and they are not convenient to use indoors. This device would be nice to have on the desktop for your SIP phone and to provide a link to your outdoor units. I hope to have one next week to try out.

   N4SV and I have been experimenting with the tunnel feature. It gives a chance to see the applications other people are using and "play" in a large mesh without leaving the comfort of your house. I have a node here linked to two other networks and can "add you in" as a client to my node (just email me with the node name

and password you would like to use). The tunnel feature is built-into the AREDN load and only requires clicking on the menu item to activate it. While we are using the Internet now, the plan is to use the same feature on the backbone network

Lastly- I bought two tripods on eBay that are designed to work with those 4-foot camouflage poles that you find at every ham fest. They seems to work pretty well (see attached photo). In principal I could use two poles to make 8-foot legs for a really stable platform, although I have not tried that yet. This tripod has thumb screws to secure the legs and the center hole is sized to accommodate a 2 inch pipe, rather than a camouflage pole.

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Subject: RE: mesh update (Feb. 2016)   from Bill / N4SV

The airRouter is very interesting, thanks for the tip Ken. The data sheet seems to indicate it's built-in 5 port Ethernet switch supports the VLANs necessary for the DtD connections to other devices and networks, as well as for the AREDN tunneling application? A quick look on Amazon shows the low power unit at the $30 to $40 range, and the "HP" high power model in the $50 to $60 range. If the Ethernet switch supports the VLANs necessary for DtD and tunneling this is a pretty cost-effective option for AREDN use. My tunnel node consists of a NanoLoco M2 with a NetGear 5 port "smart" Ethernet switch. At best prices this combo is $70 to $80 or more, so for in-shack AREDN testing the low power airRouter is a real value.

In some other BBHN/AREDN related news, thanks to the work of John, KG4NXT, the OVH received a number of donated VoIP SIP phones, specifically the SNOM 300 phone. The number of phones is limited, so we'd like to provide one phone to each ham who is interested on a first-come-first-served basis until the supply is depleted. The great news here is there is no charge for the phones, on the condition they will be used for private educational/ham radio use, and not for any business purposes. If the demand doesn't exceed the number of phones available then we may be able to provide 2 phones to some users. These phones are SIP-compliant VoIP phones and have been fully tested and pre-configured to work on a RASPBX-based VoIP phone system. The phones run on 5 VDC only so are apparently not PoE capable, I haven't had time to test or research this. They need a 5 VDC supply at a minimum of 1 amp, although I have tested one on as little as 800 ma and they seem to work. Most of the phones will include a 5VDC wall-wart so additional power supply purchase should not be necessary.

If you received a copy of my document "Setting up a RASPBX VoIP System on BBHN Network" the configuration of these phones on the RASPBX side is identical to the Polycom phone. However the web interface and configuration parameters to the SNOM 300 itself is completely different. I plan on putting together soon an addendum document with specific configuration information, complete with screen shots, to set up the SNOM 300. Till that is available I can respond directly to anyone receiving one of the phones with questions about the parameters you will need to change to get them to work in your environment.

As an additional incentive to build interest in learning the RASPBX VoIP system, I plan on making available pre-configured SD cards that you can use in your own Raspberry PI. I'll be providing these SD cards along with any phones that this group receives, also at no charge, one SD card per ham also receiving a phone. That way all you need to provide is a Raspberry PI, any associated power supply, networking cables and Ethernet switches, and of course your own BBHN router, and you'll have a fully functional Asterisk-based VoIP/SIP PBX system. I am waiting on the delivery of the SD cards and will hope to have them configured and available with the phones, but only on a request basis.

We hope this will build interest in learning how to implement a VoIP solution on a BBHN or AREDN mesh network, and possibly lead to more folks getting into the many different application aspects of these ham-based networking solutions.

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Subject: Mesh - How do I get started?? (Feb. 2015) from Thad / KK4MMH

How can I get started on mesh networking? Are there any introductory classes planned in the foreseeable future? If not...what's a good place to start?

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Subject: Response to Mesh - How do I get started?? (Feb. 2015) from Bill / N4SV

Thad, other than asking questions to this group, I'd suggest your best bet is to start at the web pages of the two main groups involved in Ham Radio Mesh Networking. Look at http://www.broadband-hamnet.org/ and http://www.aredn.org. Without going into too much detail here, the BroadBandHamnet site is the originating group using inexpensive LinkSys WRT54G wireless routers loaded with modified firmware to use in either a Part 15 configuration, or under Part 97 Ham use to allow more power and higher gain antennas. The AREDN (Amateur Radio Emergency Data Network) concentrates on using the more robust Ubiquiti line of wireless routers with their more feature-rich but quite similar firmware loaded. The AREDN team, all originally part of the BraodBandHamnet group, broke off from that group to concentrate on more sophisticated networking schemes that the Ubiquiti line is capable of. However the Linksys WRT54G routers are still in wide use and can communicate directly with most of the Ubiquiti devises loaded with the AREDN firmware, and are widely available on on-line sites like Ebay for very reasonable prices (but be sure to check the BroadBandHamnet site before buying one as not all versions of the WRT54G are compatible).

That's a thumbnail view for now, you should check out both of the sites listed above for more detailed info. Watch this email list for news of upcoming BBHN/AREDN workshops held in this area. Good luck and enjoy!

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Subject: Ubiquiti NanoStation Loco M2 and NanoBridge M2 Routers on EBay (Nov. 2015) de Bill / N4SV)

For those who are interested in getting into the Ubiquiti Wi-Fi side of either BBHN or AREDN, I've spotted what looks to be a couple of pretty good deals on EBay. One is the Ubiquiti Nano Station Loco M2, 2.4 GHz device. These devices support MIMO so they are compatible with the latest technology in Wi-Fi, but still work on a BBHN mesh of Linksys devices just fine. These new units are selling for under $50 with free shipping on EBay. This is the same device Ken, KE2N was using as part of his AREDN demo/testing, and also the same device I used with my VoIP setup to connect to the workshop BBHN mesh. The units are quite compact, are weather proof for outside mounting if needed, and include the mounting hardware (a TyWrap, HI) and the PoE injector. I recently bought the same device on Amazon for a nearly $60, so the $47.79 price is quite a bit less.

For a device with a bit more gain and directionality, another seller on EBay has used Ubiquiti NanoBridge M2, 2.4 GHz systems for $60 with free shipping (thanks to Ken for spotting them). While they are used devices, and may well have weathering from being used outdoors, they are complete and functioning, according to the seller, with the PoE injector and mounting hardware. This device is also MIMO compliant. This is a small dish with an 18 dBi rating. I've ordered one, so by next weekend I should have a report on the condition and functionality. Note that I have no monetary interest in either of these devices, just pointing out a potential good deal. Good luck.

The "used" $60 Ubiquiti NanoBridge M2 that I mentioned from EBay arrived Wednesday afternoon, and if this device was ever used anywhere it certainly was not out doors long. The dish shows no signs of ever having any hardware on it, in fact all the hardware was new in a sealed Ubiquiti bag, as was the mounting bracket. The feedhorn might be ever so slightly discolored, but not so it would be noticeable. The system works fine, I have it running from my den with the AREDN Beta b04 firmware now, playing on Channel -2 with my NanoLoco and AirGrid. Obviously I can't say every one of these will be in the same shape, but it is better than described on Ebay, includes all hardware and the PoE injector, and is a well-made setup and clearly an affordable add on for anyone who wants to get into the Channel -2 game for AREDN, and have some additional gain and directionality versus the NanoLoco M2.   NNNN

R E M I N D E R

Yes, it is that time of year again!!!!! Below is the 2016 Renewal Application.

Please fill out the form below (for database), attach your check and mail to the address below or drop off at a meeting. Be sure to update all information, including your e-mail address, telephone number(s) and nine digit ZIP

MEMBERSHIP RENEWAL APPLICATION
"OLE VIRGINIA HAMS AMATEUR RADIO CLUB"
2016

NAME: _____   CALL SIGN: _____
ADDRESS: _____   Home Tel: _____
_____   Cell Tel: _____
Work Tel: _____
EMAIL: _____
BIRTHDAY: _____

ARE YOU PRESENTLY AN ARRL MEMBER? (YES/NO)
ARE YOU A VOLUNTEER EXAMINER: (YES/NO)
MAY YOUR TELEPHONE NOS. BE LISTED IN THE "Members Only" OVH ROSTER? (YES/NO)
WHAT IS YOUR PRESENT LICENSE CLASS? _____

Dues are now **$20.00** per year and payable on January 1, 2016. Dues for each additional family member living at the same mailing address are $10.00. Dues for a full time student at the college undergraduate or lower level [list school attended and grade or level: _____] are $10.00.

AMOUNT ENCLOSING: _____

NAME AND CALL OF FAMILY MEMBERS:

Name: _____   Call: _____
Name: _____   Call: _____

Return to: **Treasurer, OVH**
P.O. Box 1255
Manassas, VA 20110-1255