CAARA Newsletter

President's Corner

by Curtis AA3JE

For a month with no official meetings we sure are busy.

We have Thatcher Island, we have Essex Junior Triathlon, Gloucester Triathlon, Run Gloucester and the Hurricane Hubert drill (Humphrey? Hinkley?) all jamming up together this month.

Please do not miss the transmissions on 145.13 of the Thatcher Island group. They are hardy souls, doing battle with bugs, gulls, sand, sea, salt and sugar (actually lack of sugar last time). The island is a BLAST and lots of fun.

Thatcher Island will take place SAT and SUN 8/7 and 8/8 on HF and VHF

Essex Junior Triathlon will take place on this Saturday 8/7, at about 9 am.

Gloucester Triathlon will take place Sunday 8/8, at about 8 am.

Run Gloucester will take place on 8/22, again at about 8 am.

Remember to review your copy of the constitutional amendments, and show up for the annual meeting first thing in September.

The cool weather is coming and it's getting near time for a HAMFEST.   73, Curt

CAARA ANNUAL MEETING ON WEDNESDAY SEPTEMBER 15TH !!!!!

The Cape Ann Amateur Radio Association will hold its Annual meeting on wednesday, September 15th at 8 PM at the clubhouse on 6 Stanwood Street in Gloucester Mass. The Caara Board of Directors encourages as many members as possible to attend as this is the yearly chance for the membership to vote on the positions on the Board of Directors. This year has even more significance as the membership has the responsibility to nominate and vote in a new club President and Vice President as their terms come to an end as well as vote on a couple of Board of Director positions as some of the terms alternate and come to an end as well. This Annual Meeting takes on even more importance as we are going to hold a Constitutional Convention as well. During this process members will be able to have the chance to vote on some proposed changes to our club's Constitution. So mark your calendar and we hope to see you there as this will give us a chance to catch up on all the summer activites.   *Dean-KB1PGH*

Greetings to all all CAARA members,

One of the missions of the CAARA emergency communications group is to provide public safety communications for our local Cape Ann events. We have two upcoming triathalons and a new 7 mile run and those organizations have requested amateur radio operators to provide health and welfare communications for their events. So here is a perfect opportunity to volunteer and give back to your local community as well as play ham radio at the same time while learning some emergency communications skills during the nets that will be going on during these events.Here are the dates and approximate times

Saturday August 7-Essex Youth Triathalon starting at 9:30 am at Centenial Grove.

Sunday August 8-Gloucester Triathalon. The Triathalon starts at 7:30 AM in downtown Gloucester .

Sunday August 22- 7 mile Run Gloucester starting at the Boulevard and going around the back shore, start time is 8 AM .

Figure on showing up on station an hour before each event.

We are actively looking for help from our club members to help fill in the spots, if you can help us that day please e-mail me back at dburg101@aol.com and let me know.We need around 8 people for each event.   *Dean-KB1PGH*

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Welcome to CAARA:

CAARA, an ARRL affiliated club, operates the 2 meter W1GLO repeater on 145.130 MHz with antennas located on the Cingular tower in the Blackburn Industrial Complex in Gloucester Massachusetts. It has an average effective radius of 60 miles, and serves Eastern Massachusetts, Cape Cod, Rhode Island, Southern New Hampshire, and maritime mobile stations. CAARA also operates the W1GLO repeater on 224.900. The W1RK 443.700 repeater with antennas located in Magnolia is owned and operated by club member Ralph Karcher and it too is available for club use.

The Association is one of the few amateur radio clubs that has its own clubhouse. Located at 6 Stanwood Street in Gloucester, it includes a permanent HF station with rotating beam and vertical antenna along with a 2 meter packet station and 2 meter voice and 220 MHz transceivers.

Amateur radio exams are held on the second Sunday of each month at 10:00AM at the CAARA clubhouse. Anyone who is considering a new license or an upgrade, is welcome to test with us. There is no pre-registration necessary. Contact the head of our VE team Bob Quinn if you have any questions about monthly testing.

Monthly member meetings are held on the first wednesday of each month at 7:30 PM except for July and August.

Each Sunday evening at 9:00pm, the club operates a 2 meter net on 145.130. This is an open and informal net which disseminates club news and prepares operators for emergency communications work. All are invited to check into the net as club membership is not a requirement.

CQ Facebook 'fans' top 3500 mark

More than 3,500 Facebook users have signed up as 'fans' of *CQ* magazine on the popular internet social networking site. Plus, they represent a considerably younger group of ham radio operators than organized ham radio has been reaching through traditional means.

"According to Facebook's own demographics, the majority of *CQ*'s fans on the site are age 45 or younger," according to *CQ* Editor Rich Moseson, W2VU. "This is significant because it means we have opened up an important avenue of communication with these younger hams by making the effort to go where they 'hang out,' rather than expecting them to find us. This is essential if we are going to make sure that younger hams are connected to the mainstream of the hobby."

Facebook statistics also show that *CQ*'s fans are drawn from all over the world, with more than 20 countries represented and members in the U.S. accounting for only a little more than one-third of *CQ*'s Facebook fans.

CQ Amateur Radio magazine is the world's leading independent amateur radio publication, with readers in over 100 countries.

CQ sponsors more than a dozen amateur radio contests and operating awards, including the world's most popular participation sport, the CQ World Wide DX Contest, which has drawn more than 10,000 competitors in each of the past two years. Thousands of additional stations participated but did not submit logs.

HAMKITT STORE CLOSING ITS DOORS

Some sad news in the ham radio business world. This with word that the HAMKITT store in Des Moines, Iowa is closing it's doors due to poor sales. According to Terry Graves, K7FE, who is the Chief Editor, QRZ dot com, Joe Leto, W0IW, opened the Des Moines, Iowa retail business with the intent to provide local hams an amateur radio store to visit. He also had a web site providing online sales.

The ham store void in the area was an attraction for Joe to start his business. While it was well received by the locals, the poor economy caused reduced sales and made the venture unprofitable. According to W0IW the remaining inventory is still for sale and will be until he closes the door. To find out if he has what you need you can e-mail Joe to info (at) hamkitt (dot) com

INTERNATIONAL LIGHTHOUSE AND LIGHTSHIP WEEKEND

A tide of registrations for the International Lighthouse and Lightship Weekend. There are 340 lighthouses, some lightships and one time-ball tower registered so far for the International Lighthouse and Lightship Weekend on the 21st and 22nd of August.

The event now in its 11th year was begun by the Ayr Radio Club of Scotland. Now there are radio amateurs and lighthouses in some 30 countries involved.

The 300th registration this year came from Rainer Kledtke DO7RKL for the Westerheversand lighthouse in the northernmost part of Germany. A most famous landmark it stands 41-metres tall on a peninsula between the North and the Baltic seas.

Australia has been a strong supporter of this fun event celebrating the history of lighthouses. It has 53 registrations, just ahead of Germany on 50 and the United States some 40 lighthouses.

There's still lots of lonely lighthouses looking for the company of friendly radio hams to bring radio gear to them for the International Lighthouse and Lightship Weekend. To learn more or register a lighthouse visit the website at www.illw.net. (VK3PC)

ARRL SAYS APOLLO 11 HEARD BY HAM

The ARRL reports that a ham received signals from the Apollo 11 lunar astronauts 41 years ago. According to the League, in July of 1969, Larry Baysinger, W4EJA, independently detected radio transmissions from the Apollo 11 astronauts on the lunar surface.

Baysinger was both a radio amateur and an amateur radio-astronomer. His accomplishments were reportded by Louisville Courier-Journal reporter Glenn Rutherford in an article titled Lunar Eavesdropping: Louisvillians Hear Moon Walk Talk On Homemade Equipment. You can read more at www.arrl.org/eavesdropping-on-apollo-11. (ARRL)

A CLOSER LOOK AT THE BUDDIPOLE ANTENNA

As you saw in last months edition, Briggs AB2NJ and myself went outside to give my new Buddipole a test run.I thought I would take a few more pictures to give you a better idea of how it all gets put together from the picture where you saw me standing underneath the dipole configuration.In picture number 1 you can see the carry bag that the entire Buddipole comes in.It is a very heavy duty mesh long bg that can handle years of use. In the second picture you can see all of the contents that came out of the bag.I should say this-the Buddipole Antenna is actually a system so all of the parts you see did not come as a whole. I purchased many accessories to expand what I can do but I will get into that in another column. As you can see in picture two there is the tripod, the mast, the Budddipole Antenna Bag, the coaxes,the guying kit, the counterpoises, the Triple Ratio Balun and more.In Picture 3 you can see the Buddipole Antenna Bag which contains the antenna arms, the Versatee which goes on top of the mast, the adjustable coils and the extra long whips with the red tips on them. You can actually buy just this set and nothing else if you wish but I will get into that at the end.

Now that we have all the bags open lets put this portable antenna. In picture 4 we see the tripod which is made out of aircraft grade aluminum and has extendable legs which makes it 3 ft high total.In picture 5 we see the top opf the mast that attatches to the mast by going thru two sleeves and screws into place in two places for safety. This mast is the long version which extends to 16 ft overall so with the mast you get a total of 19 ft in height. This mast is also made out of aircraft aluminum and in the picture you can see how the mast extends with the twist tighteners so you can adjust the height of the mast to whatever you want plus it collpases to fit inside the bag for easy transport.In picture 5 you can see the "Versatee" which affixes itself atop the mast.You can see the

3 different colored holes that the banana plugs from the coax connectors fit into. Notice it has a top one if you want to construct a vertical antenna. The Versatee is made out of high strength molded UV resistant plastic and has 2 seperate side holes and one top hole so the antenna arms can screw into for either a dipole or vertical antenna configuration.

The Versatee is made out of high strength molded UV resistant plastic

As you can picture #7 we have the first antenna arm attatched to the Versatee as we construct one side of the dipole. The Buddipole antenna kit comes with two of these but I purchased two more and they can attatch to each other as to make the antenna physically longer for a wider bandwidth for the 40 and 80 meter bands. These antenna arms are very lightwieght as they are also made out of sturdy aircraft aluminum. In picture number 8 we continue to biuld the one side of the dipole as we attatch an adjustable coil to the end of the antenna we just put on. This coil is used to make the antenna resonant from 40 to 10 meters. Buddipole makes a larger coil that will work 80 meters as well. As you look closer to this picture you can see that you can adjust the coil by unscrewing that black coil clip up and down the coil as you se fit. You can also see that how the coil electrically connects to the antenna by that black banana clip that simply plugs into the coil. You will notice that the coil is marked in blue and black markers as it comes from the factory so as to give you a reference to where to insert the coil clip for the 40 and 20 MTR bands. Now as we move to picture # 9 we can see that I have attatched the black whip with the red tip onto the coil to fully construct one side of the dipole.The black colored heavy duty whip at the end can extend to 9.5 FT to make a wider bandwidth and is double crimped at the coil connection for extra support. One more is this, the regular Buddiplole antenna comes with only 5.5 ft whips so I purchased the longer ones which I highly recommend. Plus with these longer whips I can skip the antenna arms and the coils and attatch them directly to the versatee if I want to make a qiuck 10 or 6 meter dipole.

Well constructed coils for quick band switching.

Now since we have finished the dipole. Lets say you want to build a vertical for a lower DX angle. As you can see in picture # 10 all I did was disconnect the one side of the dipole and attatched it to the top of the versatee and now you instantly have a vertical antenna.You can see on the bottom of the vertical antenna and hanging on the versatee is the Buddipole Triple Ratio Balun which will help keep any RF from going down the coax in the lower bands such as 40 and 80 Meters.Actually you can use the balun on all bands except 6 meters and the balun actually makes the Buddipole Dipole sides equal in length because the Buddipole is really and off center fed dipole.In picture number 11 you can see a closer look at the 3 switch trpile ratio balun. This balun will work up to 100 watts and the entire Buddipole will work up to 250 watts.If you look to the right you'll see the counterpoise wire of the vertical. This counterpoise wire or radial comes in a nice kite winder and is 33 ft long. As you can see the end of the wire is a machined connection that goes into the side of the versatee just like the antenna arms do and you see how the balun connects to the versatee with those banana plugs we talked about earlier.As a side note a purchased a electric fence post to attatch the unwinded side of the counterpoise as it is recommended to keep it at least 3 ft off the ground. One qiuck way to tune the vertical is to get it close with the coil and then you can fine tune it by either lengthening or shortening the counterpoise. Now since we have done a dipole and a vertical now lets do a upwards 'V" antenna. The Buddipole Antenna system comes with a "Rotating Arm Kit" as you can see in picture 12. These extensions go directly to the versatee and attatch with two pins going into the little holes that you see on the versatee and then tighten with the black knobs to hold the antenna arms.

As you see in picture 13 is the Buddipole with the Rotating arm kit in the upward "V" posistion. You can also make a sloping downward "V" if you wish or you can make and "L" shaped antenna or a sloping dipole as well. Now that you have the antenna you want and you raise it up 19 ft you will have to guy it . As you see in picture 14 is the guying kit that comes with the long mast. You can see it uses the same kite winders as the counterpoises and the 3 metal pegs. The guying kit is attached to the antenna by a velcro strap that wraps around the mast and the 3 guy lines attatch with plastic clips.In the last picture you can see what I mean about the

banana clips at the end of the coax and if you notice the coax has rf chokes wrapped aoround it at the end to prevent feedback. You have the option of using this coax if you decide not to purchase the Triple ratio balun. What is not shown is the 6 Meter Beam kit which allows me to make the Buddipole into a 6 to 12 meter Beam if I want.

In the end the Buddipole Antenna System is a very versatile way to go portable. With all the options the price tag does add up but the construction quality is top notch. The Buddipole is definitely not for the "Plug and Play" minded, it is more like a giant "Erector Set" but this antenna will make you learn more about antenna and DX theory than you can imagine.I would also highly recommend using an antenna tuner as it will make

your life easier for experimenting with all the antenna designs and options that the Buddipole gives you. There is also a book written entirely on different Buddipoile set ups which you can buy at the Buddipole website which will help you use the antenna.I will write more about the performance of the Buddipole in future columns as I get a chance to get outdoors and go portable as everyday can be "Field Day" with the Buddipole. For more information on this antenna go to www.buddipole.com

73's

Dean Burgess KB1PGH

HAM RADIO AT THE 100th ANNIVERSARY BSA JAMBOREE

And finally, the Boy Scouts of America have been holding their Jamboree at Ft. A.P. Hill in Virginia and ham radio was a major part of the action. The theme is 100 years of scouting.

It has been an incredibly busy time here at the 2010 Boy Scouts of America National Jamboree where operations of K2BSA have been a critical part of the program.

Brian Mileshosky, N5ZGT, is the chairman and coordinator for K2BSA operations here at Fort AP Hill, just outside of Bowling Green, Virginia.

"Ive got a staff that works under me and we're in charge of the demonstrating of ham radio to the Scouts, Mileshosky explains.

"That is getting them on the air, conducting the space station contact, things like that while the other staff is off doing other complementary things like the Radio merit badge and doing the licensing classes, the VE exams and basically wrapping up the whole picture of demonstrating and providing ham radio to the participants here."

Mileshosky says more than 40-thousand Scouts and

leaders are on the jamboree site and thousands have been stopping by the check out ham radio. "

To my knowledge, I think to date this could probably be considered the largest on-site amateur radio demonstration to youth in the world to date," Mileshosky says. "And that's just a fantastic thing to be behind."

And, Mileshosky says there's something far more important in the mission of K2BSA here at the jamboree.

"Wer'e targeting ham radio's legacy," Mileshosky says. "And that no matter how you look at it, whether if you look at ham radio as a hobby or as a service or both, we got to have blood in it for it to continue and that blood has got to be young."

Larry Wolfgang, WR1B, is acting as the American Radio Relay League's connection to K2BSA operations.

"The board of directors has voted strong support for the Scouting program," Wolfgang says. "And so that support starts right from the top. At the headquarters level, the support is great because I get to come here and represent the league, be a liaison and kind of help out in every way possible with the operation."

That includes technical support for set-up of the

antenna array and radio gear as well as all ARRL license manuals and other publications, maps, frequency charts and even pins. Wolfgang says the one of the keys to the K2BSA operation's success is the Radio merit badge which Scouts can earn in a little over three hours.

"A lot of Scouts really like the idea they can complete the merit badge," Wolfgang says.

"And they may not know about radio to start with, but by the time they're done, they have a pretty good idea of what we do as amateur radio operators.

"And quite a few of them want to take the license class and move on to get a license."

A huge supporter of this year's K2BSA operation at the jamboree is ICOM. Ray Novak, N9JA, is division manager for amateur and receiver products at ICOM America. He stopped by to visit the jamboree operation and see how things were going.

"A couple of stations that we have are running 7600s," Novak says. "We've also worked with the local amateur radio group that has the D-star repeater in Stafford, Virginia, using the WS4VA repeater to do D-star from two locations here and, a couple of other radios as well.

"We're helping with radios for the fox hunt. We're just trying to show all different aspects of where ICOM helps out with the ham radio community."

The James Millen Memorial Station is located at the Museum Annex of the Antique Wireless Association in Bloomfield, NY. This is the station which was used by Millen in the late 30's and basically stayed untouched at his home until being relocated in 1985.

Below are pictures of the station as provided by John Dilks. This station has been returned to operation and is frequently used for AWA activities and events. If the reader requires further information on the station and the move they can reference the AWA's Old Timers Bulletin, Volume 35, Number 4 (November 1994) or Electric Radio Magazine issue number 69 (January 1995)
.
Receiver: Behind the microphone is a first production run National HRO receiver. The Receiver was restored by Bill K3ZJW.

Transmitter: Comprising most of the three six-foot relay racks, this 1KW transmitter uses push-pull 204A finals and a pair of 851's in the modulator. You can see the glow of the 851 modulator tubes in the right-side picture. The transmitter was restored by Bob W2ZM.

ARRL Facebook page generates more than 3000 page views each week, with the majority of stories generating more than 80,000 "click-thrus."

"We are excited to have such a strong presence on Facebook," said ARRL News Editor S. Khrystyne Keane, K1SFA. "Through our page, we try to showcase all the fun that Amateur Radio is by using interactive status updates, articles from the ARRL Web site and photos from events that are happening all around the world. Personally, I really enjoy seeing what other hams have to say about their love and enjoyment of Amateur Radio." Keane maintains the ARRL Facebook page that was created by Herman May, KE5HYW.

While US hams make up the majority of users on the League's Facebook page, hams from all over the world, such as Indonesia, Spain, Greece, Australia, Italy, Argentina, Denmark and the Netherlands, are active, too. "Facebook only gives us the top 20 countries represented that visit our page, but I know from personal interaction with hams that we have more than just those 20 countries visiting us every day," Keane explained.

ARRL Facebook Page Tops 10,300 Fans

With more than 10,000 fans on Facebook, the ARRL page is the number one spot for hams on the Internet's most popular social networking site. Not only is the ARRL page the most popular Amateur Radio page on Facebook, it is attracting young — and not-so-young — hams to share their opinions and ham radio-related news with other hams.

According to Facebook demographics, more than 100 people between the ages of 13-17 are fans of the ARRL's page, with 80 percent below the age of 55 (Facebook breaks down its statistics in age groups of 13-17, 18-24, 25-34, 35-44, 45-54 and 55+). The ARRL page also averages about 400 users each week. Users are those who post their own comments, comment on others' posts or "like" a comment. Along with this, the
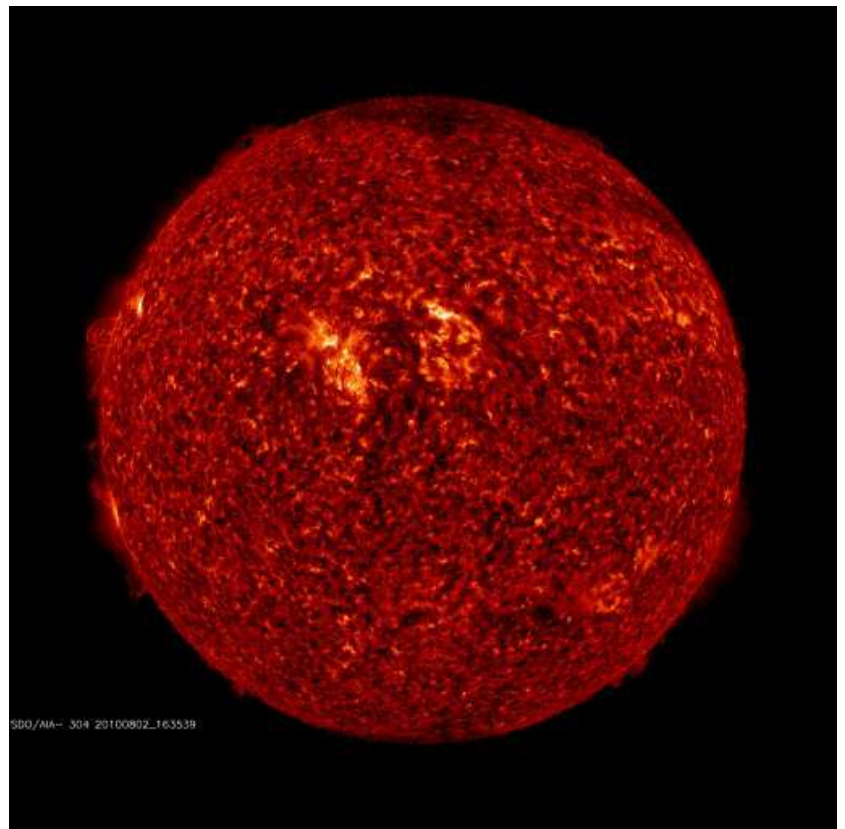
Ubuntu Linux for Hams

Bert Kolts, AB0VI

This free operating system provides your PC with all of the usual features, including lots of ham radio applications.

If you have wanted to upgrade your PC to a new operating system, but haven't wanted to pay the high cost for some commercial packages, then you might want to consider the world of open source software. Contrary to popular belief, there are several options available for PC operating systems.

After a string of never ending system bugs and finally a hard drive crash, I was finally prompted to look for an alternative operating system for my PC. The hard drive was easily replaced, but I wanted an operating system (OS) that wasn't going to cost me hundreds of dollars, that would be more robust and would support my ham radio operation.

A suggestion from a friend and a little time spent surfing the Web quickly led me to the *Ubuntu* Web site. It looked like a good option, but the most important question in my mind was whether it would support any ham radio applications.

What is *Ubuntu*?

Simply put, *Ubuntu* is a full-fledged operating system based on *Linux* (the PC version of *UNIX*) that has a similar look and feel to other popular OSs, such as Microsoft *Windows*. The *Ubuntu* OS supports all of the usual PC functions but with software that is all open sourced. This means that the operating system and all of the programs that it includes are totally *free*. Over the last few years, *Ubuntu* has gained in popularity to the point where some PC vendors are now offering it as an option with some of their new products.

In case you might be wondering about the name *Ubuntu*, it is a concept that comes from several South African languages. It's one of those terms that does not translate well into English, but according to *The Official Ubuntu Book* it can be roughly translated as meaning "humanity toward others," or "I am because we are."

The *Ubuntu* desktop looks similar to those of other operating systems. Figure 1 shows the desktop that I use for version 8.04 (also referred to as Hardy Heron). You might notice that the desktop does not have any individual program icons, but this is simply a matter of personal preference, icons can be added if you wish. All of my programs are listed under the APPLICATIONS menu, located at the top left of the display, where I can organize them into folders by program type. Also located in that corner of the display is the PLACES menu, which contains such items as disc drives and networks, as well as folders for pictures, videos, music, etc. The SYSTEMS menu has user preferences and system administration menus.

The *Ubuntu* OS uses *Firefox* as a Web browser and *Evolution* for e-mail. For office applications the *OpenOffice* suite is provided, which supports a full featured word processor, spreadsheets, presentations and more. The system also includes the usual games, photo, video and music programs as well. Some of the video programs will even support the European video formats. This is an important feature if you have friends or relatives in Europe, as we do, who like to send you home videos of the grandchildren.

Hardware support is good too. I have two different PCs that interface with a router, one via LAN and another wireless. Each has a different printer as well. All of these devices, including the wireless USB adapter, were identified during system installation and simply worked with no problems. *Ubuntu* supports a wide range of both old and new hardware and peripherals. A list of the supported hardware can be found on the *Ubuntu* Web site.

If you would like to give *Ubuntu* a trial run, you can go to their Web site and download the OS, or order a free CD. You could also choose to buy one of the books that provide an introduction to *Ubuntu*, many of which will also include a CD. Just be sure that the included CD is one of the recent *Ubuntu* releases. Version 10.04, Lucid Lynx, is the latest, as of this writing.

When installing the OS, you will discover that you have several options. You can either run *Ubuntu* directly from the CD, just to try it without installing it on your hard drive, or you can create a dual boot configuration and have both *Ubuntu* and your old OS available. Of course you can also take the big jump and simply install *Ubuntu* as your only OS.

With the OS up and running, software updates and support are likely to be the next concern. The *Ubuntu* community, which consists of developers and users, provides periodic software updates, documentation and user forums. These help to assure that your system is kept up to date and that users have a resource for questions and problems should they arise.

Ham Radio Applications

At this point, since *Ubuntu* is beginning to look like a really viable alternative OS, the next big issue is whether it will support the ham radio applications that we want to run. Fortunately, the answer to this question is — yes it will.

One of the nice features of *Ubuntu* is the *Synaptic Package Manager*. This system lets you search through thousands of programs for specific types of applications and once found, download and install them onto your PC. All of this is done in one simple operation. To help make life easier, the programs within the *Package Manager* are categorized by type, such as games, mathematics, network and science. There is even a separate category for Amateur Radio.

The ham radio applications include programs for Morse code training, APRS and packet programs, rig control, CW and digital mode terminal applications, satellite tracking, Smith Charts, logging, DX clusters and more. In most cases there are multiple programs available for each of these applications and there is also a logging program that interfaces with LoTW.

As an example, I use the program *Xlog*, shown in Figure 2, for my log. This program not only provides basic contact logging, but it also tracks your scoring for important awards and checks for previously worked stations. In addition to this, *Xlog* can also read your rig's frequency, mode and power via the serial port. For contesters, there is a CW keyer mode that allows you to program the function keys with CW messages and, of course, it can also import and export log data in several common formats.

There are a number of programs available for *Ubuntu* that will support the various digital operating modes. One popular program for digital mode operation is *fldigi*. This program, shown in Figure 3, supports several digital modes including: CW, PSK, HELL,

Olivia, RTTY and more. It also has the ability to perform rig control, measure frequency (calibrated to WWV), log contacts, run in contest mode and interface with QRZ.com.

***Wine* — It's Not Just for Drinking**

But what happens if you can't find a *Linux* application for the task you need and a *Windows* program is the only solution? Fortunately all is not lost, because there are several ways that you can run *Windows* based programs on *Ubuntu*. One of these ways is with *Wine*.

Wine is a software package that lets you run many *Windows* applications within the *Ubuntu Linux* environment. It creates a virtual C: drive on your hard disc and there you will find the familiar *Windows* folder "Program Files" that contains your *Windows* applications. When you run a *Windows* application in *Ubuntu* it will execute under *Wine*, but the display will look just like does when it executes from a *Windows* operating system.

Figure 4 shows an example of the *Windows* program *CircuitMaker*, a circuit simulation program, running under *Wine*. *CircuitMaker* is an old program that is no longer supported, but in this case I needed this old *Windows* program to support some of my older homebrew projects. It runs as well now with *Ubuntu* and *Wine* as it did with my old *Windows* system.

The much newer circuit simulation program, *LtspiceIV* from Linear Technologies, can be run with *Wine* as well. I downloaded the file a few days ago and it loads and runs on my PC with no problems whatsoever.

Schematic capture and PCB layout applications are also necessary tools for those of us who like to do homebrew projects. The PCB vendor that I like to use for my PC boards provides free schematic and layout software, but unfortunately their software is only available in *Windows* versions. (Will software vendors ever learn that there are some of us who prefer to operate in *Linux*? Sigh.) Once again, it only took me about a minute to download their software onto the *Wine* C: drive and install the programs. As expected, they ran perfectly with no problems.

[Note that the *Wine* emulator works well for smaller applications such as those described above, but it should not be considered a replacement for a *Windows*

OS. Most of the larger, more complex programs that run smoothly under *Windows* will run erratically — or not at all — in the *Wine* environment. — *Ed.*]

The Bottom Line

In today's tight economy many of us are looking to get the most bang for our computer buck. *Ubuntu*, with all of its standard features and functionality, its large library of *Linux* based ham radio applications and its ability to run *Windows* applications if necessary, is certainly a viable option when considering an operating system upgrade. Best of all, since the *Ubuntu* system is open source software, this is all available for *free*, which makes *Ubuntu Linux* and ham radio a hard combination to beat. After 2 years of running *Ubuntu* on two of my home PCs, I find that the more I use it the more I like it, so give it a try.

It's a Bird, It's a Plane! No, It's an Asteroid — Asteroid (31531) ARRL, To Be Exact!

John, Paul, George and Ringo are on the list. Mozart, Bach, Beethoven and Brahms — even Frank Zappa and Elvis (but not Madonna). Of course Asimov and Sagan made the cut, Mr Spock, too, but not Captain Kirk. And now ARRL — more precisely, (31531) ARRL — joins this prestigious company as one of more than 16,000 named minor planets in our solar system. A minor planet — such as an asteroid —is an astronomical object in direct orbit around the Sun that is neither a dominant planet — such as Mercury, Saturn and Neptune — nor a comet. The first minor planet — named Ceres — was discovered in 1801. Since then, more than 200,000 minor planets have been discovered, most of them lying in the asteroid belt. But as of July 27, 2010, only 16,005 had been named.

Approximately 2.5-4 miles (3-7 km) long — (31531) ARRL orbits the Sun at a distance of 2.7 Astronomical Units (AU) (1 AU is the distance from the Earth to the Sun, about 93 million miles, or almost 150 million km). It is currently located near the boundary of the constellations Scorpio and Libra and is about 2.1 AU distant from the Earth. It takes (31531) ARRL almost five years to orbit the Sun.

At a magnitude of brightness of 19.5, (31531) ARRL is extremely faint. This is almost 15 magnitudes fainter than the human eye can see from most cities and towns; 5 magnitudes is a factor of 100 in brightness, so this object (at its time of discovery) was about $100 \times 100 \times 100$, or 1 million times fainter than the naked eye can see. The asteroid remains about 19th magnitude most of the time and does not brighten considerably, so (31531) ARRL will never be seen with the naked eye (unless via spacecraft). Even though it is faint, it is probably within the range of a moderate to large amateur telescope equipped with a CCD.

Joe Montani, W7DXW — senior research specialist with the Spacewatch Near-Earth Asteroid Project Lunar and Planetary Lab at the University of Arizona — told the ARRL that he had discovered (31531) ARRL in his work discovering and observing Near-Earth Asteroids (NEAs). He said he had received confirmation that the asteroid had been officially named as of July 27; it can take 10 years or more for the smaller objects — such as asteroids, dwarf planets and comets — to receive names. (31531) ARRL was discovered in 1999.

"The naming was proposed to the International Astronomical Union (IAU) Committee on Small Bodies Nomenclature (CSBN), and was accepted by the CSBN and published to the world on July 27, 2010 at about 1900 UTC," Montani said. "The full name of the object is (31531) ARRL. The number in parenthesis is the so-called 'permanent number' that an asteroid receives after its orbit is sufficiently accurately determined so that it can never become 'lost.' 'ARRL, is, of course, the acronym of the American Radio Relay League."

All proposed names are judged by the CSBN, which is comprised of professional astronomers with research interests connected with minor planets and/or comets from around the world. The name must also be 16 characters or less in length, preferably one word, pronounceable in at least one language, non-offensive and not too similar to an existing name of a minor planet or natural planetary satellite. The names of individuals or events principally known for political or military activities are unsuitable until 100 years after the death of the individual or the occurrence of the event. Names of pet animals are discouraged, and names of a purely or principally commercial nature are not allowed.

In proposing to name an object, the proposer must supply the IAU committee a brief written citation, no more than four lines of ASCII text of 78 characters per line, formatted in a special way. "The full text of the citation I wrote for (31531) ARRL contains

information about the ARRL that I gleaned from the ARRL Web site," Montani explained. "With the announcement of the naming, the citation is published and recorded for all time. The citation serves as an explanation of the naming and gives a sense of the motivation for it."

The citation for (31531) ARRL reads: "Since 1914, the American Radio Relay League has been the largest membership organization of radio amateurs in the US. ARRL promotes interest in 'ham' radio and experimentation, maintains high standards of conduct and fraternalism among hams and represents their interests in matters legislative."

Prior to the object receiving its permanent number, Montani said that (31531) ARRL was known by its permanent designation of 1999 CQ137. "I selected this object for naming from among the many thousands discovered by Spacewatch," he told the ARRL. "It seemed fitting to me that 'CQ' should be in the designation. In addition, the number 137 is also significant to physicists and engineers and perhaps to radio amateurs: It is the reciprocal of the 'fine-structure constant' that depends on the square of the charge on the electron, the speed of light, Planck's constant and the permittivity of free space. This object seemed to have it all for us!"

Montani discovered (31531) ARRL using the .9 meter (36 inch) Steward Observatory Spacewatch telescope, located on Kitt Peak outside of Tucson, Arizona. The telescope, which saw first light in 1921, was also the telescope that was used to discover the 30 Hz pulsar located in the center of the Crab Nebula. In 1980, Tom Gehrels and Bob McMillan founded the Spacewatch program. The primary goal of Spacewatch is to explore the various populations of small objects in the solar system and study the statistics of asteroids and comets in order to investigate the dynamical evolution of the solar system. CCD scanning studies the Centaur, Trojan, Main-Belt, Trans-Neptunian and Earth-approaching asteroid populations. Spacewatch also finds potential targets for interplanetary spacecraft missions, provides follow-up astrometry of such targets and finds objects that might present a hazard to the Earth.

Active Sun Could Cause Havoc on Earth

It was quite a busy weekend for our Sun. During the late hours of Friday, July 30, a magnificent coronal mass ejection (CME) billowed away from the eastern limb of the Sun; the source of the blast was apparently sunspot 1092. On Sunday, August 1 at approximately 0855 UTC, Earth-orbiting satellites detected a C3-class solar flare, and again, the blast came from sunspot 1092. At about the same time as the solar flare, an enormous magnetic filament erupted, stretching across the Sun's northern hemisphere, a complex global eruption involving almost the entire Earth-facing side of the Sun.

According to NASA, if a CME like this hit Earth, polar sky watchers would likely see bright auroras. In this case, however, the cloud is not aimed in our direction. At most, it would deliver a glancing blow to Earth's magnetic field around August 2, producing only minor geomagnetic activity. Future CMEs could be more geo-effective as the sunspot turns to face Earth in the days ahead. Auroras are glowing, dancing curtains of light that appear in the upper atmosphere of a planet and are caused by the interaction between the planet's magnetic field and charged particles from Earth's magnetosphere.

High speed coronal mass ejections produce major disturbances in the solar wind. Often loop-like in appearance, CMEs rise as massive clouds of material from the solar atmosphere. Dangerous, high energy, charged particles are often produced in these disturbances and, when they are directed toward Earth, often produce large magnetic storms in the magnetosphere.

A solar flare is an explosion on the Sun that happens when energy stored in twisted magnetic fields (usually above sunspots) is suddenly released. Flares produce a burst of radiation across the electromagnetic spectrum, from radio waves to x-rays and gamma-rays. Scientists classify solar flares according to their x-ray brightness in the wavelength range 1-8 Angstroms. There are 3 categories: X-class flares are big; they are major events that can trigger planet-wide radio blackouts and long-lasting radiation storms. M-class flares are medium-sized; they can cause brief radio blackouts that affect Earth's polar regions and minor radiation storms sometimes follow an M-class flare. Each category for x-ray flares has nine subdivisions (C1-C9, M1-M9 and X1-X9). Compared to X- and M-class events, C-class flares are small with few noticeable consequences here on Earth.

According to Spaceweather.com, the timing of these events suggests they are connected, and a review of

movies from NASA's Solar Dynamics Observatory (SDO) strengthens that conclusion. Despite the ~400,000 km distance between them, the sunspot and filament seem to erupt together; they are probably connected by long-range magnetic fields. In this movie (171 Å) from SDO, a shadowy shock wave (a "solar tsunami") can be seen emerging from the flare site and rippling across the northern hemisphere into the filament's eruption zone. That may have helped propel the filament into space.

Court Rules FCC's Indecency Policy Unconstitutional

Decision could impact Commission's entire indecency enforcement effort

The FCC has ruled in the past that the communications indecency rules that apply to broadcast programming also applies to Amateur Radio transmissions. This is because many youngsters participate in ham radio and the government has an interest in protecting them from what it considers harmful indecent material.

Indecency, obscenity, profanity ...and the law
The First Amendment to the U.S. Constitution is part of the Bill of Rights. The amendment prohibits the making of any law ...infringing on the freedom of speech or the press. Traditionally, print publications have the highest degree of First Amendment protection. It is basically legal to print anything. Over-the-air broadcasts enjoy the least. Broadcasters are subject to restrictions barring the transmission of indecent or profane material over the airwaves.
The FCC's power to regulate language content comes from the U.S. Criminal Code, Title 18, Section 1464. The statute was originally in Section 503(b) of the Communications Act and was moved to the Criminal Code in 1948. Section 1464 states: "Whoever utters any obscene, indecent, or profane language by means of radio communication shall be fined not more than $10,000 or imprisoned not more than two years, or both." A subsequent statute and court case prohibited the broadcast of indecent material from 6 a.m. and 10 p.m.
The law covering subscription TV broadcasting is different. It only holds that obscene material is illegal. Section 1468 states: "Whoever knowingly utters any obscene language or distributes any obscene matter by means of cable television or subscription services on

television, shall be punished by imprisonment for not more than 2 years or by a fine in accordance with this title, or both."
The FCC prohibits highly offensive curse words from being broadcast between 6 a.m. and 10 p.m. local time when children could be listening. The Supreme Court has upheld the FCC's rule banning questionable material when there is a "reasonable risk that children will be in the audience".
The so-called "safe harbor" refers to the time period between 10 p.m. and 6 a.m., local time. During this time period, a local broadcast station may air indecent material. But due to ham radio's reach, and the fact that Amateur Radio communications frequently spans many time zones, the safe harbor constraints generally do not apply to ham radio communications.
There is also a constitutional issue involved. The FCC must be mindful of the First Amendment to the United States Constitution and Section 326 of the Communications Act, which prohibit the FCC from censoring material, or interfering with the public's free speech rights.

What makes material "obscene?"
According to Supreme Court, unlike indecency, which is constitutionally permitted, obscenity is not protected by the First Amendment. There is no "safe harbor" for the broadcast of obscene material and it may not be broadcast at any time.
According to the U.S. Supreme Court, to be obscene, material must meet a three-prong test: (1) an average person, applying contemporary community standards, must find that the material, as a whole, appeals to the prurient interest (i.e., material having a tendency to excite lustful or erotic thoughts); (2) the material must depict or describe, in a patently offensive way, sexual conduct; and (3) the material, taken as a whole, must lack serious literary, artistic, political, or scientific value.

What makes material "indecent?"
Indecent material contains sexual or excretory material that does not rise to the level of obscenity. For this reason, the courts have held that indecent material is protected by the First Amendment and cannot be banned entirely.
Material is indecent if, in context, it depicts or describes sexual or excretory organs or activities in terms patently offensive as measured by contemporary community standards for the broadcast medium. In each case, the FCC must determine whether the

material describes or depicts sexual or excretory organs or activities and, if so, whether the material is "patently offensive."

To be "patently offensive," context is critical. The FCC looks at three primary factors when analyzing broadcast material: (1) whether the description or depiction is explicit or graphic; (2) whether the material dwells on or repeats at length descriptions or depictions of sexual or excretory organs; and (3) whether the material appears to pander or is used to titillate or shock. No single factor is determines the decision. The FCC weighs and balances these factors because each case presents its own mix of these, and possibly other, factors.

"Profane language" includes those words that are so highly offensive that their mere utterance in the context presented may, in legal terms, amount to a "nuisance."

Regulation of indecency

The FCC did not begin to spell out a policy on what the word "indecent" meant until 1975. It did so then in response to a complaint from a father who had heard a monologue on a New York radio station (owned by Pacifica) by comedian George Carlin, titled "Filthy Words." =

The post-Pacifica policy stood until March 2004, when the agency changed its direction. Thereafter, it said, even a single use of "the F-Word" on the air would be treated as illegal if it occurred between 6 a.m. and 10 p.m. The FCC also made it clear that, among other single banned words, the four-letter word meaning excrement was also banned.

Indecency on the Internet and subscription television

Congress attempted to expand indecency regulation to the Internet with the Communications Decency Act (CDA) of 1996. The law was passed as part of that year's Telecommunications Act overhaul. It sought to impose criminal penalties on anyone who:

(A) uses an interactive computer service to send to a specific person or persons under 18 years of age, or

(B) uses any interactive computer service to display in a manner available to a person under 18 years of age, any comment, request, suggestion, proposal, image, or other communication that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards, sexual or excretory activities or organs.

Upon passage, the ACLU, American Library Association and others challenged the constitutionality of the CDA. They claimed that it violated the public's constitutionally protected speech (namely speech that is deemed indecent or "patently offensive"). The court struck down what it termed a "blanket restriction on speech" and ruled that, "The Internet is entitled to the full protection given to media such as the print press. It said that the special factors justifying government regulation of broadcast media do not apply." A subsequent high court decision (2000) extended similar protection to subscription television.

Despite the differences between regulating broadcasting – but not the Internet and cable television — Congress continued to support a system of increased fines on broadcasters.

In 2006, Congress passed the Broadcast Decency Enforcement Act, increasing the maximum fines to "$325,000 for each violation or day of such violation, to a maximum of $3 million for any single act or failure to act." But on June 4, 2007, a the Second Circuit Court of Appeals held that fines for so called "fleeting expletives" could no longer be collected from companies.

FCC's Indecency policy struck down

The agency changed its indecency approach after getting many complaints about two TV broadcasts. At the Billboard Music Awards in 2002, Cher unexpectedly blurted out the "F-word" and Nicole Richie said the "S-word." And Rock singer Bono used a variation of "the F-Word" on the NBC-TV 2003 broadcast of the Golden Globe Awards.

In reaction to the complaints, the FCC on March 15, 2006 issued what it called an "omnibus order" that dealt with about fifty indecency violations ...including those of a single "fleeting" usage of a curse word. The fines totaled more than $4 million. Joined by other broadcasters, Fox TV sued the FCC for what they said was a constitutionally questionable and unevenly enforced indecency policy. The matter eventually ended up at the Supreme Court.

The high court remanded the case back to the New York-based Second Circuit Court of Appeals to consider the constitutionality of the policy. The appellant court heard the case again.

On Tuesday, July 13, 2010, the three judge panel unanimously struck down the FCC's indecency policy which calls for heavy fines. In a 32-page ruling, the court said it "now holds that the FCC's policy violates the First Amendment because it is unconstitutionally vague, creating a chilling effect that goes far beyond

the fleeting expletives" heard over-the-air. The FCC's order and the Commission's underlying indecency policy was vacated.

The appellate court's decision was a major victory for broadcasters who have long complained the FCC's indecency rules violated First Amendment rights. In the past, the FCC has levied fines on scripted expletives but had been more lenient about accidental profanities uttered during live shows.

FCC commissioner Michael Copps said in a statement that the court's decision was "anti-family." The federal court's ruling affects radio and TV broadcasting, but not cable, satellite, wireline or print media. It probably also impacts language used on-the-air by ham radio operators. Copps believes the FCC's policy is "constitutional and enforceable," and he called on the commission to "move forward immediately to clarify and strengthen its indecency framework."

The Fox Network was "extremely pleased" with the Second Court's decision. "We have always felt that the government's position on fleeting expletives was unconstitutional," Fox said in a statement, adding "the inherent challenges broadcasters face with live television ...must allow for the unfortunate isolated instances where inappropriate language slips through." In the end, it seemed that the Federal Communications Commission may have to try again to explain why it thinks single fleeting utterances of the "F-word" and the "S-word" are unlawful communications at times when children may see and hear. The problem may be how, in legal terms, the Commission might fashion a ruling with that result.

The Second Circuit will undoubtedly not have the final word on this. The constitutional debate may again wind up back at the Supreme Court if the FCC appeals the decision. It appears that only another Supreme Court decision will provide a definitive answer to the problem of regulating over-the-air broadcast indecency.

Amateur Radio ....and indecency

The Part 97 amateur service rules used to prohibit the transmission of "...obscene, indecent or profane words or meaning." For some unknown reason, the word "profane" was dropped from Section 113(d) in 1993 even though the criminal law (18 U.S.C. § 1464) and the FCC's website still mentions all three.

The new rewrite of Section 113(a)4 now only prohibits "...obscene or indecent words or language." The FCC has in the past held that the indecency rules applying to TV and radio broadcasting also apply to Amateur Radio transmissions. In making obscenity or indecency

determinations, the FCC staff analyzes what was actually transmitted.

If the FCC determines that the curse words were obscene or indecent, it can issue a Notice of Apparent Liability (NAL), which is a preliminary finding that the law or the FCC's rules have been violated. Subsequently, this preliminary finding may be confirmed, reduced, or rescinded when the FCC issues a Forfeiture Order.

The fact remains, however, that the FCC has never issued a citation or NAL to a ham radio operator for solely violating its obscenity or indecency rules. The violation notice always mentions other accompanying offenses which can easily be proved ...and don't involve controversial first amendment issues.

FCC Launches Consumer Help Center:

Beginning July 28, those who have dealings with the FCC will have a new tool that the FCC claims will put them "within one click of all the information they want" from the Commission: a new "easy-to-use" Consumer Help Center. "Our new Consumer Help Center makes it easy for consumers to learn about our work and take action," said FCC Chief of the Consumer and Governmental Affairs Bureau Joel Gurin in a press release. "Here, in one place, consumers can do a number of things, such as read about consumer issues, get practical advice for avoiding problems, file a complaint, comment on our rulemakings, or read what our FCC experts are saying in our Consumer Blog." Read more here http://www.arrl.org/news/fcc-launches-consumer-help-center.

Joseph M. Hoffmann, W2DST
A Station Lost in Time

Massachusetts Statewide Hurricane Drill-
Hurricane Hudson
RACES/ARES/SKYWARN Exercise

On Monday, August 2, the Cape Ann Amateur Radio Association Emergency Communications Group participated in the Annual Mema Statewide Hurricane Drill. The drill ran for 2 hours from 7 to 9 PM local time.

This emergency communications exercise tested all of the communication networks from Skywarn, Ares, Races nets and how they would function during a fictional landfall of hurricane "Hudson" Massachusetts. The nets complied weather related information and passed it along to W1BOX which is the National

Weather Service in Taunton and storm dmamge inforamtion to the Mema bunker in Framingham. We also want to thank Jon- K1TP and Ross- W1RAB for checking into the net and passing along storm related traffic.

Ruth- WW1N and Bill- W1OKD using Echolink, which was part of the drill.

Thanks to Dean-KB1PGH for the pictures and write up.

Curtis Wright- AA3JE relaying storm damage messages to the Mema bunker in Taunton and Stan Stone- W4HIX relaying weather information to W1BOX which is the National Weather Service in Taunton and compliling the messages and reviewing how the drill was running was the ARES North Shore District Coordinator Eric Horwitz- KA1NCF.