News Items:
BPL Still the Big Story

The ARRL is calling for all Amateurs to write your elected officials and ask them to stop BPL (see "BPL - A Call to Arms" by David Sumner, K1ZZ, reprinted on page 6).

The National Telecommunications and Information Administration (NTIA) released its Phase 1 study on April 27th. The report says BPL does cause interference, but we can work around that. They quote a lot of material submitted by the ARRL and seem to agree with it and then they propose a plan to go ahead with BPL even though they admit the interference is serious. This may be in response to a speech made by President Bush the day before (see page 6).

In NTIA's report there is a chart which shows graphically several standards proposed by various nations. The most reasonable standard, one which would be acceptable to everyone, was proposed by the BBC and NATO. The acceptable radiation levels of their proposal were over 70 dB below what the FCC is proposing. 70 dB represents a factor of 10 million.

In other news, the FCC has released a proposal of its own (NPRM) for changing the Amateur Service Rules. The NPRM is not related to the ARRL's restructuring proposal. It does recommend accepting the ARRL's Novice Refarming plan, which would eliminate the Novice sub-bands on 80, 40, and 15 meters and allow Novice and Tech Plus licensees to use the entire CW portion allocated to General class licensees, but limit their power to 200 watts and their emissions to CW only while allowing General and higher class licensees to use full power and all permitted emission types across the entire narrow band portion. It would also increase the telephony segment for General and higher classes by about 25 kHz. It also recommends eliminating the rule prohibiting manufacture and marketing of amplifiers for use between 24 and 35 MHz. There were a number of other proposals.

From Ohio Section News:
OHIO SECTION SUGGESTS - if you are into DX activities and/or seeking QSL cards, check with <http://home.fuse.net./jslough/w8buro.html#>. This is the official home of the 8th Call area QSL bureau. Jay Slough, K4ZLE, is in his second year of managing the bureau and updating its procedures. If you need cards, go there and find out where they are and how to receive them.

The 53rd Dayton Hamvention will be held May 14, 15, and 16th. Tickets can still be ordered via the Internet and you can save $5. They will be held for you at Hara Arena ticket office. See their web page at www.hamvention.org for details.

At our April meeting, Doug Bowling, AB8CJ gave us an update on "The Big Project" at Marlington High School, which was followed by a very informative presentation by Jason Bowling, KB8RNU and Will Sebastian, KC8UIR on APRS, (see picture on page 8). Much information can be found at: http://web.usna.navy.mil/~bruninga/aprs.html

Ye Olde Meeting Announcement

The next meeting of the Alliance ARC will be on Wednesday, May 5th, in the cafeteria of the Alliance Community Hospital. Our meetings begin at 7:30 PM, and are an excellent opportunity for eyeball QSO's. Directions can be found on the K8LTG Repeater (145.370) See you there!

Editorial

This month, instead of getting up on a soap box and ranting and raving about BPL, which I liken to tearing down the Taj Mahal to build a Wal-Mart (I think Wal-Mart is a fine store, by the way, but there are better places to build one), I thought I'd print a recipe that my wife found in a cookbook put together by the people at Oakhill Manor Care Center, where her Aunt stayed last year. It's called "Dick's Elephant Stew."

You'll need:
1 Elephant (medium size)
800 lb. Potatoes
600 lb. Carrots
2 barrels Peppers
2 Rabbits (optional)
1 barrel Salt
100 lb. Onions

Cut elephant into bite sized pieces. Dice carrots, onions and potatoes. This should take about 2 months. Add enough brown gravy to cover (they didn't list that in the ingredients; I wonder how much you need, Ed.). Season to taste. Cook over kerosene fire for about 4 weeks at 465º. This will serve about 3800 people. If more are expected, 2 rabbits may be added, but do this only if necessary, as most people do not like hare in their stew.

Well, the cooks in those institutions are used to cooking for large groups.

If you haven't paid your dues yet, send it to Mary Ann, or better yet, bring it to the meeting.

KE8VE

Meetings

The Alliance Amateur Radio Club meets on the First Wednesday of every month, in the cafeteria of the Alliance Community Hospital. Talk-in is on 145.37 ®. Meetings begin at 7:30 PM. Visitors are always welcome.

Nets

Thursday is our "net night," with the following nets on tap:

Ten meters
CW @ 8PM on 28.400 MHz
SSB @ 8:30PM on 28.400 MHz

2 meters
9 PM on 145.37 MHz

Internet

If you'd like to check us out on the web, our E-mail address is:
w8lky@qsl.net
Our club home page is:
Http://www.qsl.net/w8lky

Newsletter Information

April Minutes

ALLIANCE AMATEUR RADIO CLUB

April 7, 2004

The regular meeting of the Alliance Amateur Radio Club was held at the Alliance Community Hospital on April 7, 2004, at 7:30 P. M., with Robert Steele K8RLS, president, presiding. Secretary David Glass W8UKQ kept the minutes. There were 20 members and three guests present.

The Pledge of Allegiance was given, and introductions were made. Visitors, Jason Bowling KB8RNU and Will Sebastian KC8UIR were introduced.

The minutes of the regular meeting for March were published in the newsletter. The total of the treasury balance was reported for the month. The report was approved upon motion by Frank WA8WHP, seconded by Larry KE8VE.

Mary Ann KB8IVS reported the treasury balances. The report was approved. Dues are due April 1.

.Old Business: Field Day is June 26 and 27. Don K8OMO moved that we hold Field Day at Marlington School. The motion was seconded by George K3GP, and approved. Doug Bowling AB8CJ will check for approval to use the facilities before April 19. John KD8MQ will order the Porta-

John.

The Park Board will allow us to use Silver Park for the Special Event on August 16 only.

Action about the Power Supply is on hold.

Frank WA8WHP reported the Advanced Skywarn Training in Lisbon in the fall.

Joe KC8TAC has not received any information about SATERN.

Dave W8UKQ moved that the liability insurance bill be paid. Seconded by George K3GP and approved.

NCSs Howard KC8YIF and Smitty KC8TJQ are doing great on the nets.

Larry KE8VE played a few seconds of a CD demonstrating BPL noise on the HF frequencies.

A new member is Chester Slonaker WD8PVL of New Matamoras, Ohio.

qsl.net is asking for a donation. Our web page is on that system.

There was no comment on restructuring of amateur licenses. May is Military Appreciation Month. There is a Special Event on May 2.

Don K8OMO displayed pictures that were composed and printed on a teletype.

New Business: Doug Bowling

AB8CJ described "The Big Project" and its development at Marlington High School. He is also involved with the Robotics projects.

Jason Bowling and Will Sebastian described the APRS, Automatic Positioning Reporting System which they are working on.

Jack W8WEN displayed pictures of B-29s on Tinian Island in 1945.

Thank you, Gladys, for the cookies and donuts.

The meeting adjourned at 8:56 PM upon motion by Jim N8XTJ, seconded by Smitty KC8TJQ.

Respectfully submitted, Dave Glass W8UKQ, Secretary

WAYBACK MACHINE

(Continued from page 5)
Radio Act of 1912 well past the breaking point. In 1926, the cards came tumbling down, and the "Summer of Anarchy" was ushered in. How would amateurs fare with no enforceable regulations in place? Join us next time as "The Wayback Machine" explores the events leading up to the creation of the Federal Radio Commission.

THE WAYBACK MACHINE

ISSUE #5
by Bill Continelli, W2XOY

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On November 2, 1920, Warren G. Harding was elected President of the United States. Millions read the election results in the newspapers the next day. In the Pittsburgh area, however, hundreds heard the election returns the moment they were wired in, thanks to Dr. Frank Conrad, a Westinghouse employee, who broadcast the results over 8XK, his amateur station. This station would evolve into KDKA, and the night of November 2, 1920 has been called the start of the multi-billion dollar broadcast industry. But was it? This month "The Wayback Machine" looks at the evolution of broadcasting, and the amateur's role in it.

The idea of broadcasting was first considered by Lee deForest in May, 1902, when he wrote that "Ultimately, wireless telephony will be possible". He urged the financial backers of the deForest Wireless Telegraph Company to develop and patent the concept. The stockholders, however, were more interested in immediate profits (through massive stock sales) rather than genuine development, and refused to finance the necessary research. Undaunted, deForest in 1907 formed the deForest Radio Telephone Company. In a statement that for 1907 must have appeared radical and even bizarre, but was amazingly prophetic, he wrote, "I look forward to the day when opera may be brought into every home. Some day the news

and even advertising will be sent out over the wireless telephone".

Despite deForest's intense interest in this area, he was not the first to broadcast the human voice and music over the airwaves. That honor belongs to Reginald Aubrey Fessenden, a Canadian Professor. He was the first to recognize the inherent flaw in the concept of spark transmissions, and set out to find an alternative. His quest led him to Schenectady, NY, and the services of General Electric's most brilliant scientist, Charles Steinmetz. Fessenden explained his idea: an alternator capable of generating waves of 100,000 cycles per second (3000 meters). Steinmetz and his assistant, Ernst Alexanderson, worked for almost two years, and finally produced an alternator that met Fessenden's requirements. The Alexanderson Alternator, as it was now known, was delivered to Fessenden's station in the Fall of 1906. On the evening of December 24, 1906, ship and amateur operators heard something in their headphones they had never heard before: someone speaking! A woman singing! Someone reading a poem! Fessenden himself played the violin. (The Alexanderson Alternator would play a prominent role in early high power stations and will be fully covered in a column exploring Schenectady's contribution to the development of radio and television).

Not to be outdone, deForest contin-

ued his radio telephone experiments in the period 1907-1910, broadcasting from the Eiffel Tower and live from the stage of the Metropolitan Opera, where Enrico Caruso was singing. However, all of these transmissions had a major problem: without a pure, stable, direct current CW carrier to modulate, all the signals had a background whine and distortion. Real development in the area of modulated carriers would have to wait until Armstrong discovered the oscillating properties of a regenerative circuit.

By 1916, both Armstrong's circuit and the Audion were widely circulating in the radio world, and broadcasting surfaced again. Lee deForest resumed his transmissions, with programs of "good music, culture, and lectures". deForest can be credited with two "firsts" in 1916; the first advertisements (for his Audion and other products), and the broadcast of the Presidential election between Woodrow Wilson and Charles Evans Hughes. (Unfortunately, deForest signed off before the California results were in, so he declared Hughes the winner over Wilson).

Also, in 1916, amateur station 2ZK broadcast one hour of music each night. David Sarnoff, who had manned his station during the Titanic disaster, also got into the act. He wrote a memo to his employers at American Marconi suggesting a "Radio Music Box", which would become a "household utility". He went on to describe his vision of radio broadcasting, and then turned to finances. He predicted an income of $75,000,000 or more each

year from the sale of receivers. Marconi, still focusing on ship to shore telegraphy, took no action on the memo.

After amateurs had returned to the air in November 1919, hundreds of them began to explore the area of broadcasting. In May, 1920, amateur station 8XK joined many other hams in the transmission of music. Incidentally, it WAS LEGAL for amateurs to broadcast music, news, sports, lectures, advertisements, or indeed just about anything else they wanted. The Radio Act of 1912, still in effect, did not mention "amateurs", rather, one paragraph made a general reference to individual private or commercial stations. The only real restriction was the 1 kw power limit and the 200 meter wavelength. After that, the government didn't care. Thus, those amateurs who had built equipment to modulate their CW transmitters eventually played a phonograph record or two, sang (or tried to sing), or broadcast some form of entertainment.

With all of the above documented evidence, why is November 2, 1920 considered the start of broadcasting? The answer lies not at the transmitter, but at the receiver. Prior to that night, all broadcasts had, in effect, been from one amateur to another, or to a commercial station. The November broadcast, though, was designed and promoted by Westinghouse as a transmission to the general public. Starting in September, stores were selling basic receivers for $10.00 to receive 8XK. Westinghouse, in effect, had seized deForest's and

Sarnoff's idea, and was marketing it to the general public. Thus, it was the makeup of the listening audience that defined the start of broadcasting.

When the word of this successful transmission got out, more amateurs got into the act and set up their own little broadcast stations. By the end of 1921, it was estimated that about 1200 amateurs had made at least one broadcast. Some had a regular schedule of programs and would evolve into commercial stations, others did it just out of curiosity. But there were listeners. Over 400,000 people heard the Dempsey-Carpentier fight on July 2, 1921. Radio sales were approaching 100,000 per year, not counting crystal sets which were selling at the rate of 20,000 per month. However, with this explosive growth came two problems for the amateur.

The first was an identity crisis; what should the role of the amateur be in broadcasting? Some thought we should stay out of it and just stick to traffic handling on CW. Others envisioned the amateur as a jack of all trades, expert CW operator and relay station, as well as community broadcaster. In fact, a new name evolved to describe this amateur/broadcast hybrid, "Citizen" radio or wireless. Even QST was confused; for a period of time in 1921, the word "Citizen" replaced "Amateur" on the front cover.

The other problem was frequencies. Everyone - amateur, broadcaster and hybrid - was on 200 meters. Tuning across the dial in 1921, one would mostly hear CW, a few spark holdouts and the new broadcasters. While the amateurs were used to the

interference, the general listening public was not. They had purchased their radios to hear music, not CW. Complaints started to pour into the Secretary of Commerce. Legally he was powerless, as the Radio Act of 1912 offered no solutions. A conference was called for all interested parties, held in Washington in February 1922 to try to resolve the impending crisis.

Even though he was exceeding his authority under the Radio Act, Secretary Hoover was able to get the following proposals accepted at the conference: 1) Henceforth, special broadcast licenses would be issued. Two frequencies would be available for broadcasters immediately, 360 meters (833 kHz) for regular transmissions, and 485 meters (619 kHz) for crop reports and weather forecasts. 2) After the marine interests had abandoned the 220 to 545 meter range (1363 to 550 kHz), it would be turned over to broadcasting. 3) Broadcasting was forbidden by amateurs, who were defined for the first time by name as stations operating "without pay or commercial gain, merely for personal interest". 4) "Quiet Hours" were imposed on all amateur stations effective from 8:00 to 10:30 PM daily, and on Sunday morning.

The fact that the number of broadcast stations dropped from 1200 to 30 immediately after these regulations went into effect shows just how many amateurs were, in fact, pioneer broadcasters. This agreement, however, was a house of cards. Secretary Hoover has stretched his authority under the

BPL - A Call To Arms

On April 26, **President Bush** told the American Association of Community Colleges Annual Convention in Minneapolis: "There needs to be technical standards to make possible new broadband technologies, such as the use of **high-speed communication directly over power lines. Power lines were for electricity; power lines can be used for broadband technology. So the technical standards need to be changed to encourage that.**"

Mr. Bush is wrong. Using power lines to distribute broadband services (called Broadband over Power Lines, or BPL) is a bad idea that should not be encouraged. Federally licensed Amateur Radio operators need to tell him so -- and also need to enlist their Members of Congress in reversing this bad administration policy.

The links shown on the right-hand side of this page will take you where you need to go to respond to the White House and to Congress. Do it now! We need **thousands of responses** from all parts of the country, **right away**, if we are to make an impression.

Here is our basic argument:
Power lines were designed to transmit electrical energy. They were not designed to transmit broadband signals, which in fact are radio-frequency (RF) signals. When a broadband signal is put on a power line, much of the RF energy leaks off the line and radiates,

causing interference to nearby radio receivers. Interference has been documented at test sites throughout the country and overseas where BPL is in operation. Recordings of actual interference at several test sites are available at **www.arrl.org/bpl**.

The nation's 680,000 radio amateurs are especially concerned about this interference because it affects the short waves -- a unique portion of the radio spectrum that supports long-distance, intercontinental radio communication. Licensed radio amateurs use these frequencies for hurricane reporting, disaster and emergency relief, and many other purposes in accordance with FCC regulations. The Amateur Radio Service is the only 100% failsafe emergency communications capability in the world. No matter what happens, radio amateurs will be able to communicate with one another without having to rely on the expensive and vulnerable infrastructure -- but we cannot maintain our emergency networks if BPL is deployed and interferes with the weak radio signals we are trying to hear.

In addition to amateur operation, the short waves are used for international broadcasting, aeronautical, maritime, and other services including the military. Depending on the frequencies in use, BPL interference also could wipe out radio communication for many of our nation's First Responders -- police, fire, and emergency medical personnel -- who use low-band VHF radios operating in the 30-50 megahertz (MHz) range.

Radio amateurs support expanded broadband services to consumers at lower cost. Indeed, they tend to be early adopters of new technology.

However, there are ways to deliver broadband that do not pollute the radio spectrum as BPL does. These include fiber-to-the-home, cable, DSL, and Broadband Wireless Access. None of these technologies causes interference to short wave radio.

BPL is sometimes touted as a solution for rural areas. It is not. A BPL signal only carries a few thousand feet down a power line and then must be repeated. This requires a lot of hardware and will not be economic in areas with low population densities.

The FCC recognizes the interference potential of BPL and is in the midst of a rulemaking proceeding, ET Docket No. 04-37, that proposes new requirements and measurement guidelines for BPL systems. However, the FCC proposals do not go nearly far enough to protect over-the-air radiocommunication services.

In short, BPL has a major disadvantage that is not shared by other broadband technologies and that outweighs whatever benefit it may offer. National broadband telecommunications policy should not include support for BPL, but should focus on other, more appropriate technologies.

Please write or call -- right now! **Don't put it off.** We need thousands of responses to reach the White House and Congress in the next few days.

David Sumner, K1ZZ
Chief Executive Officer, ARRL

May 2004

Happy Birthday to: WB8TPF, K8DEN, N8EAD

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	April S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		**June** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			**1** 10-10 Int. Spring Contest, CW ARI International DX Contest Indiana QSO Party MARAC County Hunters Contest, CW New England QSO Party US IPARC Annual Contest, CW
2 **CUYAHOGA ARS VE, INDEPENDENCE, OH** US IPARC Annual Contest, SSB	**3** COLUM. COUNTY TRAINING NET 8:00PM RSGB 80m Club Championship, SSB	**4** STARK COUNTY ARES NET 7PM 147.120 ARS Spartan Sprint NORTHERN COLUMBIANA ARES NET 9PM 147.255	**5** AARC Meeting 7:30 CARROLL COUNTY NET 8:00PM 147.075 **PIONEER AR FELLOWSHIP VE, AKRON, OH**	**6** AARC NETS 8:00, 8:30, 9:00 QCWA Net 7:30	**7** **WB8TPF**	**8** 50 MHz Spring Sprint CQ-M International DX Contest FISTS Spring Sprint Internet CW Sprint Contest Mid-Atlantic QSO Party Nevada QSO Party Oregon QSO Party VOLTA WW RTTY Contest
9	**10** COLUM. COUNTY TRAINING NET 8:00PM	**11** STARK COUNTY ARES NET 7PM 147.120 NORTHERN COLUMBIANA ARES NET 9PM 147.255	**12** CARROLL COUNTY NET 8:00PM 147.075 **K8DEN** RSGB 80m Club Championship, Data	**13** AARC NETS 8:00, 8:30, 9:00 QCWA Net 7:30	**14** **Dayton Hamvention** MASSILLON NET 8:00PM 147.18 **N8EAD**	**15** **Dayton Hamvention** Anatolian RTTY WW Contest ARCI Newcomer's Run Manchester Mineira CW Contest Portuguese Navy Day HF Contest US Counties QSO Party, SSB
16 **Dayton Hamvention**	**17** COLUM. COUNTY TRAINING NET 8:00PM	**18** STARK COUNTY ARES NET 7PM 147.120 NORTHERN COLUMBIANA ARES NET 9PM 147.255	**19** CARROLL COUNTY NET 8:00PM 147.075 **TWENTY OVER NINE ARC VE, YOUNGSTOWN, OH**	**20** AARC NETS 8:00, 8:30, 9:00 **MAHONING VALLEY ARA VE, YOUNGSTOWN, OH** QCWA Net 7:30 RSGB 80m Club Championship, CW	**21** MASSILLON NET 8:00PM 147.18	**22** 2 GHz and Up Contest VK/Trans-Tasman 80m Contest, Phone
23 **WARREN ARA VE, NEWTON FALLS, OH**	**24** AGCW Activity Week COLUM. COUNTY TRAINING NET 8:00PM	**25** STARK COUNTY ARES NET 7PM 147.120 NORTHERN COLUMBIANA ARES NET 9PM 147.255	**26** CARROLL COUNTY NET 8:00PM 147.075	**27** AARC NETS 8:00, 8:30, 9:00 QCWA Net 7:30	**28** MASSILLON NET 8:00PM 147.18	**29** **CANTON ARC/ MASSILLON ARC VE, CANTON, OH** CQ WW WPX Contest, CW Great Lakes QSO Party
30 ARCI Hootowl Sprint **Franklin County Hamfest, Columbus, OH**	**31** COLUM. COUNTY TRAINING NET 8:00PM MI QRP Memorial Day CW Sprint					

A jumper cable walks into a bar. The barman says "I'll serve you, but don't start anything."

SPECIAL
SERVICE
CLUB

Alliance Amateur Radio Club
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Alliance, OH 44601

**Jason Bowling, KB8RNU and Will Sebastian, KC8UIR describe APRS,
the Automatic Position Reporting System, which uses GPS technology
and Packet Radio to allow others to track your position in real time.**