



The Feedline

Newsletter of the Cass County Amateur Radio Club, Logansport, IN



W9V marks CCARC's 50th

The Cass County Amateur Radio Club celebrated its 50th anniversary as a public service organization with everything from a special event station to reminiscing among the club's older members.

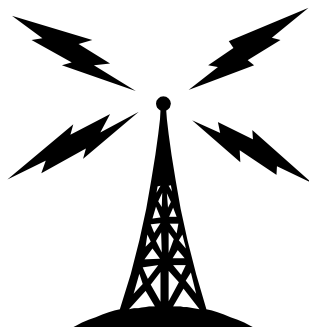
W9V went on the air at the club station at Noon following the regular club meeting on October 18th.

A new multi-band dipole was installed for the event, but will remain up for the regular use by the club station, W9VMW. The antenna project was headed by Phil, W9LVY, and Don, K9EQT.

The special event station made contacts with

around 50 stations around the country, operating SSB on 20 and 40 meters, plus VHF FM.

Hams who contacted W9V will receive a colorful certificate to commemorate the event.



W9V operated for several hours October 18 to commemorate the CCARC's 50th.

Prominent members

Some former and current members have been well known in their fields. The late Bill Wells, WA8HSU, was credited with the design of the first intermittent wiper circuit for automobiles. Bill also started the club's testing program.

Don Hyman, K9EQT, is known for his expertise in satellite equipment, and Kent Castle has been active in NASA at the Johnson Space Center.

The late John Frye, W9EGV, wrote the "Carl and Jerry" stories for *Popular Electronics*.

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Club started with a vision

It was May 1953 when a dozen area radio enthusiasts gathered to form the Cass County Radio Club. All that was required was an interest in wireless communications.

From these small beginnings grew an organization

that has provided public service in many community events, including the Iron Horse Festival, the 1974 Monticello tornado disaster, and is still regularly active in weather spotting and amateur radio testing.

Club members activated

the first repeater in the late fifties, which spurred a growth in membership.

Club meetings have occurred in many places including the city building, the county highway garage, the public library, and Harvey's Restaurant.

Special points of interest:

- The "Cass County Radio Club" first organized in May, 1953.
- "Amateur" was added to the name years later.
- For over 40 years the CCARC has maintained up to three active repeaters on VHF and UHF.

IS BPL an out-dated mode for wideband?

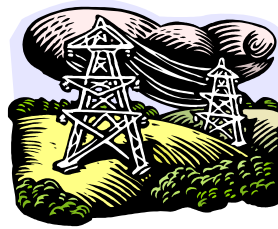
Amateurs have been greatly concerned about the potential interference that could be caused by the implementation of technology known as Broadband over Power Lines, or BPL. But two communities are showing that this technology may already be out-of-date.

Owensboro, KY, is not especially famous for anything. Nor is it the kind of place where you'd expect to find a roll-out of new technologies.

But in October, 2002, that's just

what happened. The Owensboro Municipal Utilities fired up its high speed broadband service at only a few dollars a month more than existing dial-up service.

It wasn't the speed of the new service that got attention but the way the bits were delivered - wirelessly, at least for the last critical



BPL might be outmoded before it really begins.

mile to customers' homes.

A start-up company in Klamath Falls, OR, also started a similar project.

BPL wouldn't be needed if this technology spreads. Much cheaper than copper wire, such networks could reach rural customers at a cheaper rate than DSL.

The customer would pay the cost of equipment like modems and antennas.

MANs use new 802.16 technology

The new IEEE 802.16 standard could do for cities, villages and neighborhoods what 802.11b did for coffee shops, airports and homes.

The standard specifies the Wireless MAN Air Interface for wireless metropolitan area networks (MAN). The standard, published in 2002, was created in a two-year, open-consensus process by hundreds of engineers

Wireless broadband would greatly reduce the costs currently connected with copper wire networks especially with the "last mile."

from the world's leading operators and vendors.

IEEE 802.16 addresses the "first-mile/last-mile" connection in wireless metropolitan area networks. It focuses on the efficient use of band-

width between 10 and 66 GHz and defines a medium access control (MAC) layer that supports multiple physical layer specifications customized for the frequency band of use.

A WISP of an idea

Wide Internet Service Providers (WISPs) can operate much more cheaply than DSLs. A single base station, typically located on a cellular tower or rooftop, connects an end user's devices to the Internet (IP core, core servers) via a terminal. In some systems, the terminal has an external antenna; in others, such as the

one shown, the antenna and a modem are combined in a single device that can be connected directly to a laptop [as above], PC, or an IEEE 802.11 home router. If the wireless connectivity is also used for voice service, a transfer point, or gateway, into

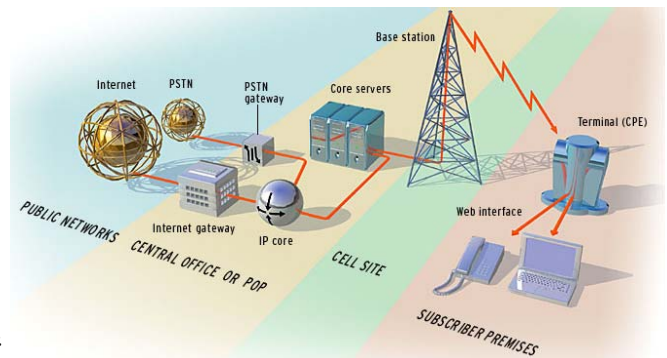


Illustration by Bryan Christie

the public service telephone network (PSTN) is needed as well.

IEEE Spectrum

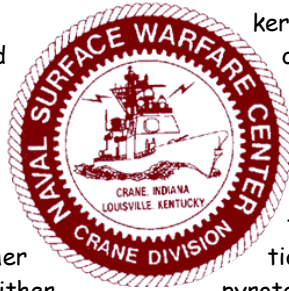
Indiana base vital to Navy mission

Most people have heard the story of the rescue of PFC Jessica Lynch during the Iraq war. But few people know that most of the gear used by her Navy SEAL rescuers was either developed or procured by engineers at the Naval Surface Warfare Center in Crane, IN.

The Crane facility is the third largest US Naval facility in the world covering 62,609 acres, of which nearly 49,000 are forested. NSWC Crane looks more like a national forest than the cradle of naval technology stewardship. Wild turkeys and deer dot the landscape. Trees, lakes, and pastures span the 100 square mile territory.

Why so large? The vast network of 1,700 munitions bunkers, built well away from one another, need space to avoid an explosive chain reaction, were an accident to occur.

In addition to the munitions bun-



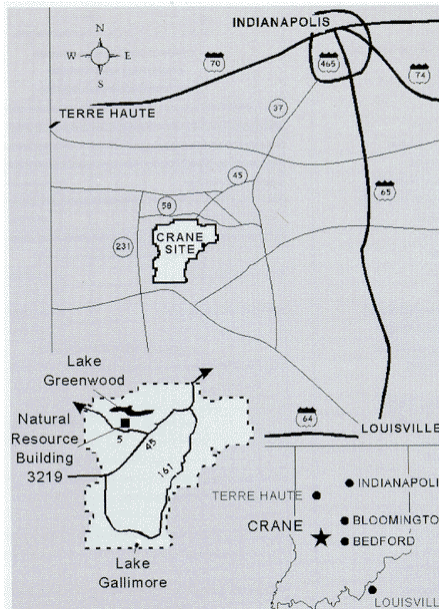
kers, Crane boasts a labyrinth of buildings dedicated to researching and developing batteries, radar systems, night vision sensors, chemical and biological detection, small arms, radiation hardening equipment, pyrotechnics, microwave tubes,

and printed circuit boards.

With approximately 3,200 employees, Crane provides technical support for almost every ship, submarine, aircraft, and missile system in the Navy, and has an annual payroll of around \$250 million per year. Three-quarters of the employees are scientists and engineers, who research and develop new technology. Crane also brokers deals with defense subcontractors.

Why would the Navy build a supply center hundreds of miles from the ocean? Indiana was chosen for several reasons, not least of which was that it was out of range of German bombers and saboteurs during World War II. In addition, the site is isolated from large, urban areas, and southern Indiana's forested, hilly terrain is perfect for storing explosives.

Crane also is home to several thousand acres of White Oak timber, carefully set aside and managed to provide a source of oak for future restorations of the USS Constitution.



NSWC Crane is located in Martin County

Indiana Daily Insight

Giant solar storms disrupt ham bands

One of the most powerful solar flares ever recorded erupted October 29th near giant sunspot 486. The explosion hurled a coronal mass ejection (CME) directly toward Earth. Bright auroras appeared when the fast-moving cloud swept past Earth.

High-latitude sites such as New Zealand, Scandinavia, Alaska, Canada and US northern border states from Maine to Washington were favored, as usual, to see auroras but they de-

scended to lower latitudes, too.

Not all CMEs trigger auroras. Several, for instance, have swept past Earth in earlier days without causing widespread displays. It depends upon the orientation of tangled magnetic fields within the electrified cloud of gas. This CME was no exception.

Ham band communications were severely interrupted for several days on frequencies from HF to VHF. The conditions were experienced as noise

on amateur bands and if signals were heard, there was a fluttering quality to the audio.

info from
Space Weather



Major solar storms at the end of October disrupted ham and commercial communications.

Cass Co. Amateur Radio Club

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The Cass County Amateur Radio Club is an Indiana Not For Profit Corporation in continuous existence since 1953.

We're on the web!
www.culcom.net/~ccarcinc

Bits, bytes and beyond

- ① Being average makes you as close to the bottom as to the top.
- ① An average full size tree can produce as many as a quarter of a million leaves. It's also believed that leaves may actually multiply as they fall to the ground.
- ① Former ARRL Indiana Section Manager, Peggy Coulter, W9JUU, of Muncie passed away in October.
- ① More than 200 hams have assisted firefighting efforts in California by providing emergency communications. Hams have provided

logistic support using FM, HF and SSTV modes.

- ① The Dayton Hamvention will be at Hara Arena for at least one more year. Gary Des Combes, N8EMO, General Chairman, says the dates are May 14 - 16, 2004.
- ① The ARRL will offer a free Amateur Radio Emergency Communications seminar Friday, November 14, in conjunction with the Fort Wayne Hamfest & Computer Expo, starting 1 PM.
- ① The CCARC currently has openings for new members!

Repeaters

Primary repeaters operate on 147.180 MHz, and 443.650 MHz. The VHF repeater is located at the Chase Park water tower with an open receiver. Additional receive sites are located at the Cass County EMA building and in Delphi. These are accessed with a 77 HZ sub-audible tone. The UHF repeater is located at the EMA building. The VHF transmitter also transmits a 77 Hz tone. Setting your receiver to *decode* will reduce unwanted signals. A second VHF repeater located at the Logansport Municipal Airport operates on 145.230 MHz. Autopatch is available on the main VHF repeater to members. Repeaters may be out of service from time to time for repairs or upgrades. The club station is W9VMW.

CCARC Meetings

Meetings are held the third Saturday of each month at 9:00 AM at the Cass County Emergency Management Agency building, 2 miles North of Logansport on SR17. Dues are \$15.00 per year. Immediate family members may join for an additional \$5.00.

Amateur License Tests

Test sessions for all classes of amateur radio licenses are offered the first Friday of each odd month at 6:30 PM at the Cass County EMA building, 2 miles North of Logansport on SR17. Pre-registration is not necessary.

Cass County Amateur Radio Club Officers

President: Don Hyman, K9EQT

Vice President: Todd Ervin, N9PVQ

Secretary: Tom Murray, KB9WSL

Treasurer: Dave Wandrei, N9WCQ

Directors At Large:

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Testing Coordinator:

Don Hyman, K9EQT

Emergency Coordinator:

Todd Ervin, N9PVQ

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