Northwest Indiana DX CLUB

Volume 4, Issue 9 September 2016

President's Corner

The next meeting is September 24th at Noon (CST).

Location is the Viking Chili Bowl on Highway 30 in Valparaiso.

Jerry, W9KTP will have a presentation for us to watch.

Hope all members can attend, as this may be the last one before winter sets in unless we have a mild November.

73

John, W3ML

Happy DXing!

Inside This Issue

1 President Speaks
2- Member News/DX News

Don't Forget

DXCC CARD CHECKING

Doctor Richard Lochner, K9CIV has been appointed an Official ARRL DXCC Card Checker. Contact Rich to schedule an appointment for card checking.

You may email him at k9civ@arrl.net for details on how to mail your cards to him, if you desire to go that route.

NWI DX Club Website

http://nwidxclub.weebly.com/

Member News

If you have any news to tell, please send it to me so I can send it to the group.

Hamvention

(previously known as the Dayton Hamvention)

From the Ohio/Penn DX Bulletin No. 1279

HAMVENTION (More Details in a Video!). Tim Duffy, K3LR, from DX Engineering, recently visited (on August 11th) the new site/venue for the 2017 HamVention at the Greene County Fairgrounds and Event Center in Xenia, Ohio. In a YouTube video, Tim interviews Michael Kalter, W8CI - Treasurer of the Dayton Amateur Radio Association (DARA) as well as taking video and pictures of fairgrounds. The purpose of the video is to show everyone what this new site/venue has to offer and provide to hams for this special event as well as all the hard work and planning that goes on to make it happen. Take a look at the video and see what is coming for the 2017 HamVention at:
https://www.youtube.com/watch?v=FXXl18G0QA0

Goodbye Copper-Hello Bacteria
New Technology

By Steve Mollman-KD9HL

Every time I read of some new technology in electronics I think "Wow, what will they think of next".

From the days of Marconi and the spark gap transmitters, through the vacuum tube, transistors and today's microchips there has been a constant drive to reduce the size of the components and hardware. Components have got so small that today many home-brewing amateurs are having difficulty making their peace with the rice-grain sized surface mounted devices (SMD). To build gear using SMDs requires a steady hand and a magnifying glass without mentioning the soldering iron and techniques necessary. There have been almost as many articles written on SMD construction as there have been for attaching coax to a PL-259 connector.

Now there is a new threshold on the miniature horizon. Bugs, germs or bacteria! The news media[1] reports that scientists at the University of Massachusetts[2] have developed bacteria that can produce ultra-tiny electrical conducting wires. The scientists use " *Geobacter metallireducens*" a genus of proteobacteria. Geobacter was first discovered in the 1980's in the silt of the Potomac River just downstream of Washington, DC.[3] This is the same bacteria that is now used to clean up oil spills and radioactive contamination. It eats up the bad stuff and converts it into carbon dioxide. While eating contaminants, the bacterium grows electrical conducting filaments.

By using a simple genetic modification, the size of the filaments was reduced to about 60,000 times thinner than the human hair and conductivity was increased 2000 times. The new bacterium is called "*Geobacter sulfurreducens* ". The extremely short filaments, a trait necessary for miniaturization, can be knitted together into longer lengths by embedding them in resins or plastic.

Besides being conductive, the filaments have properties that enable them to function as transistors or capacitors.

Since Geobacters can feed on nearly any kind of biological waste (think sewage), the environment could benefit, and fewer rare and often toxic metals[4] would be needed for electronics.

The first uses of what are now called "biowires" are expected to be in the medical field as monitoring sensors implanted in the body.

Making things smaller is here to stay. Look at cell phones. My first one was the size of a brick. The one I have today is slightly larger than a credit card. While the use of this technology is probably years in the future, a thought is that to homebrew something, the builder will have to have access to an electron microscope.
For more information: Google "Synthetic Biological Protein Nanowires with High Conductivity".

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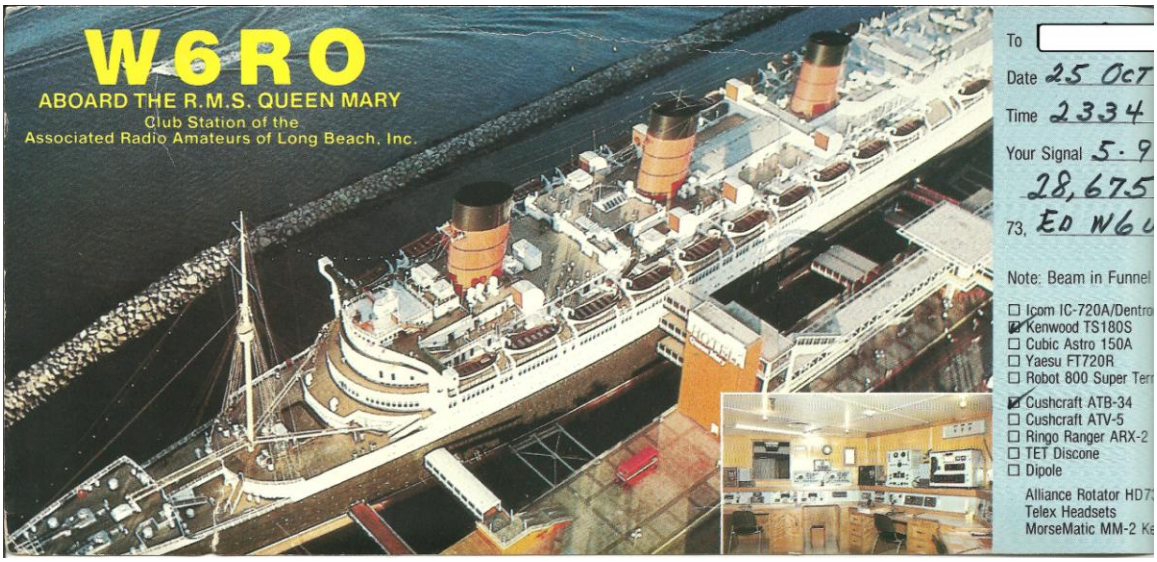
[1] Wall Street Journal, July 30, 2016.
[2] "Synthetic Biological Protein Nanowires with High Conductivity" by Yang Tan and Derk Lovley with other co-authors. University of Massachusetts – July 13, 2016.
[3] Tongue in Cheek-Some wags claim this bacteria had its origins as away for nature to deal with waste of our Federal Government's bureaucracy. Garbage In-Garbage Out!
[4] Examples are the refining of Gold, which requires the use of large quantities of Cyanide. Copper production often releases highly acid particulates into the atmosphere. These particulates often contain arsenic (cumulative poison), cadmium (heart disease), and mercury (nerve damage). Gallium in some compounds is a known carcinogen.

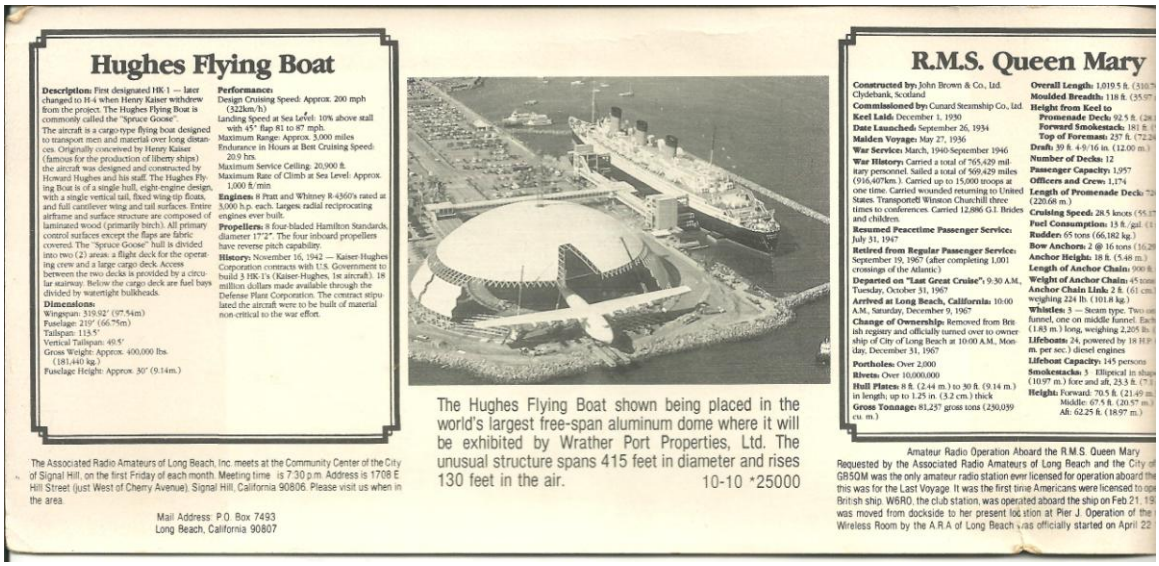
QSL Card of the Month

A collection of the old, the new, the rare, the exotic or just interesting QSL Cards

W6RO – RMS Queen Mary

Club Log 2016 Most Wanted Rank: Not Applicable
CQ zone: 3 ITU Zone: 6
Continent: NA
Primary prefix: W
Location: 33.77° N, 118.19° W
Beam Headings from Northwestern Indiana: 263°/82° 1782 mi / 23075 mi





This month's card is not DX but is an interesting and unusual example of a QSL card..

One of the most luxurious ocean liners ever to sail the Atlantic, the RMS Queen Mary is a piece of floating history. She played hostess to the rich and famous during the 1930's, transported more than 800,000 service men during WWII as the legendary "Grey Ghost", and served as a means of transportation for many of the European war brides coming to America and Canada before resuming her status as a luxury liner. In 1967 she was retired. Today the RMS Queen Mary is an elegant hotel, meeting place and tourist attraction in Long Beach, CA. In 1993, the ship was included in The National Register of Historic Places.

The "Gray Ghost" nickname came about because of the color she was painted after conversion to a troop carrier at the beginning of World War II. During the war the ship carried as many as 15000 troops at one time with speeds averaging up to 35 MPH (57 km/h – 30.4 Knots). Because of the high speeds, she often traveled without an escort or convoy protection, successfully avoiding the German submarine wolf packs.

The RMS Queen Mary's original radio room was removed when the ship was moored in Long Beach. In its place, an amateur radio room was created one deck above the original radio room. Some of the discarded original radio equipment is used for display purposes. The amateur radio station, with the call sign W6RO, relies on volunteers from a local amateur radio club, "The Associated Radio Amateurs of Long Beach" to staff the radio room during most public hours. Other licensed amateur radio operators can also use the station.

The reverse side of this QSL card includes an overview showing Howard Hughes' famous "Spruce Goose" seaplane. This was a co-attraction for many years. In 1992 the owners of the Spruce Goose, the Aero Club of Southern California, sold the plane and it was removed to the Evergreen Aviation & Space Museum in McMinnville, Oregon.

- 73's and Good DX -

Steve Mollman-KD9HL

Handy Hint

Ladders

By Steve Mollman-KD9HL

While hardly considered an essential part of the ham shack or ones electronic arsenal, ladders are often needed for the installation and maintenance of gear such as antennas. One challenge almost all ladder users face is what to do with the small parts and fasteners that are part of the equipment being worked on. Put them in a pants pocket and try to fish out the correct one later? Put them on the top step where they will eventually fall off on to the ground and get lost in the grass? Both options are irritating.

It seems that modern stepladders no longer have a fold-down shelf, but manufacturers have seen fit to mold into the top step a number of holes and slots for holding tools. These work well for holding screwdrivers, wrenches and other needed tools. Werner, a major ladder manufacturer, even includes a "depression" for holding those elusive screws and parts. The problem is that it is almost useless because of its shallow depth and small size.

A solution is to attach a small food container to the top step. Then you will have a place for those tiny screws and small parts and they won't roll off and fall to the ground. I used "Shoe Goo®" repair adhesive to hold the container to the ladder. Sheet metal screws or machine screws could also be used.

An alternate location could be the first step from the top of the ladder. Manufacturers warn against standing on this step, so it is available for other uses.

Another tip is to mark the center of gravity of your ladders. Either paint a small stripe or use bright tape at that point. This is particularly handy when you are alone and trying to carry a long extension ladder. Just grab the ladder at the marked point and it will be balanced.

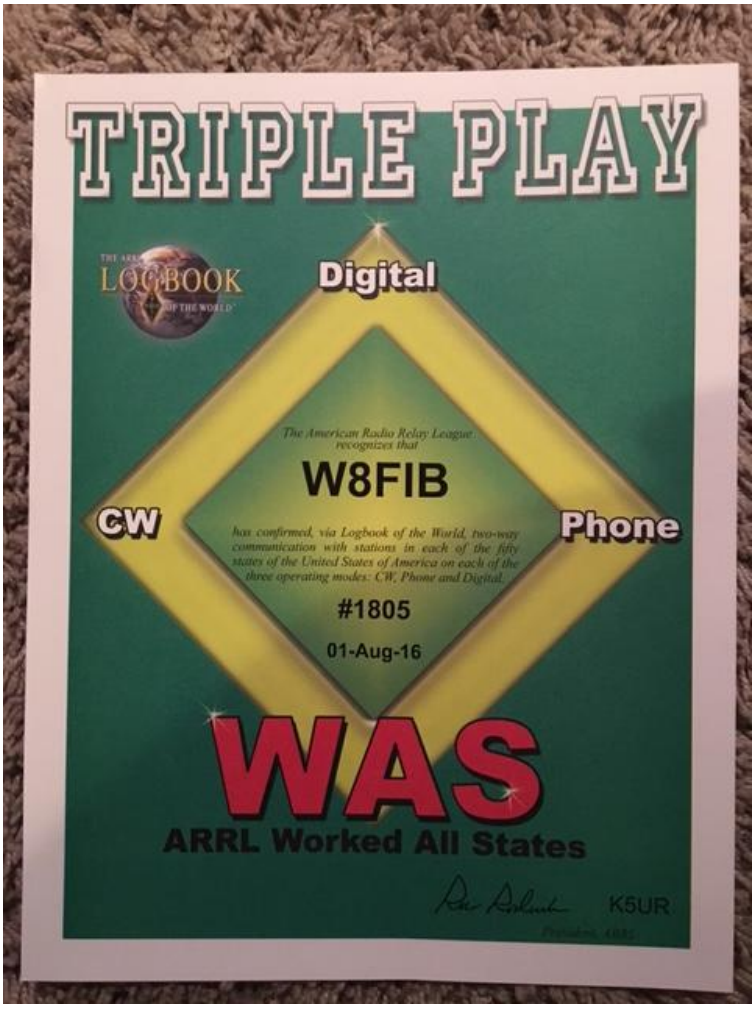
β 73's and good DX β

Here is a video on antenna making.

For years now Hams and Shortwave Listeners have been building antennas out of that great American toy: The Slinky. In this video we string two out to form a dipole and hook them up to SDRPlay's RSP software defined receiver. It works pretty good!

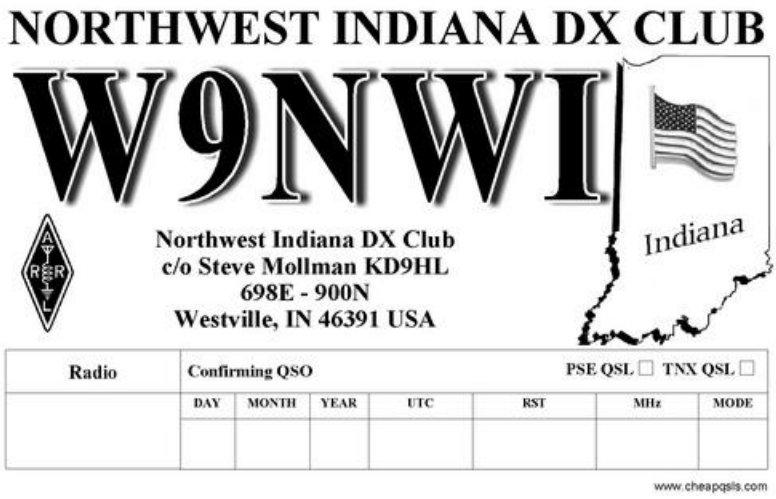
http://qrznow.com/sdr-receiver-with-a-slinky-antenna/

Tom, W8FIB received his Triple Play Award. Congratulations!



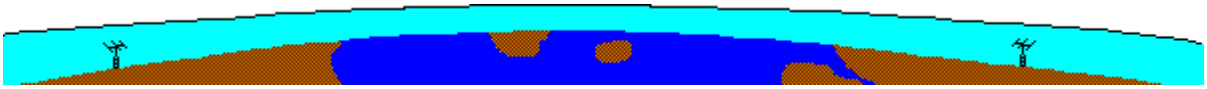
Wish everybody followed it.

Make your own QSL Cards - http://www.radioqth.net/qslcards



I want to thank those that have been sending in articles for the newsletter. All items are appreciated.

Don't forget to send in any information you would like to share with the Club members.



Until Next Time,
73
John
W3ML

http://nwidxclub.weebly.com/