

Big Rapids Area Amateur Radio Club

April 2011

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President's Message

If you missed March's club meeting, you missed a good chance for fellowship and an interesting program.

Todd Price, Executive

Director for the local American Red Cross, gave a very interesting and interactive presentation on their services and potential partnerships between the Red Cross and our club. Todd provided a lot of information and gave us some handouts to peruse.

David Huhtala (KC8WGA) did a Tech Corner on CoCoRAHS (Community Collaborative Rain, Hail and Snow Network). David showed us some of the gauges he uses to collect rain and other samples. He also showed us a five-minute video on how people participating in CoCoRAHS report their observations. Thanks to David, for an informative update on an important organization that supplements data for the National Weather Service.

Your Board of Directors met before the meeting at Vivo's Italian restaurant. Unfortunately, we did not have a quorum to take action on anything. However, those of us in attendance (the McKays, Bev, Gregory Woolen, Jens) seemed to enjoy the food and



What do you mean it's spring? 3-23-11

company. We will be doing this again before the April meeting.

Thanks to David Huhtala (KC8WGA) we had a summary of last year's club activities in the February newsletter. Good job, David. Thanks to the McKays for bringing refreshments to the March meeting. Thanks to Patricia McKay (KD8GGD) for continuing to do the 50-50 raffle for the club.

As many of you might know, David Huhtala will be leaving Big Rapids in two weeks to begin basic training for the U.S. Air Force. David has been a very active member of the club participating in a variety of activities. Most recently he coordinated the Youth Activities for the club. He has conducted many nets on both active club repeaters. David began broadcasting the Amateur Radio Newsline on

our two meters repeater. He is a fine young man with impeccable character. He will be sorely missed by all who know him!

(enter from the side door – not the front door).

I hope to see you at the next club meeting on Thursday, April 7th at the Big Rapids Department of Public Safety. This should be the last time that we will be in the back section

73s,

Jim
K4UIH

Announcements:

Sat, April 2, 9:00am – 10:30am

at Sharon's restaurant in Rogers Heights. Talk-in on the 146.740 Big Rapids 2-meter repeater for anyone needing directions.

Thu, April 7, 7pm – 9pm

435 N. Michigan Ave, Big Rapids, Mi 49307. Next BRAARC club meeting Thursday at 7 p.m. at the Big Rapids Department of Public Safety Building, 435 N. Michigan in Big Rapids. Presentation Topic: TBA

Sat, April 9, 9am – 10am

VE Testing - <http://kc8yyp.angelfire.com> . See website for information: request pre-registration 7 days in advance for testing. Testing in canadian lakes. See website for details, maps and contact points. Thanks N8ERV VEC

Brain Teaser — WA4FRJ - March

During last summer's Brain Teaser soccer competition, 5 schools were competing. Each school played each other once, with 2 points for a win, 1 point for a draw, 0 points if they lost. Here are the final points after all of the matches:

Big Rapids	6
Reed City	5
Cadillac	4
Morley	2
Rodney	?

How many points did Rodney end the season with? (Hint: Figure out how many games were played. After that it's easy!)

The answer is 3.

There were 5 teams therefore a total of 10 games took place. Hence Rodney's points must take the total to 20 as every game will contribute 2 points. i.e. if a team wins it gets 2 points, if there is a tie each team gets 1 point.

The Lost Art of Cable Lacing

By Dan Romanchik, KB6NU

The Make: magazine blog is a wealth of information for amateur radio operators. Recently, they ran a post on what they consider to be on the "lost technology" of cable lacing <<http://blog.makezine.com/archive/2009/07/lost-knowledge-cable-lacing.html>>.

The blog post does a great job of explaining the technique and includes several illustrations. One of them

<http://cdn.makezine.com/make/blogs/blog.makezine.com/upload/2009/10/lost_knowledge_cable_lacing/cableLacing6b.gif> is a drawing from an old ARRL handbook. There are also a link to the Wikipedia page on cable lacing <http://en.wikipedia.org/wiki/Cable_lacing>.

Nowadays, we mostly use zip ties to bundle cables, but there are disadvantages to using them. For one thing, to apply them properly, you should have a tool that controls how tightly the zip tie holds the wires. This is to prevent crushing the insulation.

Also, I've found that zip ties don't do so well when the cable has only two or three wires. They're just not designed to hold so few wires. I think that cable lacing would do a much better job of keeping a small bundle of wires together, say wires that connect front panel components to a PC board.

Cable lacing certainly looks much cooler than zip ties. This is the perfect technique for those homebrewers that want to make their projects look great as well as work great.

I asked on my blog, "Now, where can I find the 'wax-impregnated cotton or twine'?" and my readers came through. Hamilton said, "Apparently you find wax string here: <http://www.kitkraft.biz/product.php?productid=1496>. I remember using it for something as a kid, but I can't place it." Ron McKenz wrote, "I notice that a number of telco vendor sell waxed lacing cord. Here are a few URLs: <http://www.sourcetelsupply.com/catalog/index.php?cPath=27>, <http://www.tessco.com/yts/resourcecenter/pdfs/clablelacing-FAQ.pdf>, and <http://www.oelsales.com/product.cfm/267/>."

Ned, WB4KBO, said, "I would suggest a large roll of dental tape and a large-diameter curves sewing needle for fabricating harnesses. I was told that this was the material of choice for lacing harnesses when i worked at Heath Company many years ago. Makes sense to me. Buy it at Meijer for an occasional harness, or a dental wholesale supply house if you are going into production. Also great stuff for kite rigging, vine lacing and many other things."

Mike, WA6ARA wrote, "What you want is Mil-T-43435. It is better than a cord, it is a flat weave tape, nylon, and waxed. It is made for cable lacing but is use now in the parachute industry as "super tack". Item T1050 at <http://www.paragear.com>"

So, there you have it. Links to show you how to do it, and a couple more links for where to find the lacing material. I now expect all of our homebrew to look a lot neater.

From MTU research magazine. Copy submitted by Phil, KC8QOV.

Sharing the spectrum: the polite world of cognitive radio

Suryabh Sharma is working on the wireless communication system of the future, where there are no dropped calls and you can download your favorite movie in no time at all. “The fancy name for these is cognitive radio networks,” says Sharma, who is earning his master’s degree in electrical engineering. Up until now, wireless systems have been, well, non-cognitive. Sharma explains. “For all our wireless communications, we have a radio spectrum in a range of frequencies. The Federal Communications Commission (FCC) has divided these into small bands, one for radio, one for TV, for amateur radio, etc. If you monitor each of these bands, you can see we are not using them to their full capacity.”

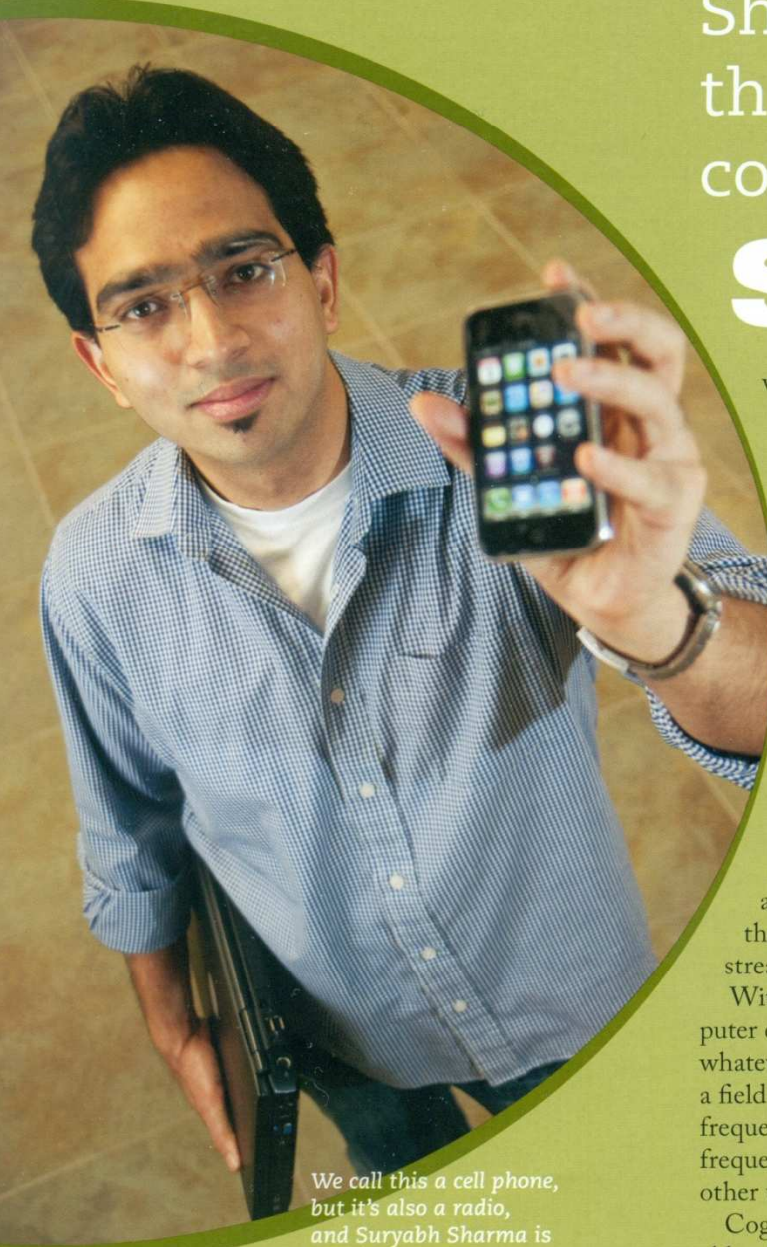
Sometimes, however, they are completely full, and that’s when the system breaks down. “If there is high traffic on the band I’m using to watch a video on my cell phone, then it will be fragmented,” says Sharma.

For the moment, there’s nothing that can be done about that fragmented video; all WiFi transmissions must use the 2.4 gigahertz band. Now, the FCC is looking at changing the rules to allow so-called cognitive radios to transmit on different bands, such as those used for television, on a space-available basis. For example, if the band used by cell phones is experiencing high traffic, a phone could stream video by selecting an underused band.

With his advisor, Zhi Tian, an associate professor of electrical and computer engineering, Sharma is investigating ways for cell phones, iPads, and whatever new wireless devices arise to share the radio spectrum efficiently, a field known as resource management. Devices must identify the radio frequencies that have room for more traffic, switch their own transmission frequencies, and somehow manage to negotiate for space with thousands of other users.

Cognitive radio networks will have to take into account multiple variables, including the location of users and their patterns of use, issues that Sharma is investigating in his research.

It’s a complicated problem, Sharma says, but one that can’t be ignored. “With the number of users growing, we’ll have to come up with some sort of intelligent allocation,” he says. “It’s all about optimization.” ■



We call this a cell phone, but it’s also a radio, and Suryabh Sharma is studying ways to help it navigate the airways and broadcast more efficiently.

RYAN SCHUMACHER PHOTO

This up-and-coming technology will allow new, intelligent devices to pick the best radio frequencies for transmitting information, from text and email to voice and video.

Weather Words

David, KC8WGA

This Month in Pictures

A Swan Takes Flight!



Icy Spikes



The Gods of the Copybook Headings

by Rudyard Kipling, 1919

AS I PASS through my incarnations in every age and race,
I make my proper prostrations to the Gods of the Market Place.
Peering through reverent fingers I watch them flourish and fall,
And the Gods of the Copybook Headings, I notice, outlast them all.

We were living in trees when they met us. They showed us each in turn
That Water would certainly wet us, as Fire would certainly burn:
But we found them lacking in Uplift, Vision and Breadth of Mind,
So we left them to teach the Gorillas while we followed the March of Mankind.

We moved as the Spirit listed. They never altered their pace,
Being neither cloud nor wind-borne like the Gods of the Market Place,
But they always caught up with our progress, and presently word would come
That a tribe had been wiped off its icefield, or the lights had gone out in Rome.

With the Hopes that our World is built on they were utterly out of touch,
They denied that the Moon was Stilton; they denied she was even Dutch;
They denied that Wishes were Horses; they denied that a Pig had Wings;
So we worshipped the Gods of the Market Who promised these beautiful things.

When the Cambrian measures were forming, They promised perpetual peace.
They swore, if we gave them our weapons, that the wars of the tribes would cease.
But when we disarmed They sold us and delivered us bound to our foe,
And the Gods of the Copybook Headings said: "*Stick to the Devil you know.*"

On the first Feminian Sandstones we were promised the Fuller Life
(Which started by loving our neighbour and ended by loving his wife)
Till our women had no more children and the men lost reason and faith,
And the Gods of the Copybook Headings said: "*The Wages of Sin is Death.*"

In the Carboniferous Epoch we were promised abundance for all,
By robbing selected Peter to pay for collective Paul;
But, though we had plenty of money, there was nothing our money could buy,
And the Gods of the Copybook Headings said: "*If you don't work you die.*"

Then the Gods of the Market tumbled, and their smooth-tongued wizards withdrew
And the hearts of the meanest were humbled and began to believe it was true
That All is not Gold that Glitters, and Two and Two make Four
And the Gods of the Copybook Headings limped up to explain it once more.

As it will be in the future, it was at the birth of Man
There are only four things certain since Social Progress began.

That the Dog returns to his Vomit and the Sow returns to her Mire,
And the burnt Fool's bandaged finger goes wabbling back to the Fire;

And that after this is accomplished, and the brave new world begins
When all men are paid for existing and no man must pay for his sins,
As surely as Water will wet us, as surely as Fire will burn,
The Gods of the Copybook Headings with terror and slaughter return!

Submitted by: David, KC8WGA.

Don't know what copybook headings are? Students in England during the early 19th and late 20th centuries, used to practice their handwriting with copybooks. At the top of each page there would be a perfect example of how to write something, called copybook headings. With this in mind, the student would copy that statement over and over again on the page. Some examples of these copybook headings would be, "Water will certainly wet you," Fire will certainly burn," or "All that is gold does not glitter." In addition, these headings are known as common truths that will always be around no matter what. (sources: eliteskills.com, thepoliticalforum.com)

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FOR SALE:

Icom 2 meter transceiver. RX 136-174 Mhz and TX 144-148 Mhz. 6 watts on high power. 1 watt on low power. Use rechargeable Ni-Cd or alkaline batteries. \$60 or best offer. Contact Jim Woolen, K4UIH.

