"KAR" SPECIAL ON BPL
Kansas Amateur Radio
Serving our communities via Amateur Radio
orlan@postcomp.com February 2005 Special w0oyh@arrl.net

----- Original Message -----  
From: James Tuggle  
To: orlan@postcomp.com  
Sent: Thursday, February 17, 2005 4:24 PM  
Subject: FW: RE: BPL Communications  

Guys,

This BPL issue is becoming a monster with a whole new life of it's own. I am forwarding this for information purposes. Bret and Orlan; feel free to use any of this information in the newsletter's but be sure to credit the information source to me for legal purposes.

I'll keep you up on the next round of conversations. Thank you James for the BPL info and I will pass it along to our KAR readers. 73, Orlan w0oyh - KAR ed

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James kc0nyk@arrl.net  
From: Samuel.Stonerock  
To: "James Tuggle"
Subject: RE: BPL Communications
Date: Thu, 17 Feb 2005 14:03:50 -0800

I've enjoyed the exchange so far.. a few words if I may.

My current assignment and additional involvement with SC-8 (Alternate) and California's GO 95/128 Rules Committee (Chairman) requires the monitoring of new and developing technologies, including BPL, to assess the impact to SCE's construction methods, and inspection-maintenance programs. Traditionally, a percentage of [electric] utilities rush into every technological wading pool and splash about, others sidle up to dip their toes, while the majority avoids the commotion entirely and focuses on their core business. At this stage, it might be a good idea for members of all NESC subcommittees, especially SC-8, to do some basic research and get some global perspective, if they haven't done so already.

I've attached a link to one website that I frequent. You'll see that the smaller of California's three IOUs (SDG&E) is wading in while the larger (PG&E) took a quick dip and walked away.
http://www.broadbandreports.com/?cat=BPL

I agree with Mr. Kientz that worker safety is vital, however, the continuing evolution of BPL technology and instrumentation, not to mention ongoing legal and regulatory battles, might easily negate any intended value of a new or amended work rule if we act prematurely, which I think is Mr. Tuggle's point.

Sam Stonerock
Corporate Representative
T&D - PWRD - RPPM - M&I

From: "James Tuggle"
To:
02/17/2005 09:33
Subject  RE: BPL Communications

While still an advocate of advanced technology, the overwhelming evidence of BPL interference with existing communications is irrefutable. I think that NESC should stay out of the battle. This is an FCC enforcement issue as well as a political hot potato, to say the least.

James Tuggle
Malpasogroup
I understand Clay's point. I did not intend to sound quite so negative; however, I am concerned from the NESC side. What I am saying is that a though evaluation needs to be made prior to ammending the NESC. I have always been an advocate for new technology - but - only after due process.

The industry is already having maintenance conflicts with communications operators of PCS on power structures.

Hank

----- Original Message ----- 
From: Clayton King
To: 
Sent: 2/17/2005 8:32:39 AM
Subject: BPL Communications

Good morning to all: I am sending this mail in response to the extremely negative comments that Hank sent out. Broadband (Internet) Over the Power Line not just about $$$$. It is about bringing high speed internet to individual houses, in a safe manner. This is not something new.

Communications over power lines has gone on for years, utilities controlling switches in remote sites, etc. It should not affect worker safety. BPL only works when the distribution system is energized and operational. If the system is down and maintenance is required, then BPL is down also. If the system is energized and workers are doing maintenance they use procedures that protect them anyway.

The BPL signal is only a digital stream of 1 and 0s. It is low voltage. The safety issue has not been the utility worker, but the insulation level of the coupler that keeps the distribution level voltage out of the house, and off of the computer. If the coupler fails the computer is fried, possibly along with the computer user. I conducted the high voltage testing to develop the coupler for one of the manufacturers. They do work.

I have been actively involved in testing the equipment in the development stage and am now consulting on several test sites. There are several thousand active units in a large number of cities. Ameren (previously Union Electric) in St. Louis has a test site that has been in operation for several years. Charlotte, NC has a large site too. Philadelphia Electric has a site. They are reporting much success, and no safety issues. BPL has been in wide operation in the United Kingdom for several years, without complaints.

The issues that are of most concern is the possibility of high frequency radiation from the power line itself, as it transmits the digital signals. The 1 to 0 and 0 to 1 transitions operate very fast, similar to a square wave, and contain the high frequency components. The testing now going on is related to interference to amateur radio signals, emergency vehicle communications, radio controlled model
airplanes, etc. The FCC does not now, and will not in the future allow one frequency user to interfere with another. The law requires the interfering signal to be shut down immediately.

Yes, there is money to be made, but the utility becomes the internet service provider and it is the one making some of the money. This is definitely a step in the right direction to bringing high speed internet to individuals, at a cost that is much cheaper than the high price of telephone company DSL networks now. I wish it were available here. And yes, safety is of prime importance, for both the utility and the household. These issues are being actively addressed by way of standards, NESC, etc.

BPL is still in the development stage. Let's get the facts before we shoot a new technology down.

Clay King

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