Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 15 regarding new	)	ET Docket No. 04-37
requirements and measurement	)	
guidelines for Access Broadband over	)	
Power Line Systems	)	

REPLY COMMENTS ON NOTICE OF PROPOSED RULE MAKING

To The Commission:

I have a bachelor of science in electrical engineering, have in the past worked for a power and distribution transformer manufacturer, a manufacturer of amateur radio equipment, and a manufacturer of test equipment that makes in-house IC's, and I've been chief engineer for a couple AM radio stations while holding an FCC First Class Radiotelephone license. I have held an amateur radio license for over forty years, of the extra class for thirty. I've published articles in two ham radio magazines and one company newsletter. I've had my share of experience on the ham bands including Worked-All-States (WAS) and Worked-All-Continents (WAC) certificates using no more than five watts output from or ten watts input into my transmitter, many evenings operating HF portable in the parks, and pedestrian mobile on ten meters. I have come across and dealt with various noise and interference problems from Part 15 devices which I've either solved, compromised with, or moved away from.

Many radio spectrum users have sent in their comments either outright opposing the rollout of BPL or asking for tighter restrictions. Some BPL companies and sympathizers have lauded the NPRM except that they have misgivings about being able to protect the privacy of their clients and/or proprietary technology if they have to incorporate its operations in a database. I would like to reply to both sides of concern by taking a look at what happened to BPL in some other countries.

Several countries including Japan, Austria, Australia, the Netherlands and Great Britain having tried BPL——a.k.a. PLC——have either banned it or put it on indefinite hold. This reminds me of a story I heard from a friend whose friend's roommate had a serious problem. This gal had two red macaw parrots standing about two feet tall. Beautiful birds. She also had a boyfriend. Her boyfriend had an eight foot Burmese python. The python cost $300 but each of the birds was worth $3500.

The python slept in the nightstand in their bedroom which it accessed through a mouse-sized hole in the back. One day they went out and had left one of the parrots loose. When they returned there was no parrot, but the snake had this huge bulge in its stomach. The parrot's owner did not like that one least little bit, and the next day that snake was

gone. That reminds me of the fate of PLC in some countries. It wiped out HF communications, so they got rid of it.

Your NPRM seeks to accommodate it. Broadband over powerlines has a value just like that $300 python. I seriously doubt if it will be used to bring broadband to rural areas because of the prohibitively expensive hardware, and it is not needed to help provide a competitive environment for broadband services because there are already several competitive platforms in place or in development, but for the sake of argument, let's say it has some value like that $300 python. The HF to low VHF bands are truly valuable like that $3500 parrot. They would be sorely missed if they were unusable.

Okay, the approach of the NPRM is threefold. First, BPL service must stay within Part 15 emissions level while licensed services get to operate with higher power. Good start, the snake is on the floor and the parrot on the ceiling. One is low and the other high. What could go wrong?

The NTIA study has shown that peak levels at Part 15 limits are higher than expected. That snake can climb. Furthermore, as noted in the NPRM, some services operate with received signals right on the noise floor. With the parrot down there and the snake up here, we better have a backup plan.

And we do! It's called hunger mitigation where we systematically feed the snake mice to notch out its hunger, and we maintain a data base, a feeding schedule, so we can keep track of everything. That should work fine as long as we are sure to always get around to it. If the BPL companies do not notch out the frequencies being interfered with for whatever reason, then their service will do what hungry snakes do. We must actually do the work to mitigate that hunger in order for it to work.

That leaves us with the final fallback: the no-biting rule. BPL providers must not produce harmful interference. If the snake bites the parrot, we give the snake a slap and make it desist. Right! On the other hand if the parrot bites the snake, the reptile has to put up with it and not get mad.

I am hearing about one ham mobile operator who is being interfered with by BPL and the company's lawyer has said it is not *harmful* interference because a mile or so down the road he will be past it. Yes, and what happens when they expand their service to someone a mile along and another one after that? Each mile he will be past one and into the next, so while none is by that definition harmful interference, his operation has been swallowed up all the way down the road. That's the way it is when a python bites a bird, it isn't long before the whole bird gets swallowed down. Even a fixed station if it picks up slight interference from a BPL source, there will eventually be another source adding to that and another and another until he can't use the band. Random noise type signals tend to add. That's why interference must be stopped as soon as it starts in order for this rule to be effective at all.

And once the bird gets swallowed, the snake is not going to be inclined to unswallow it. If an inadequate Part 15 allows an interfering BPL system to get established, it might be really really hard to undo it, people wanting continued service and the providers a return on their investment.

The bird is understandably nervous but so is the snake. The snake doesn't like its loss of privacy by having its feeding schedule posted on the refrigerator door to remind its owner, his girlfriend, her roommate, or the housesitter or neighbor or relative who comes

to look after the place when and what it gets fed. The parrot's worries are bigger.

I suppose you've heard the story of the chicken who suggests to the pig that they donate a ham and egg dinner to the church, whereupon the pig replies, "To you it's a donation. To me it's a total sacrifice." Yes, an accessible database of a local BPL operation intrudes somewhat on the privacy of clients and business, and I don't think it should be any more intrusive than necessary. But as BPL has the potential here as seen in other countries of completely disrupting HF over-the-air usages, there is too much at stake not to follow all due diligence to prevent or remedy interference——if BPL is allowed to proceed at all, that is,——and that means some way of tracking what is being sent out by it over the air, which per the NPRM means a database.

Respectfully Submitted,
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