

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

In the Matter of

Carrier Current Systems, including Broadband over)
Power Line Systems)
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ET Docket No. 04-37

COMMENTS OF EVHEN TUPIS

<u>Topic</u>	<u>Table of Contents</u>	<u>Paragraph</u>
Executive Summary		1
Introduction		3
Item by Item Discussion		4
Suggestions for Rulemaking		12

Executive Summary

It is important to establish a moral compass as newly emerging issues such as Broadband over Power Lines (BPL) present themselves. This is especially important as carelessness may result in potentially dangerous precedent being established. My comments are grounded in a moral compass that is engendered by existing rules, their interpretation, reasonable accommodation or combinations of same.

My comments are intended to **support** the implementation of new consumer technologies, not to be a forum for nay saying or paranoid conjecture. I believe that there is room for properly implemented and regulated expansion of the state of the consumer art. *The most successful implementation, however, is one that focuses on attaining a stated goal while safeguarding the interests of existing services upon which consumers presently rely with a high degree of expectation and trust.*

Introduction

Comments will focus on the following issues:

1. The personality of BPL as an unintended ultra-wideband radiator.
2. The prior practice of protection.
3. The responsibility of mitigation.
4. Denial of service, right to swift action and compulsion to levy escalating fines.
5. A reasonable sunset clause in the case of unmitigatable interference.

Item by Item Discussion

The goal of the Broadband over Power Lines (BPL) service is the utilization of an existing infrastructure (power lines) for the purpose of delivering data-content to and from a service subscriber. It has never been billed as a wireless or freely radiating service. As such, leakage from the system is rightly considered an unintended byproduct – one that robs the BPL system of efficiency in its own operation.

BPL is likewise considered a wideband radiator. At this part of the RF spectrum, a single service that consumes 6 MHz of spectrum is unprecedented – let alone when the consumption of this amount of RF spectrum adds nothing to the quality of the service being provided.

Whereas BPL RF-emissions are considered unintended and non-contributing to the delivery of the service, there is little likelihood that the service provider will actively monitor the emission. This places BPL emissions in a category that could be described as “likely to cause interference” and the BPL service provider in the category of “having little motivation to mitigate” should such interference be uncovered. Neither condition prohibits the BPL service provider from delivering their product.

Given this environment, it becomes imperative that swift protection be afforded to those consumers who have already been granted Primary and Secondary allocations in this spectrum. This includes both those that transmit the RF as well as those that rely on those transmissions as passive consumers (such as short wave listeners).

Timely mitigation of any noted interference must be the responsibility of the BPL provider. Timeliness is the key. Anything less than immediate response to an interference report is not only unfair to duly licensed Primary and Secondary license holders but should be interpreted as a denial-of-service action-of-negligence. It must be the responsibility of the source of the unlicensed transmission to mitigate any interference that it causes, and do so hastily.

With the intent of assuring that BPL transmissions can be easily identified they should include a human-identifiable component. This is not unlike the requirement for licensed services to periodically suspend their activity to engage in “station identification”.

The price for ignoring the need to immediately mitigate interference should be substantial. The FCC standard appears to be \$10,000 per day, for every day of violation. Such a standard should be applied in this case as well.

At some point, a sunset clause should be applied. That is to say, should mitigation not be forthcoming, the source of the interference should be required to cease

operation until assurances that future operation can occur without revisiting the same interference issues.

Suggestions for Rulemaking

1. BPL must be self-identifying (even shortwave listeners should have a way to ID it).
2. Automatic Frequency Agility must be required. If a BPL system senses other users of the spectrum within which it is operating, the BPL systems should automatically relocate operation to another 6 MHz segment of the spectrum.
3. BPL systems must be required to automatically shut-down if all combinations of allowed operating frequency segments are tried-and-failed in conjunction with #2 above.
4. Should #3 occur, there should be a requirement of FCC notification. An engineering study must be submitted to the FCC prior to attempted BPL reactivation in the offending segment of line.
5. Establish a time-limit for the BPL provider to mitigate interference based on a formal notice of interference (in case the automated system is somehow ineffective). 24 hours seems like a good starting point.
6. Impose an upward-scaling punitive financial penalty structure. The "upward scaling" term refers to something on the order of the \$10,000/day for each day of interference, as opposed to a single \$10k penalty for the "interference event".

Such measures place the responsibility for maintaining a friendly RF environment upon the "newcomer". The assumption is that existing users are already peacefully coexisting.

If BPL is indeed a service that does not interfere (as the BPL proponents would argue), then these suggested rules will be moot as they will never need to be invoked. Conversely, should BPL indeed cause more interference than its proponents are willing to admit to, the above rules will serve as a motivation in assuring that existing licensed users are adequately protected.