

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Carrier Current Systems, Including)	ET Docket No. 03-104
Broadband over Power Line Systems)	
)	
Amendment of Part 15 Regarding New)	
Requirements and Measurements)	ET Docket No. 04-37
Guidelines for Access Broadband Over)	
Power Line Systems)	

To the Commission:

I. Background

I submit these comments, as a citizen concerned about public service, emergency and/or disaster communications on frequencies between 1.7 and 80 MHz, and as a Commission licensee of an amateur station. I have trained and been certified in emergency communications, including, but not limited to the incident command system.

The Commission should clearly instruct BPL providers in the non-interference requirements. BPL providers shall be required to release and promote their filings both through their offices and via a public database of their BPL liaison contact information, BPL system installations, interference complaints, and mitigations. This database should be publicly available and centrally maintained, preferably by the Commission in conjunction with the Department of Homeland Security. Interference complaints must be resolved in a clearly defined timetable, with sufficient regulation to facilitate resolution.

II. Emergency Communication can be hampered by interference.

With respect to emergency and/or disaster communications, the problem of interference can be obvious or subtle. Though the easily observable signs are an issue; the problematic interference involves the raising of the noise floor, either through emission directly on the frequency of concern or via harmonics and/or other mixing products. Such seemingly subtle interference will be difficult to diagnose quickly, and reduce the effectiveness of those frequencies, potentially rendering them unusable. Many emergency and disaster services operators are not trained in the engineering issues underlying communications, furthermore many operators are not capable of recognizing that the noise floor has been raised – perhaps interfering with or preventing communications, and few, if any, in those services will be capable of implementing

overcoming techniques—such as better antennas, higher power, or increasing receive capabilities.

III. Amateur station Commission licensees will experience interference.

This technology has interfered with amateur communication in other countries, especially when it has expanded beyond the small select testing phases. That is unlikely to change fundamentally solely on the basis of being in the United States. Given much of the weak signal work being done in the cutting edge digital communications modes, an increase in noise will hamper the efforts of those utilizing their granted amateur license in advancing the radio art. Though much of this has not yet been utilized extensively in emergency and disaster communications, any interference to these nascent technologies will impair their development and their adoption.

IV. Interference with licensees is a problem which must be specifically mitigated.

I understand and endorse the Commission's desire to promote the creation of a ubiquitous broadband infrastructure, but not through the relaxation of the present Part 15 limits. I do have concerns of the proposal with which BPL technology would be allowed increased potential to usurp a Commission licensees use of those frequencies heretofore granted to them. Nonetheless, if BPL technology is to receive such relaxed limits, in the form of a new rulemaking, in order to counter the greater potential for interference, special attention should be paid to reducing the possibility of interference, and most importantly, curing interference whenever it is discovered.

To reduce the possibility of interference, the Commission must adopt specific mitigation requirements to resolve interference complaints. To this end, I recommend that the Commission turn to the type of interference agreements found commonly in commercial tower leases, and adopt such measures within the rule-making. I refer to introducing commercially reasonable cure timetables, with the proviso that such support of the reasonable, business-friendly, and practical timelines for permanent solutions and not interim reductions or temporary interference eliminations. I support a government maintained federally mandated, publicly accessible central database of interference incidents and their mitigation specifics.

V. Proposal

1. The Commission should specifically instruct BPL providers in the requirements of non-interference.

BPL providers should not be allowed to select their own definition of interference. I support the Commissions clear role as the sole authority in determining the definitions of interference. I urge the commission to specifically instruct in and

clarify to BPL providers their obligations under the non-interference restriction of Part 15 to halt interfering emissions.

2. BPL Providers shall publicly notify, provide information and contacts.

BPL providers should be required to file with the Commission, the name of an office and person(s) responsible within the organization to receive and process both interference complaints and BPL system information queries. Such contacts should be available with a postal address, electronic mail address, and telephone contact, which contacts should be posted by the BPL provider on their website, in all customer correspondence, and within a publicly accessible FCC database, as well as on file with other governmental agencies, such as the Department of Homeland Security – FEMA possibly via the Commission’s Enforcement Bureau, Office of Homeland Security.

I am concerned in the ability for an industry-operated entity to effectively to receive and process notifications and maintain the interference data base as outlined in §15.109(g). I strongly encourage replacing the term “industry-operated agency” with “government federal agency” and the final sentence of §15.109(g) should be struck. Due to the ability of universal broadband to foster Homeland Security and the dynamic nature of emergency communications during crisis, I urge that such any central database be seamlessly accessible by the Department of Homeland Security – FEMA, most aptly maintained by the Commission’s Enforcement Bureau, Office of Homeland Security.

If this is not possible; an interference consortium of broadband providers, including but not limited to BPL, Digital Subscriber Line (DSL), Cable Modem, Wireless Internet, and Satellite should be formed and §15.109(g) should be adopted as proposed.

3. BPL Providers should provide an interference curing timetable that meets specific standards.

When a complainant, either a Commission licensee or a receiver of licensee transmissions, suffers interference from a BPL source, the complainant should receive a response outlining the BPL provider’s proposed steps toward curing the problem, with a timetable, and such response should be made within 10 business days.

A cure should be permanently implemented within 35 business days which returns the noise level at the site of the reported interference to within regulatory allowed limits.

I support, §15.109(f) as proposed should be adopted in its entirety but it is not solely sufficient. Any reappearance of previously mitigated interference on a specific frequency or frequency range at the site should not constitute a separate instance of interference and should be considered as a failure to cure the interference. Even if immediate use of frequency notching, agile frequency hopping and/or power reduction techniques are to be used for interference mitigation, the date, the frequency, the system

provider, the system type, the method of mitigation implemented, and the system locations subject to the mitigation, and a unique event identifier, shall be entered into a publicly accessible database. Such details should be available either by request from the BPL provider via the aforementioned public contact or via the publicly accessible §15.109(g) database.

4. BPL Providers must at least meet regulations similar to those required by licensees.

Should the interference thereafter not be in compliance with the controlling regulations, a regulation comparable to 47 CFR §27.64(a) “Protection from Interference” should control. That section reads:

Failure to operate as authorized. Any licensee causing interference to the service of other stations by failing to operate its station in full accordance with its authorization and applicable FCC rules shall discontinue all transmissions, except those necessary for the immediate safety of life or property, until it can bring its station into full compliance with the authorization and rules.

5. The Commission should specifically define the rural and underserved areas where BPL would first receive accommodations.

To increase the broadband service in rural and underserved areas are both goals of the Commission and the providers of BPL. The Commission should formally define such rural and underserved areas and restrict the Part 15 relaxations for BPL systems to such areas for the initial locations of implementation. The Commission has cited as an example of such areas in the 25 percent of zip codes that indicated one or less high-speed internet service providers as indicated by *High-Speed Services for Internet Access: Status as of June 30, 2003*, Industry Analysis and Technology Division, Wireline Competition Bureau, FCC, Table 12 (Dec 2003)

I propose and support the amendment of §15.107 by adding paragraph (e) to read as follows:

“(e) The limits shown in paragraphs (a) and (b) of this section shall not apply to Access BPL systems installed in areas which have two or less high-speed internet services providers at the time of Access BPL installation, inclusive of the exempted Access BPL system.”

The commission could grant BPL the modified Part 15 limits solely to fully build out these rural areas as an initial step. Those areas would be, by definition, less dense, in their population, and of Commission licensees. This would accomplish the dual goals of promoting BPL in its intended use while minimizing the amount of near-field, direct interference on densely populated areas. Such defined areas, while reducing the number of targets harmed by local interference, should not permit any acceptance of expanded

Part 15 BPL emission interference on frequencies which, through their natural characteristics of long-distance propagation, on those outside of the defined areas.

After completion of the full rural and underserved build out, interference assessment and mitigation efficacy should be fully evaluated. Only then can accurate, reasonable, and sweeping relaxations be implemented, based on significant, extensive, real, and in situ, as opposed to extrapolative, data.

VI. Summary.

Without clear interference guidelines, designated public information and contacts, specific resolution timetables and regulation terminating unmitigated interfering transmissions, the relaxation of emission restrictions on such Part 15 systems, will usurp the privileged environment that the Commissions initial license grants were intended to create. An initial limitation of expanded Part 15 limits to designated rural and underserved areas will help clarify issues and ease such technologies adoption.

Respectfully submitted,
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