

BEFORE THE FEDERAL COMMUNICATIONS COMMISSION

In the Matter of }
Inquiry Regarding Carrier Current Systems)
104
Including Broadband Over Power Line Systems)

ET Docket No. 03-

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COMMENTS OF: Robert S. Slate

I do hereby, as an informed and concerned citizen, do respectfully submit my following comments in response to the Federal Communication Commission's ("FCC's") notice of Inquiry regarding Carrier Current Systems, specifically Broadband over Power Lines ("BPL") systems.

INTRODUCTION:

To say that I'm an engineer that can properly consider all RF aspects of BPL system would be improper. I know that I do not have the skills to do so. Never the less I am a practical engineer in many fields and believe I do have valid concerns. As such I do have reason to be concerned over proposed BPL implementation as I'll try to outline below.

While my primary field of expertise is as an industrial engineer may suggest that I'm not qualified, experiences over the last decade researching and operating a Radio Telescope facility for terrestrial, space vehicles and deep space research & communications and other specific activities may suggest otherwise.

SPECIFIC COMMENTS TO NOI:

Question:

Are the existing Part 15 rules for low speed carrier current systems adequate to protect authorized users of the spectrum who may be affected by the new high speed BPL technology?
What changes to these rules, if any, are necessary to protect authorized radio services?

Comment:

I have to be concerned that the current rules apply to communications systems designed primarily only for communications. Of primary concern in communications systems is efficiency. While current levels of incidental radiation leakage is tolerated by equipment location, in BPL systems re-location of offended equipment will probably not be an option. The emission standards must be lowered. Compliance with emission standards can not only be

monitored at intended transmission points or intended other points of use.

Question:

How should the Part 15 rules be tailored both to ensure protection against harmful interference to radio services and to avoid adversely impacting the development and deployment of this nascent technology?

Comment:

Harmful interference needs to be defined. Rules need to be in place prior to adoption that provide the means to arbitrate one individual's desires for BPL with another's desires to use spectrum "at the pre-existing noise floor". And how can one accomplish that to satisfaction? I look for signals well into the noise floor. How could a BPL provider be expected to consider my practice as reasonable if it prohibits his activities? As currently proposed I do not see how BPL systems can function and not generate harmful interference.

Question:

Should the Part 15 rules specify both radiated emission limits and conducted emission limits for BPL systems, or would one type of limits be sufficient to control interference from both low speed and high speed BPL? Since all carrier current systems inject RF signals into the power line for communication purposes, would conducted emission limits be more appropriate to protect authorized radio services?

Comment:

Conducted emissions are probably not the concern, only radiated emissions. Since equipment that may be affected may be placed anywhere within any BPL transmission area the emission limits have to be maintained for all components of the transmission systems, not just the signal injection and re-transmission points.

PERSONAL COMMENTS:

1. There may be three basic groups of entities that may respond to this NOI.

a. Interested citizens or businesses that promote BPL systems for financial gain.

For these citizens (or non-citizens) the goal is financial gain which may be realized even though the BPL systems work or not for the long term.

b. Knowledgeable citizens that may benefit or be harmed by BPL. Generally this

would include commercial and public service entities such as Land Mobile service, Broadcasters and Police/Fire/Health entities.

c. Informed citizens. One has to realize that this group mostly contains citizens that use radio for a "Hobby" application.

2. The public at large is not aware of BPL and can not be expected to reply.

3. For group "a" above I have to comment that as demonstrated many times in American business the goal is profit, not public service. Adding one more medium for Broadband will not make the other mediums more competitive nor

has

there been any suggestion that it will reduce cost for subscribers. And for

the

majority of citizens basic cost is the deciding factor over which service to use. Not available bandwidth.

Reading their responses suggests a desire for BPL spectrum use through-out the

HF, VHF & UHF spectrums where-ever technically feasible, not just in the HF band.

4. The respondents represented by "b" I have to assume to be very knowledgeable by

order of their even knowing of this NOI and their exposure to the field.

5. For those in group "c" I have to say the following:

I know from personnel experience that while a number of these individuals do use

radio spectrum for a diverse range of "hobby" functions without any obvious contribution to society, a great number of these people do use their

"hobbies"

in many ways that benefit America and the rest of the World.

It is most likely that the only truly informed and connected group represented

in group "c" probably are HAM radio operators.

While industry may capitalize of the term "Amateur" ("HAMS") to suggest a lack

of skills and knowledge in reality "PROFICIENT", "SKILLED" and "TRAINED EXPERTS"

may be more representative of a large part of this group.

I am a HAM operator and most of my "HAM" activities involve preparations for public service. Very little of my "HAM" activities do not involve public service.

examples: (All of the following statements can be validated)

a. Amateur training enabled my wife to spend more than 10 weeks (700 hours) in

2001 providing skilled, non-compensated, radio communication and other support

for several large disaster. For many "amateurs" being a HAM is not a hobby,

but a service.

b. Amateur organizations are called upon (most if not all) weekend(s) to support public events, be they are walk-a-thons or disaster preparedness exercises.

c. Science and Education. Through-out the country Amateur organizations & operators provide real & practical training and exposure for all ages in all science disciplines. We do develop technology and also provide the means for individuals, industry and the military to test new technology or theories.

CLOSING COMMENTS:

I do understand that current BPL technology will cause harmful interference to spectrum users, including HAMS and others.

I have seen no independently validated documentation otherwise, presumably because the proposed technology is proprietary and there-fore needs to be concealed.

I regards to the above comments though, I have to admit that I've had little time to perform in-depth studies of the technology and may lack the skills to do so.

I do believe though that a demonstrable need for the application of BPL is lacking and that implementation will not provide affordable Broadband to those who can not get the same through other types of service, nor is the option for BPL pressing.

Thank you for providing me with the opportunity to comment.
Sincerly, Robert S. Slate