

2738 Whitewood Road
Bethlehem, PA 18017
April 25, 2004

Comments:

Amendment of Part 15 - FCC ET Docket No. 04-37 - New requirements for ...Access BPL

Please accept this letter as comments regarding the subject action.

As one of the few licensed amateur radio operators located in an area in which Access BPL is actually being tested, I have had several months to observe the impact and to work with the local provider (PPL Telcom) aimed at mitigating the resultant harmful interference. My personal experience and observations are as follows:

1. Access BPL can indeed cause harmful interference. This is not theoretical, imaginary, or in question. Comments publicized by some BPL equipment providers implying the contrary are incredibly naïve or self-serving. Electric power lines are, by their very nature, very poor transmission lines in the 2-30MHz range and will radiate. "One can't fool mother nature".

2. My home is within 30 meters of a power line that initially carried Access BPL signals. Harmful interference was created at levels exceeding the strongest signals on the band, rendering the 28-30MHz amateur radio band useless for normal communications. This was discussed with the provider (PPL Telcom) and he responded by disabling the BPL on the line.

3. Lesser sources of harmful Access BPL interference continue. BPL signals from 0.5 to 1 mile from my modest home station are easily detected and are at the same amplitude (or higher) than the radio signals of interest, again preventing reliable communication.

4. Detailed information was sent to the PPL Telcom in an effort to further reduce the problem. Efforts to "notch" the interfering frequencies were partly successful, but after three months, these more-distant BPL signals continue to interfere with communications on 28.000-28.223MHz, 24.89-24.99MHz, 21,000-21.000.72MHz, and 18.091-18.168MHz.

Universal access to broadband digital communications is a worthy goal. But there are several technologies - current and emerging - that will address this need without damaging the unique international telecommunication resources provided by the 2-30MHz spectral range. Nor does it make sense to consider broadband technologies that use a considerable portion of this relatively narrow spectral region.

However, since Access BPL already appears to be covered by Part 15, it is absolutely essential that the following conditions be included in any modifications (Note Item 4, which has not been previously addressed, to my knowledge):

1. FCC 04-29, paragraphs 39-43 must be absolute. Mitigation must be available 24/7 upon complaint of harmful interference from a licensed user and operation of the Access BPL must cease immediately should the mitigation be unsuccessful.
2. The BPL database, including contact information and list of complaints and violations by BPL operators must be available to the public and kept up to date.
3. BPL systems must be tested for rules compliance and emissions compliance by an independent laboratory prior to type approval and prior to installation. Post installation testing should be conducted as outlined in FCC 04-29 Appendix C.
4. Access BPL providers must be required to assess and mitigate harmful interference initiated by customers, but whose conducted or radiated emission is enhanced by BPL devices that allow signals in the HF spectral region to be conducted through or around power-line transformers and onto power lines.
5. Access BPL providers must give clear notice to customers that licensed radio services have priority and that delivery of BPL services cannot therefore be guaranteed. Receipt of this notice must be acknowledged in writing prior to the signing of any contract for service.
6. There must be severe penalties for non-compliance with the rule, up to and including termination of the Access BPL system.

Finally, if the FCC wants to encourage the use of the electric power grid and "right-of-way" resources to provide more universal broadband digital access, then it should focus its actions to encourage the use of frequencies of 1Gz and above. This is the region in which true broad-band digital communication makes sense, the potential for interference is low, and the unique international telecommunications capability of the 2-30MHz band is not jeopardized.

Very truly yours,

Vincent V. Horvath, PhD
(Electrical Engineering)