Re: Docket 03-104

I have read both the pros and cons to BPL (broadband over power line) and have the following comments to offer:

1) Technical data provided by the ARRL proves to me that widespread use of BPL technology would render the 2-30 MHz HF spectrum unusable to both amateur radio operators and some military users over large geographic regions.
2) Technical data provided from other countries' experimentation with BPL indicate that there are problems with unbalanced two phase transmission methods as used in the US and Japan, versus balanced 3-phase transmission methods employed in Germany and perhaps the UK. Some countries have already put the brakes on the deployment of this technology.
3) Technical data published in IEEE has described EMI in the AM broadcast band, even though it lies below the frequency range of BPL, while acknowledging in passing that the in-band HF amateur band would be affected by BPL.
4) Propagation of BPL interference is a complex matter, given the peculiarities of HF propagation; skywave for example. BPL interference could impact an area geographically quite distant from the noise source. Additionally, no amount of receiver antenna directionality could adequately remove this interference since it comes from all directions and cannot be spatially filtered as conventional noise sources can.
5) Technical data provided by the proponents of BPL proclaim the benefits of pushing BPL to rural areas – which is hard to refute. However, they do not do an adequate job of accurately portraying the levels of EMI in the 2-30 MHz spectrum. Given the documented track record of power companies and their willingness to resolve EMI complaints, this is not leave a positive picture for the state of HF communications. Once relaxed guidelines are in place and complaints from the HF spectrum users come into the FCC and NTIA, there will be much resistance and finger-pointing from the BPL community but no interference mitigation solutions.
6) HF is a primary method of reliable long distance communications during emergency communications situations. The amateur community uses HF routinely to track hurricane damage, pass emergency messages, etc. The military uses it as a critical backup when satellite communications are unavailable. The federal government is providing grants for training in emergency communications techniques to be used by amateur radio operators. How can it be that one agency of the federal government can be a proponent of reliable HF communications, while another gives the appearance of trading it away for the allure of high technology?

In summary, I would strongly recommend the FCC proceed very carefully before granting BPL operation at any level. There should be an impartial study done of the honest impacts of EMI to incumbent users of the HF spectrum before giving any relief to BPL EMI/EMC limits. Additionally, any measurement techniques should consider the peculiarities of the HF spectrum in order to more accurately reflect the real impact to user

equipment. And as an aside, perhaps the FCC should internally review their relative priorities between Americans' fast Internet access and maintaining their emergency communications infrastructure and military capability.

Thank you for taking the time to consider my comments.

Sincerely,

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References:
IEEE Communications, May 2003
ARRL Website: http://www.arrl.org/news/stories/2003/08/08/2/?nc=1
Various FCC Comments