

The following Reply Document for Proceeding 03-104 concerns comments filed by: Amperion, Inc..

Amperion perceives itself as a pioneering BPL company, established in June 2001. Anecdotal evidence indicates powerline carrier is an old and failed technology. I have a Copyright 1982 by Tab Books Inc. "The Illustrated Dictionary of Electronics 2<sup>ND</sup> Edition" by Rufus P. Turner. It has a definition of power-line communication (PLC): Carrier-current telephony or telegraphy over power lines that are common to transmitting and receiving stations. Also see wired wireless.

Wired wireless: see wired radio

Wired radio: The transmission and reception of voice and other sounds, telegraph signals, pictures, control signals, telemetry signals, and the like by means of radio-frequency energy conducted by wire lines. Usually the lines are used primarily for some other purpose (e.g., power lines and telephone lines).

The above three definitions come from a book that is 21 years old so don't be wowed by this "new technology" that is basically only a modulation scheme brought about by faster silicon. And it goes farther back than this.

My point about pioneers is that they sometimes have no concern or compassion for the Natives.

Amperion has claimed to have performed extensive emission testing but has not included the results for this NOI. Meeting existing Part 15 emission limits does not indicate no harmful interference will occur, but on the contrary, guarantees it will occur. The Commission has already stated existing Part 15 limits were drafted with no contemplation of broadband RF generation on power lines acting as antennas. Amperion must know this???? Amperion admits to selling equipment for deployment at the present time.

Amperion has used the 1.7-30 Mhz frequencies for experiments. My suggestion to the Commissioners would be to have Amperion use the frequencies of 500 Khz to 1710 Khz and 88 Mhz to 108 Mhz on an experimental basis with no notches to check for interference complaints. Speed would be restricted but radiation complaints could be observed. This would help the Commission to determine if Amperion's claim of existing Part 15 rules being adequate is true or just wishful thinking.

Amperion claims to have noted low levels of unintentional RF radiation. These levels apparently are in the eyes of the beholder. Amperion claims these levels roll off quickly as you get farther from the MV wire(antenna). Since Amperion wants to use HF frequencies my suggestion is they become familiar with HF radio propagation., notably "skip". Radio amateurs have successfully made extremely long communications with milliwatts of power. BPL signals will be reflected worldwide." Distance" from the MV antenna(wire) is not relevant if one acknowledges these phenomenon.

Amperion claims their technology can "shift away from the offending frequency." I have not as yet come upon an offensive frequency. However, my best guess is Amperion means their algorithms have created a very robust method of protecting their data transfer from outside interference. It does not follow that this protects legitimate licensed spectrum users. I doubt it is of a concern to them.

Amperion references FCC Order 97, Section 157 placing burdens on opponents of BPL. I do not think that the FCC meant this to apply to Radio Amateurs who have no pecuniary interest one way or another in the deployment of BPL. This is a specious argument against objections raised by these parties. Also, by your interpretation, it logically follows that by placing the obligation upon me to help you create a "cleaner" technology, I am working "for" you. I have yet to receive a paycheck, stock, or any other form of compensation from Amperion. You are in effect trying to make slavery again legal and I don't appreciate it. I do not believe the FCC Chairman or the Commissioners are trying to reinstate slavery or to promote BPL "at all costs". The facts to me indicate Amperion is not concerned with legitimate users by using Part 15 rules that were not created with BPL in mind. Therefore I propose that Amperion and the BPL community create a \$20 billion fund that could be used to pay for more FCC field personnel and equipment that will be used to handle interference problems. Also, it would be used to pay for the time, materials, and labor for harmed parties in resolving these issues. This would also take care of the slavery problem.

In closing let me say that I am grateful to be able to address the comments of Chairman and CEO Philip Hunt of Amperion, Inc.

A copy of my reply comments will be sent to Amperion, Inc by certified USPS mail at

Two Tech Drive

Andover, MA

A copy will also be mailed, certified, to:

1 Riverside Plaza  
20th floor  
Columbus, OH 43215