

Comments to NOI – ET Docket No. 03 – 104.
20 August 2003

I do not believe that modifying the existing rules for Part 15 devices is in the best interest of the US. In my opinion, the current levels provide a good compromise between product complexity/cost, and spectrum pollution.

As a licensed radio amateur, I frequently listen to and use the HF/VHF/UHF/SHF spectrum for enjoyment and public service communication. In my urban home, I am frequently limited by spurious background noise from nearby computers, digital devices, and leakage from cable systems and ADSL cable radiation.

As an electrical engineer, and having worked in the field of EMC, I understand the effects of conducted and radiated noise. In the early 1980s, I developed a Part 15 device using conducted AM broadcast band frequencies, to assist electricians to determine if power was still applied to a remote circuit. In the last 10 years, I have tested several systems for compliance with Mil-Std 461x requirements and some TEMPEST standards. Last year, I designed a low power communication device operating on the FM broadcast band, and got it through Part 15 tests.

I know that microwatts of HF/VHF radiated energy can be detected at several miles. A poor antenna, may be less effective than a well designed antenna, but may still be a relatively efficient radiator. It does not require very many broadband sources, radiating from a long elevated wire, to raise the noise floor significantly at any receiving site. If even a small leak in a cable system, with relatively low signal power, can be detected at 100s of feet, then intuitively, an overhead wire carrying a similar signal will radiate an even longer distance. Combine that with hundreds of sources within a square mile, and the potential to interference is astronomical. SW listeners, radio amateurs, commercial, military/government stations will all be affected. Ionospheric reflections will attenuate the signals, but the propagation from many other regions will add to the local interference. Even MATV and CATV systems will likely have to relocate their antennae systems to try to avoid this interference.

I appreciate the interest in providing alternatives to broadband cable and telephone cable. Competition is always good, but not if the alternative completely masks all but the strongest signals in that part of the spectrum. The BPL terminals can avoid using a portion of the spectrum, if interference is detected. Few other systems can be so agile.

Providing at least low bandwidth access to rural users could be provided by other means. Low power radio, or station carrier type systems could be used, to provide a few hundred kb/s to the remote parts of the country. I am sure this could be engineered around a few MHz of BW, at frequencies under 1 GHz. There are plenty of “unused” UHF TV channels, around the US.

Please – Do not promote or encourage BPL, especially by relaxing the Parts 15 requirements.

Sincerely,
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