

I wish to first declare that I am in support of the American Radio Relay League's (ARRL) position regarding this docket. Plus, I'd like to make a few additional comments regarding the FCC ET Docket 03-104 regarding powerline communications. As I work in the computer industry as a network technician, I can see where such a service would be quite attractive. At the college where I work, we have numerous housing sites where it has not been practical to connect to our campus cable plant with either fiber or Ethernet wiring. However, as also being an amateur radio operator, I have great concerns over the probable adverse effects the currently proposed system would have to existing radio services operating in the 2 to 80 Mhz region.

As numerous amateur radio operators repeatedly prove over and over again, it does not take much power (often less than one watt) to radiate a signal hundreds or even thousands of miles in the High Frequency and low VHF frequency spectrum. It would not be unrealistic to expect that there would be instances where powerline communications would radiate beyond the intended communication points.

Since the various events of 2001 and 2002, most areas of the country are seeing renewed interest in, and upgrades to, emergency backup communications utilizing Amateur Radio. In this area, the Red Cross recently approached the known amateur radio operators, requesting help in developing backup communications for their services. Part of this request was due to a Wildfire that occurred last year in the area. The Red Cross's efforts were hindered at the onset of that fire in setting up evacuation points because of the area's cell phone services being overwhelmed. Also, during that wildfire, there was a point when the area's primary two-way radio communication site was in danger of being in the path of that fire. Since that time, the area Red Cross has had amateur radio equipment installed in its building, of which both VHF and High Frequency operation is planned.

A previous system was developed to allow the sharing of VHF frequency spectrum, Cable Television. As you may already know, Cable Television operates numerous channels on a theoretically closed system that uses the same frequency spectrum as numerous Public Safety, Amateur Radio, and Business services. From the Amateur Radio perspective, this shared use of radio spectrum has been less than successful, as Cable Television companies frequently have problems with inadvertent radiation outside of their system. In most any town of any size in the United States, you will find a video carrier being radiated from Cable Television systems on 145.250 Mhz, which is well inside of the Amateur Radio 2 Meter Band. I was involved once with an interference complaint about a fellow amateur radio operator interfering with numerous Cable Television subscribers. The root cause of the problem turned out to be a faulty distribution amplifier the Cable Television company was using in that area. From my viewpoint, the technical part of that incident was less of an issue then the social part of that incident. Numerous people were incorrectly blaming the amateur radio operator, the Cable Television company was slow to deal with the issue, and in fact had to be threatened with legal and FCC action before locating the problem equipment and repairing it.

Some requirements I'd like to see prior to having a utility company offering powerline communications would be as follows:

First, use of an alternate to the 78 Mhz of bandwidth currently being proposed from 2 to 80 Mhz. Weren't the existing Television channels from 60 Mhz to 215 Mhz slated to be reassigned to alternate use once the transition to Digital Television was complete? Why couldn't spectrum in this area, or in the area of 250Mhz to 400Mhz be used instead, thus potentially affecting much fewer services, than those occupying the 2 Mhz to 80 Mhz spectrum? In addition, the users of that spectrum would have more resources at their disposal to resolve interference issues than the typical amateur radio operator has.

Second, make for much more stringent PROACTIVE checks of incidental radiation of signal from powerline sources by the service provider. Also, require independent auditing of these lines for minimal radiation. Commercial broadcasters are held to stringent standards, powerline service providers should be held to tight standards as well.

Third, require that any powerline communication utility that has the potential for eight or more subscribers in a given localized area run fiber optic lines to the point where it would be distributed to the end users. This would help to cut down on overcrowding on the powerline part of the communications system in use, as fiber optic cabling can handle much higher bandwidths. Also, it would be more secure in lessening the area that someone could intercept network data transmissions as they do now with wireless network systems.

In conclusion, I'd like to again state that as a network technician, I'd like to see an alternative to the 56k dialup and the expensive satellite Internet Service Provider solutions currently available to us in rural and remote locations. However, I am against the use of the 2Mhz to 80 Mhz Radio Frequency spectrum as the source of bandwidth for a powerline communications service. History has shown problems with sharing this kind of a resource on this kind of a scale, and I believe that there are alternate spectrum areas available that would have much less of an overall impact. I would also like to see a much more PROACTIVE approach on the part of any such powerline service provider to avoid interference problems from occurring.