

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:

Inquiry Regarding Carrier Current Systems,)
including Broadband over Power Line) ET Docket 03-104
Systems)

Comments of the Central States VHF Society

1. The Central States VHF Society (CSHVFS) was established in the mid 1960's and currently numbers nearly 1200 members world wide. However, most of our members reside in the United States. The organization exists to promote VHF, UHF, and microwave amateur radio operations throughout the world. Among CSVHFS activities are holding annual VHF through microwave contests, issuing activity incentive awards, advancing the state-of-the-art in VHF through microwave amateur radio communications, and education through conferences. CSVHF members are among some of the Nation's leading RF and microwave engineers, broadband system designers, and Program Managers.

2. CSVHFS is in opposition to the Commission's apparent intent to implement Broadband over Power Line (BPL). It is our opinion that BPL has the potential to destroy amateur radio activity on HF and VHF bands including certain amateur radio allocations in the microwave regime. The great preponderance of CSVHFS members, and most other amateur radio operators, live in neighborhoods consisting of single-family homes on lots of one-quarter to one-half acre, served by overhead power, telephone and cable TV lines. Such typical amateur installations are likely to be especially vulnerable to destructive interference from BPL. The situation could be even worse for other amateurs, located in even more densely populated environments, e.g., townhouses and apartments. Studies conducted in other countries have produced findings supporting CSVHFS's concern regarding BPL's potential for interference to amateurs residing in such closely packed neighborhoods, some of these studies involving actual in-the-field measurements¹.

3. We also cite a recent analysis by Ed Hare, W1RFI, of ARRL, the national association for Amateur Radio, available on ARRL's Web site, <http://www.arrl.org/>, which shows that amateur stations are likely to experience severe interference from BPL systems².

¹ For example, see David Lauder, G0SNO, EMC, in the June 2003 issue of *RadCom*, the monthly journal of the Radio Society of Great Britain.

² Ed Hare, W1RFI, *Calculated Impact of PLC on Stations Operating in the Amateur Radio Service*, ARRL, November 15, 2002.

4. Depending on where in the spectrum the Commission chooses to allow BPL to be deployed, harmonics of its emissions are capable of causing destructive interference to amateur operation in all of the bands above 50 MHz. This is especially true for amateurs who participate in very-weak-signal operation such as Earth Moon Earth and long haul scatter propagation via the ionosphere or troposphere. Often, successful contacts are made via such modes when signals are too weak to be heard by the human ear. This is made possible by the use of powerful DSP technology such as the FSK441 and JT44 software developed for amateur use by Dr. Joseph Taylor, K1JT, the holder of a Nobel Prize in physics. CSVHFS fears that BPL may well sound the death knell for such worthy experimental amateur activities. It is not even certain that BPL will not cause objectionable interference to home reception of television (including High Definition digital television) and FM broadcasts.

5. It is clear that even if it does serve to increase the bandwidth of Internet access over existing methods, BPL is merely another “stop-gap” approach to serve until a really effective means is implemented. Fiber optic cables to each Internet user is probably that ultimate solution, but even it may be outmoded by some other innovative method yet to be developed, i.e. Ultra Wide Band. (UWB) micro sites. But if BPL is implemented, it is clear that it will be around long after newer, better means are available. CSVHFS is sure that the Commission is well aware that old technologies have a habit of lingering long after they are made obsolete by newer and better approaches. As such, the continuing existence of these old out-dated systems is frequently an impediment to the deployment of modern, more effective, ones. CSVHFS asks that another interim approach such as BPL not be implemented. Because of economic factors, it is quite likely that its existence will inhibit the deployment of other more capable future means for Internet access.

6. Because of the above considerations, CSVHFS urges that the Commission **NOT** authorize the introduction BPL into the United States. However, if the Commission should conclude that it must consider approving the technique, we ask that its effect on a wide variety of amateur installations be thoroughly evaluated prior to any wide scale deployment. We contend that it is not enough for Commission representatives to merely visit a BPL demonstration installation and observe its operation. The impact of BPL on other services associated with home environments, including amateur radio, commercial broadcast, and “home use” wireless devices must be clearly understood and test results shared with the public before the Commission approves operational deployment.

Respectfully submitted on behalf of CSVHFS,

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