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To the Editor:

Regarding "The Web's New Outlet" (page B1, March 2 WSJ), any listing of the pros and cons of using power lines to deliver broadband services must mention its major disadvantage: it pollutes the radio spectrum, interfering with nearby radio receivers. The only known exception is a microwave system being developed by Corridor Systems of Santa Rosa, California.

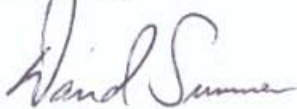
What the FCC calls Broadband over Power Line (BPL) amounts to sending a wideband radio signal over unshielded wires that were not designed for the purpose. Power transmission lines are designed to carry alternating current at 60 Hz. They do not work at all well for the transmission of the higher frequencies, between 1.7 and 80 MHz, that are used in BPL systems. Instead, because they operate according to the laws of physics, they function much like antennas. Radio receivers in the vicinity pick up the BPL signal, which overrides and interferes with radio reception. The frequencies in question are used by public safety agencies, the military, aeronautical and maritime services, broadcasters, radio astronomers, radio amateurs, and others. The frequency range includes the unique and very narrow portion of the radio spectrum in which the ionosphere supports worldwide communication.

BPL system designers have tried to address the problem by notching certain frequencies, but with only limited success. Yet BPL implementation cannot go forward without solving it, because for very good and obvious reasons it is a violation of FCC regulations for a BPL system to cause radio interference. If BPL causes interference – and it does (see references) – the BPL system must be shut down.

AMERICAN RADIO RELAY LEAGUE

Potential investors in broadband delivery alternatives to DSL and cable would be far better off considering the various methods of delivering fiber-to-the-home in densely populated areas. For rural areas, adaptations of wireless LAN technology are generally recognized as offering far more promise than BPL.

Sincerely,



David Sumner
Chief Executive Officer

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References:

The ARRL has documented interference in all four of the BPL-marketing-trial areas in the US that we have visited. Other Amateur Radio societies have also documented interference from trials in their countries. The following link has links to the ARRL video and many of the audio and video recordings made from BPL trial areas around the world. See: <http://www.arrl.org/tis/info/HTML/plc#video>

Another link is: <http://www.oe3mzc.oevsv.at/powerline/video.htm> - Austria

Although these videos show interference to amateur radio, BPL can and does use spectrum throughout HF/shortwave and VHF. Other significant users of that spectrum include government, military and international shortwave broadcasting. For evidence of interference to shortwave broadcasting, see: BBC R&D White Paper, "The effects of power-line telecommunications on broadcast reception: brief trial in Crieff," <http://www.bbc.co.uk/rd/pubs/whp/whp067.html>

Aeronautical Radio Inc documented interference to HF aeronautical communications from a similar device:
http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6514683399

There are many other questions about BPL. A very interesting independent analysis of the economic issues confronting BPL is at:
<http://intel.si.umich.edu/tprc/papers/2003/246/Tongia-PLC.pdf>