"IT SEEMS TO US..."

Who Needs BPL?

What is the driving force behind the idea of delivering Broadband over Power Lines (BPL)? Who needs it?

Not consumers. Most already have access to broadband service (if they want it) via DSL, cable modems, wireless local area networks and satellites. They are not clamoring for more choices. Consumers might like lower prices, but no one is offering any guarantees on behalf of BPL in that regard.

According to the International Telecommunication Union, DSL is the most common broadband platform in the world today and is growing rapidly. Cable modems are popular in economies with developed cable TV networks.

As for future growth, the ITU says: "The cost of installing the fiber optic cables previously made it prohibitive for connecting small communities or homes, but prices have fallen to the point that in several economies, users can now connect to the Internet via fiber optic cable at speeds 20 times greater than the fastest DSL and cable modem connections. Several governments are gradually laying fiber infrastructure to have it ready when it finally becomes cost effective to install the connections and 'light up' fiber to the home."

BPL proponents claim to be interested in serving rural areas. The ITU has many experts working to bring the benefits of telecommunications to rural and underdeveloped areas. However, the best way to do that is by wireless local area networks. Again according to the ITU, "WLANs are an effective way to share wireless Internet access from a broadband connection within a distance of 100 meters. They are also increasingly used to provide broadband access over long distances in rural areas and developing nations (using special equipment and technology to boost the effective distance of the connection points).... WLAN technologies...are easy to install and inexpensive. Many projects around the world are looking for ways to use WLAN to bridge the last mile."

Who needs BPL? Not investors. They've already lost billions of dollars on other telecommunications ventures for which there was no market, such as mobile satellite services. Investors have already paid for the installation of a staggering amount of unused fiber optic cable that is generating no return for them. They don't need another black hole.

BPL is a latecomer to the broadband marketplace. To succeed, a latecomer has to demonstrate a clear superiority. BPL has none. It may not be cheaper, but it's definitely slower than other broadband delivery systems. It's fraught with potential safety and security issues that do not arise with its competitors. It pollutes the radio spectrum. There's not a single reason a consumer would select BPL over its competition if the competing service is available, and for most consumers it already is—and BPL isn't.

Who needs BPL? Not the power utilities. They have their hands full managing their core business. The smart ones realize that, at least while the public and the government are watching them like hawks to see how they respond to the August 14 blackout, they must avoid the distraction of a doomed venture. Anyone who thinks that BPL is a pot of gold right around the corner should consider this quote from an industry source in an Associated Press story earlier this year: "I think they're a long ways from proving it, let's leave it there," said Larry Carmichael, a project manager with the Electric Power Research Institute. "The tests to date have been so small as far as looking at the financial and technical viability. It's still at the very early stage of development."

Who needs BPL? Not anyone who uses radio communication—and not just those who use the frequency range from 1.7 to 80 MHz. In its comments in response to the FCC's Notice of Inquiry in ET Docket No. 03-104, the National Telecommunications and Information Administration observes: "As a result of non-linear elements in the electrical power distribution system, BPL systems may radiate emissions at frequencies substantially higher than the frequencies actually used intentionally within the BPL system." That makes BPL a concern to anyone who watches television, listens to FM radio, rides in an airplane, train or boat, cares about weather forecasting or radio astronomy, or relies on police and fire departments or any other services that use land mobile radio—including the power utilities themselves, who are heavy users of the Power Radio Service.

Who's left? Well, there are the companies that would like to sell BPL hardware. Were it not for the fatal flaw of its spectrum pollution, the engineering that has gone into making BPL work would be worthy of admiration. However, since it involves transmitting RF via an inappropriate medium—a transmission line designed for 60 Hz, not 6 or 60 MHz—it is the sort of admiration one might have for a dog walking on its hind legs: the dog doesn't walk very well, but the surprising thing is that it can walk at all. One can only hope that these engineers will find a better outlet for their talents on their next assignment, or with their next employer.—*David Sumner, K1ZZ*