

The Distribution Network is Installed and Waiting

Since the established electricity distribution system currently serves hundreds of millions of households and businesses throughout the world, the transmission medium for IBEC's voice, data, and video technology is already available without significant additional infrastructure installation cost.

BPL Technology Allows for Rapid Deployment

IBEC's use of orthogonal frequency division multiplexing (OFDM) modulation and HPA-compatible BRAD modems at each customer premises is patterned after the existing, proven cable data infrastructure and the operation of cable modems on CATV systems. By using a proven model and the existing power components and infrastructure, the deployment of the IBEC system is rapid and very efficient. The unique value of IBEC's broadband products and services is that they provide high-speed, cost-effective access to a growing market, much of which is otherwise underserved, while adding internal value in cost reduction and enhanced service opportunities for the electric utility.

Both Rural and Urban Areas are Underserved

The broadband alternatives to powerline communication include DSL, cable modem, direct satellite, and fixed-wireless technologies. While DSL and cable modem service providers are competing head-to-head in the highly-populated areas of North America, neither is feasible in lower-population-density areas, and neither is cost-competitive with BPL, even in more populated areas. DSL requires significant telephone network upgrades that are not currently cost-effective investments without the high customer density of urban areas. Even so, ADSL service can reach only about 80% of the customers of most Telcos, and reaching many of those customers is not cost-effective. The threat from cable companies offering bundled local and long-distance voice services has motivated some telephone companies to deploy faster, but DSL continues to lag cable modem deployment and is proving cost-prohibitive in many areas.

Cable modem service is simply not an option in most rural areas, where even standard cable TV service has not proven to be an economically viable business; cable data service will probably never extend into these areas.

Fixed-wireless service will generally be limited to flat, open areas due to its line-of-sight nature, and will be most applicable to high-density areas that can maximize the customer base reached by each fixed-wireless platform, rather than in hilly urban or sparsely-populated rural and small-town America.

Satellite service is seen as the primary alternative in underserved areas of the U.S., but it does not offer comparable (to DSL, cable, or BPL) bi-directional data rates, and it remains more costly (by a factor of 2 or more) to deploy and maintain than the other technologies. Where appropriate, IBEC will be able to partner with satellite service providers to enable complete local TV access along with broadband Internet, voice, video, and security services.

IBEC Provides the Complete Communication Solution

IBEC is able to provide a complete, turnkey BPL solution for all high-speed communications needs via its unique position as an established, full-service Internet Service provider to electric utilities and their customers coupled with a full suite of voice, video, and data products and services for BPL. No other BPL product or service provider is so well positioned in the market.

The IBEC solution is a fully Internet-Protocol (IP) approach to broadband-over-powerline, essentially turning the existing power system into a broadband IP communications network. This unique approach provides the maximum flexibility possible, allowing virtually any IP-addressable device to be attached to the network. This also provides the lowest-cost solution in the industry, taking full advantage of the universality of IP technology, and ensuring continuing cost improvements in the future.

The open architecture of IBEC's IP BPL network makes it easy to add new and unique applications without "reinventing the wheel" of communications, so the individual needs of utilities can be easily addressed. Typical IP applications for utilities, beyond high-speed Internet services, include cost-saving services such as substation load monitoring and balancing, transformer and other component monitoring, automatic meter reading (AMR) over the power lines, and predictive maintenance applications that can prevent many system failures. Video monitoring over the power lines provides critical Homeland Security capabilities, especially in remote areas where no other means of broadband video surveillance is possible.



BPL and Wi-Fi Access and Homeland Security



IBEC expects to expand its operations to include international opportunities during 2005. This will take the form of key partnerships and distribution arrangements in most countries, to allow quick and seamless integration of BPL systems abroad. Already, IBEC has been contacted by interested service providers and utilities from virtually every continent and is in the process of evaluating initial markets and partners for expansion. The international market is large and growing, and IBEC intends to participate fully in this marketplace.