

The HomePlug Powerline Alliance

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Introduction

When high-speed Internet access meets the high-tech home, the result is a market need that has just begun to be addressed: Home networking.

Enter the HomePlug Powerline Alliance, a non-profit industry association created to foster an open specification for home networking products and services built especially to leverage the worldwide pervasiveness of residential powerlines. Once that specification is in place, the HomePlug alliance is dedicated to encouraging the global acceptance of solutions that employ it. The HomePlug vision is one in which a multimedia-rich Internet experience is as close as the nearest home power outlet.

Who we are

The HomePlug Powerline Alliance represents major companies in all segments of the home networking marketplace:

- Retail
- Hardware and software
- Services and content
- Semiconductors
- Technology
- Consumer Electronics

The alliance's members include the companies shaping the technology as well as those that will adopt it. They have demonstrated both the core capabilities and the financial commitment necessary to develop, launch, and market powerline networking technology.

Why powerline

With multiple outlets in almost every room, residential powerlines are already the most pervasive network in the world. As Internet use explodes, broadband access expands, and consumers plug a new generation of electronic devices into the Web, powerlines present a cost-effective, easy-to-adopt home networking solution for consumers around the globe.

Market opportunity

Already, cable modems, xDSL, broadband wireless, powerline local loop, and satellite technologies all bring the Internet to the home at broadband speeds. Market projections for cable modem and xDSL subscriptions alone show over 35 million connected users by 2003. That's more than 15 times the 1999 total.

The number of multiple-PC homes is growing at a similarly startling rate. The number of households with more than one computer will grow at double-digit rates through 2002, while growth for single-PC homes stays flat.

The math is clear: In ever-increasing numbers, consumers will want to network PCs and other electronic devices in their homes, sharing high-speed Internet access among all their connected products, no matter what type. (One IDC estimate says more than 50 percent of consumers with more than one computer will live in networked homes by 2002.)

What isn't so clear is how that network will be built or how that high-speed access can best be distributed through the home. HomePlug's solution promises to open up possibilities for new generations of applications and devices, providing unprecedented benefits to the consumer.

HomePlug's approach

The specification the HomePlug alliance is developing will:

- Be cost-competitive
- Use the home's existing powerline
- Offer high-speed connectivity at Ethernet-class data rates
- Allow consumers to connect PCs and other devices conveniently, at any power outlet
- Coexist peacefully with already-popular devices that use residential power lines to communicate (including X-10, CEBus and LonWorks)

The alliance envisions a marketplace in which consumers will use the technology to share peripheral devices and high-speed Internet connections, distribute audio and video, and automate their homes, as well as for telephony, programming guides and a range of other applications.

Powerline networking challenges

Home powerline wiring was not designed for communicating data signals and only recently has the market demanded a way to use them for high-speed data networking in the home. The physical topology of the home wiring, the physical properties of the electrical cabling, the appliances connected, and the behavioral characteristics of the electric current itself all combine to create technical obstacles to the use of powerline as a networking medium.

Conclusion

The HomePlug Powerline Alliance recognizes the challenge presented by a history of technical hurdles and immature technologies, combined with the lack of a single specification and the prospect of regulatory issues.

But its members are confident that "history" is precisely the right word. HomePlug's approach relies on advanced, optimized algorithms, improvements in silicon

production, and vastly refined semiconductor technologies to overcome the data error problems inherent in powerline networking.

The launch of the alliance comes as a clear signal that its member companies are committed to meeting an unmistakable market demand for a reliable, easy-to-use specification that can make the connected home a reality - and committed to meeting it sooner rather than later. The HomePlug Powerline Alliance is moving quickly to reach their goal of enabling and promoting rapid availability, adoption and implementation of cost effective, interoperable and specification-based home powerline networks and products.