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## **IEEE SETS SYSTEM REQUIREMENTS FOR BROADBAND-OVER-POWERLINE STANDARD, ISSUES CALL FOR PROPOSALS**

### **Proposals Sought for Bringing Internet Signals to Homes, Allowing Digital Content on Home Wiring, Interoperability**

**PISCATAWAY, N.J., USA, 13 March 2007** – The effort to create a broadband-over-powerline (BPL) standard at the IEEE has passed a significant milestone. The working group for this standard, which contains major companies at all points of the BPL value chain, has developed over 400 requirements for the baseline BPL standard and issued a call for proposals to obtain technical solutions for systems that meet these requirements. Proposals are due by June 4.

The standard, IEEE P1901™, “Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications”, will be a comprehensive specification needed to send high-speed digital data over the power lines between substations and homes and offices. It also will provide for digital voice, data and video signals to be carried over and accessed from electrical lines within structures.

“Gaining agreement for BPL system requirements is a major achievement and clears the way for the working group to create a solid standard,” says Jean-Philippe

Faure, chair of the IEEE P1901 Working Group and vice president-standardization at Itevo. “The agreement we’ve gotten on this detailed foundation makes me confident that we will create in 2008 a global draft standard that will enable companies worldwide to manufacture the components and systems needed to develop the BPL industry.”

The call for proposal addresses functional and technical requirements in three areas: an access cluster that provides for transmission of broadband content on the medium- and low-voltage power lines that feed homes; an in-home cluster that allows low-voltage wiring in structures to carry digital content; and a coexistence and interoperability cluster that ensures all equipment and devices used on BPL networks are compatible.

The access cluster sets requirements for bringing multimedia services to residences via power lines and for developing electric utility applications. This involves head-end hardware that extracts Internet signals from fiber-optic cables and places them on the current running through power lines, repeaters on distribution lines that keep the signal viable, and customer premise equipment that extracts the signal for use in a structure.

In-home requirements address the use of the power lines in a residence or office as a digital broadcasting medium for the spread of ISP broadband services inside the home, computer applications, whether from one computer to another or to peripherals, as well as for consumer electronics audio, video and other applications.

Coexistence and interoperability considerations are important because of the many devices that may be on a BPL network. This cluster involves protocols that

govern how hardware for various applications can share the medium without interfering.

The working group will evaluate and select proposals that best meet the requirements of each cluster. “The goal is to create the best technical standard, whether from one or many sources,” says Faure. “The technologies chosen will form the baseline for the standard, which will allow the full standard to be written and companies to begin creating and testing prototypes of BPL hardware.”

In addition to land-based systems, the working group has begun to extend its efforts to include BPL capabilities for planes, ships, and trains. The goal is to give those who manufacture such transportation platforms an alternative approach to networking digital information.

### **About the IEEE P1901 Working Group**

The IEEE P1901 is a Corporate Standards working group created by 20 companies in June 2005. The working group has now a membership of about 50 entities, including: Advanced Communications Networks SA (ACN), Ambient Corporation, Arkados Inc., Boeing, Broadcom Corporation, Center Point Energy, Consumer Electronics Powerline Communication Alliance (CEPCA), Conexant Systems Inc., Corinex Communications Corporation, Current Technologies, DS2, Duke Power, Earthlink, France Telecom, Gige Semiconductor, Hisilicon, HomePlug Powerline Alliance, IBM, ILEVO--Schneider Electric Powerline Communications, Infineon, International Broadband Electric Communications, Inc. (IBEC), Intel, Intellon Corporation, Itochu Corporation, Kawasaki Microelectronics, LEA, MainNet, Mitsubishi Electric Corporation, Mitsubishi Materials Corporation, Motorola,

Nishiyama Corporation, Open PLC European Research Alliance (OPERA), Panasonic Corporation, Pioneer Corporation, Powerline Utility Alliance (PUA), RadioShack, San Diego Gas and Electric, Sharp Labs of America, Siemens, SiConnect, Sony Corporation, Spidcom Technologies, Sumitomo Electric Industries Ltd, Telcordia, Texas Instruments, Telixx, Tokyo Electric Power Company, Toyo Network Systems Co. Ltd, Universal Powerline Association (UPA) and Yamaha.

For more information on IEEE P1901, see: <http://grouper.ieee.org/groups/1901/>.

### **About the IEEE Standards Association**

The IEEE Standards Association, a globally recognized standards-setting body, develops consensus standards through an open process that brings diverse parts of an industry together. These standards set specifications and procedures based on current scientific consensus. The IEEE-SA has a portfolio of more than 870 completed standards and more than 400 standards in development. Over 15,000 IEEE members worldwide belong to IEEE-SA and voluntarily participate in standards activities. For information on IEEE-SA see: <http://standards.ieee.org/>.

### **About the IEEE**

The IEEE has more than 375,000 members in approximately 150 countries. Through its members, the organization is a leading authority on areas ranging from aerospace, computers and telecommunications to biomedicine, electric power and consumer electronics. The IEEE produces nearly 30 percent of the world's literature in the electrical and electronics engineering, computing and control technology fields. This nonprofit organization also sponsors or cosponsors more than 300 technical

conferences each year. Additional information about the IEEE can be found at <http://www.ieee.org>.

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