HomePlug Powerline Alliance Announces Revolutionary Advancements for Next-Generation Powerline Networks

PORTLAND, Ore.--(BUSINESS WIRE)--The HomePlug® Powerline Alliance today announced that its Technical Working Group (TWG) has made major advancements to the HomePlug AV2 specification, designed to meet the expanding requirements of the connected digital home. The AV2 specification will be fully interoperable with current HomePlug AV and future HomePlug Green PHY and IEEE 1901 products.

"Powerline networking between modems and set-top boxes is being used today by many broadband service providers to reduce capital expenses and support costs associated with delivering new triple play and IPTV services," said Kurt Scherf, vice president, principal analyst, Parks Associates. "More than 50 operator/service providers have deployed HomePlug AV powerline networking solutions as a means to expand services. These providers require a migration path to a much higher performance powerline technology to meet future bandwidth demands while maintaining interoperability with their current HomePlug AV installations and future IEEE1901 products."

Major powerline enhancements the TWG selected for inclusion in the developing HomePlug AV2 specification include:

* MIMO (Multiple-Inputs Multiple-Outputs) offers significant increases in link throughput and range without requiring additional spectrum or transmit power. MIMO allows the data signal to propagate from multiple outputs to multiple inputs implementing advanced transmission coding schemes which will increase capacity and enable more reliable and expanded home coverage. This is similar to the 802.11n and 802.16e which use MIMO solutions with wireless products to extend performance.

* Increased MAC (Medium Access Control) efficiencies that lower overhead and expand throughput

* Increased operating spectrum: the specification will expand operations into an additional spectrum, up to an order of magnitude beyond current powerline technology. This increased bandwidth will further improve performance.

* Extending coverage via repeating and routing technology in networks of three or more nodes

The HomePlug AV2 specification is expected to deliver a 5x increase in performance over current HomePlug AV solutions at the application layer to offer significant improvements in whole home coverage to guarantee reliable delivery of throughput intensive applications such as multiple streams of 1080p HD video (and emerging

3D and 4K HD) broadband Internet, Internet gaming and security camera video over existing electrical wiring. These advancements are necessary to meet the increasingly demanding Quality of Experience (QoE) requirements of service providers and consumer electronics companies.

HomePlug's Technical Working Group made these important selections based on extensive international field testing and channel characterization, technical evaluations, simulations and experience with the widely deployed base of HomePlug AV products. The goal is to deliver a comprehensive and technically detailed specification using proven technology validated by careful technical scrutiny and rigorous testing. HomePlug plans to finalize the specification in the first quarter of 2011.

"The TWG made significant progress toward our goal of deploying a truly next-generation HomePlug powerline specification to address future market demands, and that is built on the excellent powerline products readily available and in use," said Rob Ranck, president of the HomePlug Powerline Alliance. "Consumers are increasingly interested in the large, growing volumes of video, gaming and other media content available via the Internet, and they need an easy way to connect entertainment devices that allow them to move multiple streams of content to any room in the home. HomePlug AV has been the powerline technology of choice, and AV2 provides an aggressive migration path to support greater network capacity and distribution of ultra-high quality content throughout the home."

HomePlug devices account for more than 80 percent of the world's broadband powerline communications market and over 45 million devices have shipped to date. The alliance works with key stakeholders to ensure all of its specifications are designed to meet the requirements of IPTV service providers, power utilities, equipment and appliance manufacturers, consumer electronics and other important stakeholders. HomePlug operates the powerline networking industry's largest Compliance and Interoperability Certification Program to ensure true multi-vendor co-existence and interoperability. The program has certified more than 200 products and will also begin certifying IEEE 1901 products in 2010.

Source URL (retrieved on *04/25/2015 - 5:53pm*):
http://www.wirelessdesignmag.com/news/2010/07/homeplug-powerline-alliance-announces-revolutionary-advancements-next-generation-powerline-networks