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**New IEEE Standards for Wireless Data Networking designed to help**
**Utilities Modernize Communications Infrastructure for Smart Grids**

*Four New Updates to IEEE 802(R) Family of Standards Can Be Used to Implement
Advanced Metering Infrastructure and Ensure Communications Network Reliability*

**PISCATAWAY, N.J., USA, XX Month 2012** – IEEE, the world's largest professional organization advancing technology for humanity, today announced updates to four wireless communications technologies in the IEEE 802® family of standards as well as a new IEEE 802 standards-development project. The new standards support the global utility industry’s needs for smart grid data communications infrastructure and represent some of the most recent efforts applicable to smart grids to come from the IEEE Standards Association (IEEE-SA), which has a portfolio of 100 standards and standards in development pertaining to the smart grid industry.

“Utilities can use the IEEE 802 family of broadband wireless communications standards to modernize their communications and networking infrastructure for advanced metering and other smart grid applications,” said James Gilb, chair of the IEEE 802.24™ Technical Advisory Group (TAG). “These new updates to the IEEE 802 standards will enable utilities around the world to build the carrier-grade, high-capacity networks they will need to connect the millions of grid components and end-use devices that will operate on smart grids.”

The new IEEE 802 standards include the following:

* IEEE 802.15.4g™-2012 – IEEE Standard for Local and Metropolitan Area Networks – Part 15.4: Low-Rate Wireless Personal Area Networks (LR-WPANs) Amendment 3: Physical Layer (PHY) Specifications for Low-Data-Rate, Wireless, Smart Metering Utility Networks – is a global standard that provides carrier-grade wireless communications connectivity for very large-scale smart metering applications and advanced metering infrastructure used in smart grids.It supports geographically diverse networks with minimal infrastructure that can potentially connect millions of end points. The new standard, an amendment to IEEE 802.15.4™, offers the communications range, robustness and coexistence characteristics required for these types of applications and deployments that fit the general objectives of IEEE 802.15 but were not covered by the existing standard. IEEE 802.15.4g-2012 is available for purchase at the [IEEE Standards Store](http://www.techstreet.com/ieee/cgi-bin/detail?vendor_id=5053).
* IEEE 802.16™-2012 – IEEE Standard for Air Interface for Broadband Wireless Access Systems. The standard supports worldwide deployment of innovative, cost-effective, interoperable, and multi-vendor broadband wireless access (BWA) products, with Ethernet as well as IP interfaces, that utilities can use for machine-to-machine smart grid applications. The standard specifies the air interface, including the medium access control and physical layers (MAC and PHY), of combined fixed and mobile point-to-multipoint BWA systems. The standard updates the WirelessMAN-OFDMA air interface designated by the ITU as IMT-2000. Further enhancement relevant to Smart Grid applications are provided in IEEE Std 802.16p-2012, an amendment providing “Enhancements to Support Machine-to-Machine Applications.”. Both IEEE 802.16-2012 and IEEE 802.16p-2012 are available for purchase at the [IEEE Standards Store](http://www.techstreet.com/ieee/cgi-bin/detail?vendor_id=5226).
* IEEE 802.16.1™-2012 – IEEE Standard for WirelessMAN-Advanced Air Interface for Broadband Wireless Access Systems. The standard provides an enhanced air interface and improved capacity for metropolitan-area networks that utilities can use for smart grid machine-to-machine communications as well as mobile voice-based applications, with support for Ethernet as well as IP interfaces. IEEE 802.16.1-2012 is a new standalone version of the technology first specified in IEEE 802.16m™-2011 and designated by the ITU as IMT-Advanced. Further enhancement relevant to Smart Grid applications are provided in IEEE Std 802.16.1b-2012, an amendment providing “Enhancements to Support Machine-to-Machine Applications.” The new standard is available for purchase at the [IEEE Standards Store.](http://www.techstreet.com/ieee/cgi-bin/detail?vendor_id=5249)
* IEEE 802.22.2™-2012 – IEEE Standard on the Recommended Practice for Installation and Deployment of IEEE 802.22™-2011 Wireless Regional Area Networks (WRAN) was recently published. The Emerging Technology Award winning IEEE 802.22 systems will provide broadband access to wide regional areas around the world and bring reliable and secure high-speed communications to under-served and un-served rural communities, which are estimated to include nearly half of the world' s population. IEEE 802.22-2011 is the first IEEE 802 Standard for operation in the Television (TV) Whitespaces, defined as the available or un-occupied TV channels. It is also the first IEEE Standard that focuses on broadband connectivity and smart grid applications in rural areas where most vacant TV channels can be found. The new standard is available for purchase at the [IEEE Standards Store](http://www.techstreet.com/ieee/cgi-bin/detail?vendor_id=3997)

In addition, the IEEE-SA has approved development of a new standard that will enable the handover of groups of wireless data connections between different types of networks in a heterogeneous network. Utilities will be able to use the standardto allow large groups of devices to handover from one network to another to ensure continuous connectivity and service reliability if a part of the network loses connectivity. IEEE P802.21d™ – Standard for Local and Metropolitan Area Networks—Part 21: Media Independent Handover Services Amendment: Multicast Group Management– is intended to amend IEEE 802.21™-2008 by adding support for simultaneous handovers of multiple users.Information about IEEE P802.21d is available at <http://standards.ieee.org/develop/project/802.21d.html>.

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**About the IEEE Standards Association**

The IEEE Standards Association, a globally recognized standards-setting body within IEEE, develops consensus standards through an open process that engages industry and brings together abroad stakeholder community. IEEE standards set specifications and best practices based on current scientific and technological knowledge. The IEEE-SA has a portfolio of over 900 active standards and more than 500 standards under development. For more information visit <http://standards.ieee.org/>.

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