NOT FOR IMMEDIATE RELEASE
March 10, 2015 – Draft 3

Contact: Shuang Yu, Senior Manager, Solutions Marketing
+1 732-981-3424, shuang.yu@ieee.org

ISO Approves the Award-Winning IEEE 802.22™-2011 Standard to Provide Broadband Connectivity to Rural and Underserved Global Communities

Recognition of standard helps with international adoption and broadband Internet access for remote and rural areas in developing and developed countries

PISCATAWAY, N.J., USA, XX March 2015 – IEEE, the world's largest professional organization dedicated to advancing technology for humanity, today announced that the Emerging Technology Award-Winning IEEE 802.22™-2011 "Standard for Information Technology-- Local and Metropolitan Area Networks" has been approved to become an International Organization for Standardization (ISO) Standard. The approved standard will be referred to as ISO/IEC/IEEE Std. 8802-22:2015. ISO is an independent, non-governmental membership organization and the world's largest developer of voluntary international standards. ISO has 163 member countries with a central secretariat that is based in Geneva, Switzerland. ISO and IEEE have a Partner Standard Development Organizations (PSDO) agreement.

"IEEE 802.22 standards based systems have a potential to provide broadband access to wide regional areas around the world to bring information and communication technologies to unserved and underserved communities," said Apurva N. Mody, chair of the IEEE 802.22 Wireless Regional Area Networks Working Group. "With this recognition of IEEE 802.22 from ISO, it will allow the standard to be more widely recognized and adopted."

The IEEE 802.22 working group has developed a point-to-multipoint wireless broadband standard optimized for operation in the VHF and UHF TV bands, in the frequency range between 54 MHz and 862 MHz. The standard is especially useful for serving rural areas where most empty TV channels can be found and where population is mostly unserved or underserved by Internet broadband access services.

"There are more than three billion people in the world who do not have access to broadband Internet access," said Chang-woo Pyo, vice chair of the IEEE 802.22 Wireless Regional Area Networks Working Group. "It has been known that access to cost-effective broadband Internet

connectivity substantially increases the per capita household income in developing countries. Recognition from ISO of IEEE 802.22-2011 will help adoption of this standard from countries who will benefit from this technology."

IEEE 802.22-2011 on Wireless Regional Area Networks (WRAN) takes advantage of the favorable propagation characteristics in the VHF and low UHF TV bands to provide broadband wireless access under Line of Sight (LoS) and Non Line of Sight (NLoS) conditions over a large area (10-kilometers to 30-kilometers). This occurs while operating on a strict non-interference basis in spectrum assigned to, but unused by, the incumbent licensed services. This unused spectrum, is also known as the Television Band White Space (TVWS).

Some industry trade associations such as the WhiteSpace Alliance, are referring to this IEEE 802.22 standard by an industry trade name of Wi-FAR™. Based on the regulatory domain and propagation characteristics, a single Wi-FAR™ base station can provide coverage over 300- to 2,700-square-kilometers. New cognitive radio techniques such as White Space Databases and spectrum sensing enable 802.22-based systems to avoid interference to themselves and to other licensed services that exist in the same bands while making optimal use of the available spectrum.

Use cases for the IEEE 802.22 based devices include broadband access over large distances and NLoS conditions, broadband Internet access for remote and rural areas, Internet of Things (IoT) applications, cellular offload, monitoring of the rain-forests, long-range backhaul, smart grid, critical infrastructure monitoring, defense, homeland security, healthcare, small office home office (SoHo), campus-wide broadband wireless access and a variety of others.

The IEEE 802.22 working group is developing other technologies for spectrum sharing. These include the newly launched IEEE 802.22.3™ Spectrum Characterization and Occupancy Sensing (SCOS) Task Group, as well as the IEEE 802.22.1™ Task Group that is developing technologies for sharing spectrum between high-power radars and communications systems.

Additional information on the standard can be found at the IEEE 802.22 working group web site. Interested parties can download the IEEE 802.22-2011 standard via the IEEE Get Program.

To learn more about IEEE-SA, visit us on Facebook at http://www.facebook.com/ieeesa, follow us on Twitter at http://www.twitter.com/ieeesa, connect with us on LinkedIn at http://www.linkedin.com/groups?gid=1791118 or on the Standards Insight Blog at http://www.standardsinsight.com.

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 a broad stakeholder community. IEEE standards set specifications and best practices based on current scientific and technological knowledge. The IEEE-SA has a portfolio of over 1,100 active standards and more than 500 standards under development. For more information visit http://standards.ieee.org.

About IEEE

IEEE, a large, global technical professional organization, is dedicated to advancing technology for the benefit of humanity. Through its highly cited publications, conferences, technology standards, and professional and educational activities, IEEE is the trusted voice on a wide variety of areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics. Learn more at http://www.ieee.org.

# # #