

## **PRIME 1.4 Specifications Released**

### **Unleashing the Full Potential of the PRIME PLC Standard**

**3<sup>rd</sup> November, Amsterdam:** PRIME version 1.4 represents an extension of version 1.3, that includes changes at the PHY and MAC level bringing improvements such as increased robustness and throughput, band expansion, band-plan flexibility and IP version 6 support whilst ensuring backwards compatibility. This new release keeps all of the benefits and lessons learned from 5 million installed PRIME smart meters, confirming it is a proven technology that performs in large-scale, future-proof smart grid deployments.

#### **New Specification Features**

PRIME specifications now support frequency ranges going from the CENELEC A-band (<95kHz) up to 500 kHz, allowing for optimum usage in electric grids all over the world. This expansion to FCC and ARIB band and the associated data-rate upscale opens up new geographic markets, meeting needs specifically for America, Asia Pacific and European electrical grids.

Additional robust transmission modes have been introduced, designed to improve system performance against both high power impulsive noises and interfering noises. PRIME can be fitted for multiple applications - IEC 61334-4-32, IPv4, IPv6 – which enables a variety of services beyond smart metering.

#### **Backward Compatibility**

The inclusion of these new elements implies that PRIME v1.4-compliant devices will be able to support scenarios where they co-exist with legacy PRIME v1.3 meters not implementing these new features. This attention to establishing backwards capability is focused on understanding utilities needs to protect investments in existing deployments. PRIME Alliance and its members are committed to protecting any investments with PRIME

technology and will provide backward compatibility in the evolution of the PRIME specifications.

## **Security**

Security functionality in PRIME has been engineered to the needs of the technology adopters and PRIME v1.4 specifications include state-of-the-art cryptographic protection mechanisms at MAC Layer, enabling deployment of a PLC network that is secure even at lowest levels. Two distinct security profiles allow users to optimise security and performance in their networks. Both profiles utilise 128-bit AES-CCM authenticated encryption; and recognised standards for key management, distribution and generation.

## **PRIME Evolution**

PRIME v1.4 changes are the result of field experience, and no change has been introduced without extensive measurement campaigns in existing deployments plus intensive simulation and verification of technical alternatives.

PRIME specification has experienced an important evolution in order to improve system performance. PRIME v1.4 can be deployed globally, even in the harshest network conditions. PRIME has already been extensively deployed for smart metering applications, and with v1.4 specifications it places itself as a valid alternative for other evolving smart grid applications. Medium voltage scenarios, feeder and phase connectivity identification/mapping for smart meters, low voltage remote-control applications now become a reality with PRIME v1.4.

See PRIME Alliance and find out more about Version 1.4 additional features, at **European Utility Week, 4 – 6<sup>th</sup> November booth 1.A14.**

**Version 1.4 White Paper:** download at this link from 6<sup>th</sup> November, 2014

<http://www.prime-alliance.org/wp1.4>

**1<sup>st</sup> PRIME Alliance Utility User group** hosted by Iberdrola and Gas Natural Fenosa, 21<sup>st</sup> and 22<sup>nd</sup> January, Madrid - utilities can register by emailing [sue.dawes@prime-alliance.org](mailto:sue.dawes@prime-alliance.org) or visiting our website [www.prime-alliance.org/usergroup](http://www.prime-alliance.org/usergroup) by emailing [sue.dawes@prime-alliance.org](mailto:sue.dawes@prime-alliance.org) or visiting our website [www.prime-alliance.org/usergroup](http://www.prime-alliance.org/usergroup)

### **About PRIME Alliance**

*PRIME (PowerLine Intelligent Metering Evolution) Alliance AISBL was created in 2009 to define an open and future-proofed communications PLC-based infrastructure to support large scale smart metering and other smart grid deployments. The PRIME Alliance has attracted key industry players, including Sponsoring Members ZIV Distribution Automation Systems, Ormazabal and Sagemcom. The goal of the Alliance is to provide a framework in which the smart metering and smart grid industry have access to open detailed technical specifications in order to develop fully interoperable solutions, allowing multiple vendors to be operational within the same distribution network in one common system architecture. Detailed technical specs include Physical PHY layer and Medium Access Control MAC layer specifications.*

*The PRIME Alliance provides a forum for the definition, maintenance and support of an open and comprehensive standard for narrowband power line for Smart Grid products and services. The mission of the Alliance is to accelerate the demand for products and services based on this worldwide standard and promote the broad adoption and use of the specification while certifying multi-vendor interoperability and compatibility with the global standard. The Alliance is open to all potential partners who agree to actively support and promote an open and public specification for the benefit of the end-user and all industry stakeholders. Visit [www.prime-alliance.org](http://www.prime-alliance.org) for more information or to join the Alliance.*

### **Media Contact**

Sue Dawes  
PRIME Alliance AISBL  
[sue.dawes@prime-alliance.org](mailto:sue.dawes@prime-alliance.org)  
T: +44 (0) 1923 286401  
M: +44 (0) 7786 391243