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Solutions

The features and capabilities of PRIME specifications have been developed to address the evolving challenges of Power Line Communications where systems need to work in harsh environmental conditions; PRIME has emerged as a proven, open, ITU-T- and IEEE-standardized technology that makes smart grids real.

PRIME today fits into a telecommunications architecture that supports Low and Medium Voltage Smart Metering, Demand Response, Integration of Renewables and Electrical Vehicles and Home Area Networks functionalities - making the electricity networks of the future a reality.



Utilities

PRIME focuses on the communication needs for urban, suburban and rural deployments of energy companies (utilities), supporting specific application profiles beyond smart metering and providing an end-to-end solution. Field-proven PRIME technology is currently deployed in many pilots and rollouts globally, with a total of nearly 20M installed smart meters. PRIME specifications include all lessons learned from large-scale deployments, ensuring it is a future-proof solution for any application scenario.

This multi-vendor approach places a critical focus on interoperability, which is validated by its certification process: 96 products certified today from 34 different vendors and millions of compliant, interoperable elements currently performing in utilities networks.

A solution serving utility communication needs thanks to a technology platform that integrates medium and low voltage networks, in-home and distributed energy resources. An IP multi-protocol platform onto the low and medium voltage grid over PLC and radio systems.

PRIME specifications evolve according to utility needs and ensure backwards compatibility, with the aim of integrating future communication, monitoring and control requirements.

Applications

PRIME is leading the future of smart grid communications, focusing on four main areas of development:

- PRIME as the Telecommunications Network Management Platform: managing the performance of all network and subnetwork elements.
- PRIME as the LV Grid Monitor & Control Platform: used for real-time applications such as remote control that brings REAL benefits to the planning, operation and maintenance of the LV grid.
- Wideband PLC for enhanced MV and LV smart grids services.
- A Hybrid open PLC and RF IP multi-protocol platform to cover the needs of the power utilities and their customer in the urban, suburban and rural areas.



PRIME specifications have evolved to optimize system performance in all scenarios. PRIME v1.4 can be deployed 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. MV scenarios, feeder and phase connectivity identification/mapping for smart meters, and LV remote-control applications now become a reality.