Trilliant

Trilliant - A Trusted Smart Grid Solution Partner

Trilliant helps utilities and energy retailers successfully deploy a broad set of smart grid initiatives – from advanced metering to distribution automation to consumer applications such as demand response and distributed energy resources. The breadth and depth of the Trilliant® Communications Platform deliver the flexible and proven smart grid solutions needed for utilities and energy retailers to deploy mission-critical applications to achieve their business goals.

Trilliant partners with utilities to provide communication technologies and applications to help realize the full benefit from Smart Grid initiatives.

Opportunity & Risk

Advances in technology, the financial realities of today's energy market, and regulatory incentives and pressures have combined to create a once-in-a-generation opportunity to fundamentally change the way utilities perform metering, control energy demand, and communicate with its residential and business customers.

As a result, utilities now find themselves considering an investment to upgrade the metering infrastructure and tie together meters, consumer devices, grid devices, and headend systems into a seamless, real-time two-way communications network. Making the right investment requires having a deep understanding of hardware, networking, and software technology; making critical choices surrounding the desired approach; and coordinating a multi-year program rollout. Choosing a trusted partner is crucial.

Trilliant Solutions Mitigate the Risk

Smart Grid solutions from Trilliant are built on the multi-tier SecureMesh™ Communications Network and UnitySuite™ Headend software -- advanced multi-tier wireless mesh technology to support Wide Area Network (WAN), Neighborhood Area Network (NAN), and Home Area Network (HAN) communications; a variety of SecureMesh-enabled residential and C&I meters and in-home devices; and utility-focused headend software applications.

A Multi-Tier Smart Grid Communications Infrastructure
- SecureMesh Wide Area Network
- SecureMesh Neighborhood Area Network
- SecureMesh Home Area Network

True Meter Choice
- Basic & advanced residential electric meters
- C&I electric meters
- Small and large diaphragm gas meters
- Manufacturers include:
  - Electric: GE, Itron, and Landis+Gyr
  - Gas: American, Rockwell, and Sprague

Complete DSM Support
- A single platform for both consumer choice and utility-controlled programs
- Pre-event predictive load estimation and granular load control

Room for Growth
- Software support for advanced AMI, demand-side management, and Smart Grid management applications
- Industry-leading over-the-air data rate provides headroom for future applications

A Trusted Solution Partner
- End-to-end services and support
- Proven – over 1 million deployed SecureMesh meters

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Open, Standards-Based Design

An open approach to system and device design ultimately leads to freedom of choice and flexibility. At the same time, a standards-based approach leverages the investment of many technology companies, ensures a variety of component and technology sources, and allows interoperability. By contrast, proprietary, closed technologies limit choice, lock a utility into unintended long-term vendor relationships, and force the use of technologies years after their obsolescence.

Trilliant believes in providing a utility with a wide choice of electric and gas meters, in-building devices, and WAN backhaul options. Trilliant's commitment to open standards – for example, IEEE 802.15.4, ANSI C12.22, and SOAP – ensures superior wireless communications performance, utility-centric functionality, and interoperability with other utility software applications. By using standard 802.15.4 integrated circuits in the SecureMesh NAN radios, a utility benefits from the engineering efforts of major communications semiconductor companies; by using C12.22 as the communications application layer of the SecureMesh network, Trilliant is able to interoperate with a wide range of meter types and manufacturers; and by using SOAP-based APIs, Trilliant's modular headend software, UnitySuite, can be readily integrated with legacy utility applications.

Future-Proof Approach Protects A Utility's Investment

Because the communications network and devices that a utility deploys today are expected to last for well over 20 years, they must support applications that have not yet been considered. Today's infrastructure investment must support today's needs as well as be able to grow to support tomorrow's AMI and Smart Grid applications.

To ensure that its communications infrastructure provides enough headroom to meet the needs of tomorrow's utility applications, Trilliant leads the industry with a NAN data rate of 250 kbps and a WAN air data rate up to 54 Mbps for network scalability and future extensibility. To ensure that assets are not stranded, Trilliant enables all SecureMesh devices to be firmware upgraded over-the-air.

Trilliant - A Trusted Solution Partner

Trilliant's comprehensive set of solutions enable a utility to realize its business case and immediately achieve the benefit of its infrastructure investment; Trilliant's open, standards-based design methodology takes full advantage of global technologies; and its future-proof approach reduces the risk of stranded assets.
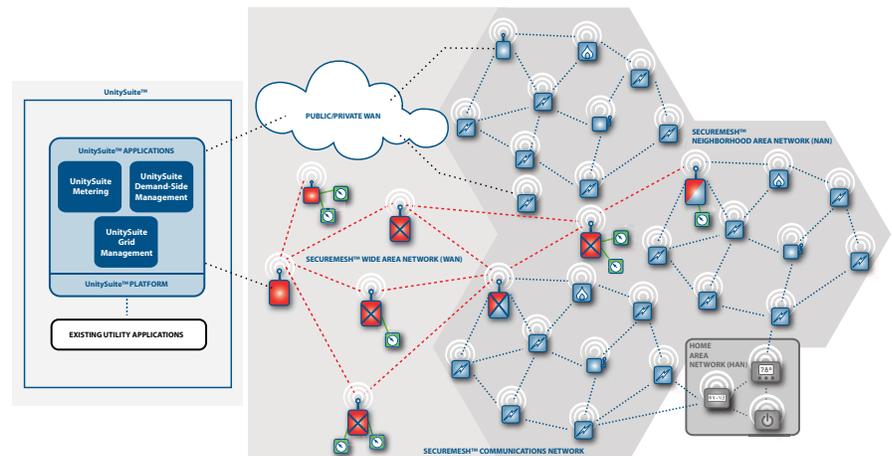
A Rich Past, A Commitment to the Future

Trilliant has proven itself to be a trusted solution partner to the energy industry. With a 20-year heritage in meter communications, Trilliant today has over 100 utility customers and a services team dedicated to supporting complete project lifecycles.

Trilliant's technology and approach are demonstrably successful -- Trilliant powers the largest wireless mesh AMI deployment in North America, and over 1,000,000 SecureMesh-enabled meters have been deployed worldwide.

Trilliant's technological innovations lead the industry -- the SecureMesh Communications Network delivers the highest wireless bandwidth in the market to support future Smart Grid applications.

Trilliant offers end-to-end solutions, services, and support to ensure that a utility's investment in AMI and Smart Grid technology realizes its objectives, both today and tomorrow.

Comprehensive Smart Grid Solutions

Trilliant delivers complete solutions to fully realize the benefits of AMI and Smart Grid over a state-of-the-art communications infrastructure.   Utility requirements are directly addressed by a variety of electric and gas meters from various major meter manufacturers, a selection of Home Area Network (HAN) devices to support demand-side management applications, and a suite of headend software applications.

Security	Standards-Based Design	Choice	Performance	Services
Standards-based authentication and encryption	IEEE 802.15.4	Meter types and vendors	Software verified scalable for >2M meters	Network planning, deployment, and tuning
	ANSI C12.22	Backhaul technologies & providers	1M+ deployed meters	System integration and configuration
Verified by industry experts	SOAP-based APIs for ease of integration	HAN devices & technologies	Industry-leading NAN data rate of 250 kbps	Program and project management

The SecureMesh Communications Network is a multi-tier 2-way communications network in the form of a scalable, high-capacity, self-forming, self-balancing, and self-healing wireless mesh. The SecureMesh Communications Network consists of as many as three tiers: Wide Area Network (WAN), Neighborhood Area Network (NAN), and Home Area Network (HAN). The SecureMesh Wide Area Network provides up to 54 Mbps of high-bandwidth, low-latency wireless communications to support Smart Grid devices directly and to provide backhaul for the SecureMesh Neighborhood Area Network and its industry-leading 250 kbps data rate for meters and HAN devices.

Trilliant supports 100% of today's AMI and DSM requirements with a broad range of applications. Trilliant has already delivered one of the industry's first multi-dimensional demand-side management solutions, offering thermostats, in-home displays, and load control switches under the control of the UnitySuite DSM application.