

Sensus Defines FlexNet Next Generation Utility Communication Network

Utilities can move more data at faster speeds from disparate devices on an IP-enabled network

Raleigh, N.C. – (June 5, 2012) – The need to move more data faster between distinct devices is raising the bar for [utility communication networks](#). The initial requirement of remote meter reading has given way to a complex set of activities and applications that affect multiple areas of a utility's operations—including distribution automation, demand response and load profiling. [Sensus](#), a leading provider of smart grid infrastructure technologies for [electric](#), [gas](#) and [water](#) utilities, is addressing these growing demands in the next generation of its [FlexNet](#)[™] point-to-multipoint, enterprise-class network.

The FlexNet system is a long-range radio solution that communicates via primary-use FCC-licensed spectrum. It serves as a dedicated and secure two-way communications highway that transmits at two watts of power to enable wide-area coverage that reaches all points in a utility's service area without the need for additional or hybrid networks.

The next generation of the FlexNet system supports true end-to-end [IPv6](#) communication across all platforms—electric, gas, water and lighting control. IPv6 compatibility transforms the system from a single application AMI network to a truly interoperable smart grid infrastructure enabling industry standard addressing to be used between all endpoints and applications.

“Our network optimizes communication to every endpoint on a utility's system,” said Sensus vice president of marketing, Greg Myers. “By utilizing power control, we ensure that the network manages the power of every transmission based on need. In essence, the network can whisper to devices in close range and shout at those far away with equal results. As well, the redundant coverage built into the network ensures that every endpoint can be reached, which reduces data backfill requirements. The redundancy also helps build robustness for mission critical distribution automation, outage management, demand response management systems and billing.”

The amount of spectrum offered to utilities by Sensus plays a key role in enabling them to efficiently transport more data reliably. Recently, Sensus increased the amount of spectrum to 525 KHz, and introduced advanced modulation schemes which increase data rates. “With the additional spectrum, utilities can transmit nearly ten times the amount of data,” said Myers. “In the not too distant future, we'll be supporting rates of 1.2 Mbps which is similar to the difference between the amount of content in a tweet versus a novel.”

Another benefit of the Sensus licensed spectrum is the ability to dedicate distinct channels to specific applications, which greatly reduces latency that can occur when multiple applications share the same channel. Delivering data faster is more than just the speed of transfer—with the FlexNet system, utilities can prioritize time-sensitive applications such as distribution automation, remote shut off and demand response and ensure that these applications are not forced to compete with other network traffic.

“Clearly, the urgency with which a utility needs to ping a meter for billing is different than critical distribution system communication such as real-time notification of outages or finding costly leaks in a water system,” said Myers. “It’s not just about how fast the system can obtain data but which data has the highest priority or right-of-way.”

Distribution Automation (DA) requirements have also grown. Once considered just a means to backhaul DA monitoring devices, the smart grid market is now requiring the network to support low latency applications like control of DA devices, peer-to-peer networking and over-the-air upgrades—all of which greatly increase the need for network bandwidth. In addition, Sensus has enabled a dedicated channel solely for the retrieval of real-time meter voltage information.

“Another area of advancement is the timely delivery of load profile data, which helps electric utilities optimize the grid and paves the way for real time pricing programs,” said Myers. “Since load profiling requires higher resolution, more accuracy and real-time delivery, we’ve increased network capacity from two channels with 15 minute interval data to four channels with five minute interval data.”

About Sensus

Sensus is a leading utility infrastructure company offering smart meters, communication systems, software and services for the electric, gas, and water industries. Sensus technology helps utilities drive operational efficiency and customer engagement with applications that include advanced meter reading, data acquisition, demand response, distribution automation, home area networking and outdoor lighting control. Customers worldwide trust the innovation, quality and reliability of Sensus solutions for the intelligent use and conservation of energy and water. Learn more at www.sensus.com. To follow Twitter updates from Sensus, please visit <http://twitter.com/sensusmartgrid>.

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