July 21, 2014: Nest Helps Lead Effort to Create Wireless Protocol for Home Automation

Thread Group Is Formed to Develop a Simple, Secure, and Low-Power Network

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SAN RAMON, Calif. — Seven companies announced that they've joined forces to form the Thread Group and develop a new IP-based wireless networking protocol for home automation called Thread. The Thread Group's founding members include Nest Labs, Samsung Electronics, Big Ass Fans, Yale Security, Silicon Labs, Freescale® Semiconductor, and ARM.

While currently available 802.15.4 networking technologies have their advantages, each also has critical issues that prevent the Internet of Things (IoT) from being realized, stated the Thread Group. These include lack of interoperability, inability to carry IPv6 communications, high power requirements that drain batteries quickly, and "hub and spoke" models dependent on one device (if that device fails, the whole network goes down). With the Thread protocol, the organization said product developers and consumers will be able to easily and securely connect more than 250 devices into a low-power, wireless mesh network that also includes direct Internet and cloud access for every device.

"Existing wireless networking approaches were introduced long before the Internet of Things gained ground," said Vint Cerf, vice president and chief Internet evangelist, Google, and advisor to the Thread Group. "The Thread protocol takes existing technologies and combines the best parts of each to provide a better way to connect products in the home."

Thread is an IPv6 networking protocol built on open standards, designed for low-power 802.15.4 mesh networks. Existing popular application protocols and IoT platforms can run over Thread networks. A version of Thread is already being used successfully in Nest products today.

According to the organization, advantages are:

• Reliable networks: Thread offers robust self-healing mesh networks that scale to hundreds of devices with no single point of failure. Devices are ready when people need them.

• Secure networks: Thread networks feature secure, banking-class encryption. Thread closes identified security holes found in other protocols and provides worry-free operation.

• Simple connectivity: Thread devices are simple to install with a smartphone, tablet, or computer. Thread devices can be securely connected in the home to each other and to the cloud for easy control and access from anywhere.

• Low power: Thread supports battery-operated devices as part of a home network. This allows the devices that people use every day — including thermostats, lighting controls, safety, and security products — to be a part of the network without requiring constant charging or frequent battery changes.

Existing 802.15.4 wireless devices already on the market can run Thread with just a software enhancement — no new hardware is required. Thread is designed for quick implementation and deployment of devices throughout the home.

Thread products will be tested to ensure that they work together out of the box. The products will also bear the Thread logo, indicating they have been certified.

The Thread Group said it is focused on educating product developers and consumers on the benefits of Thread through marketing and product certification. It will offer two tiers of membership, Sponsor and Contributor. Interested parties can review membership benefits and register at www.threadgroup.org/Join.aspx.

For more information on the organization, visit www.threadgroup.org.

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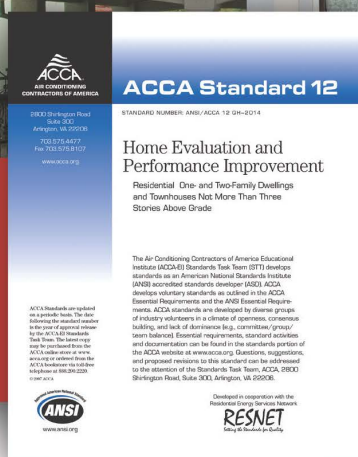- ## [Thread Wireless Networking Protocol for Smart Home Now Available](#)

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