STM and Tatung collaborate to enable smarter homes

The Associated Press

The era of the smart, connected home that offers its occupants a greener, safer, more convenient and more enjoyable lifestyle has been brought closer through a unique collaboration announced today by STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, and Tatung, a leading electronics company for smart-home solutions. Working together, the two companies have developed an array of smart-home appliances that can be interconnected to form a smart-home ecosystem.

The products, implemented by Tatung using a variety of platforms and reference designs developed by ST, are designed to leverage the popular HomePlug powerline communication (PLC) protocols and hybrid networks. The HomePlug technology transforms ordinary electric wires into a high-speed communication network available in every power outlet. Hybrid networks are based on the emerging IEEE 1905.1 standard and allow devices to take advantage of all available communication media including HomePlug and WiFi. Illustrating the huge range of creative possibilities open to smart-home equipment designers, one of the products demonstrated is an innovative combination of a remotely-controllable LED room light, a networked loudspeaker, and a WiFi access point in a single unit.

All of the modules are based on a unique intelligent communication hub/gateway

System-on-Chip (SoC) technology from ST that is the first in the world to integrate both the powerline modem and a powerful applications processor based on an ARM926EJ-S core running at 330MHz. Because the connected homes of the future will leverage many wired and wireless communication technologies, ST's new hub/gateway solution was designed to support the emerging IEEE P1905.1 standard.

For the initial roll-out, ST has worked with Tatung to develop some prototype products that could be easily commercialized and customized and/or branded by Tatung for other OEMs. This family of HomePlug powerline-enabled products, all targeting smart-home applications, includes a smart meter, a smart plug capable of controlling and measuring the electrical product plugged into it and its power consumption, and video surveillance cameras supporting H.264 and MJPEG video streaming. Additional products include a smart-Home Services Gateway supporting HomePlug, ZigBee, WiFi, NFC, and other communication standards, a smart In-Home Display, a Touch Control Panel, and a revolutionary LED Light, Speaker, and WiFi Access Point.

"This ecosystem of connected products brings the "Internet of Things" into the smart home, enabling the convergence of energy management, entertainment, surveillance and monitoring, and other functions such as Electric Vehicle charging," said Matteo Lo Presti, STMicroelectronics Group VP and Industrial and Power Conversion General Manager. "We believe that working with a strong and well-known OEM such as Tatung will accelerate the market availability of products that leverage the unique combination of PLC modem and powerful application processor in a single SoC solution."

By combining entertainment, energy management and other applications via low-cost, reliable and secure connectivity, smart-home products such as the ones that will be shown in Las Vegas will make it easier for consumers to control their homes and reduce their energy bills. The user interface can span across many screens in the home, including smart phones and tablets, TVs, computers, and dedicated In-Home Displays. In the demonstration, all of the smart-home products communicate with the main home gateway that is based on ST's leading-edge STiH416 connected-home System-on-Chip device and Linux/OSGi (Open Services Gateway Initiative), which provides a future-proof, scalable, and secure platform for the delivery of entertainment, information, social and home services.

"The convergence of Home Automation, Energy Management, and Infotainment creates exciting opportunities to develop new types of products, from essential smart-home building blocks such as smart plugs, to innovative functional combinations such the LED/Loudspeaker/WiFi unit," said W. Y. Lin, President of Tatung. "This collaboration will enable OEMs to bring innovative new ST-enabled smart-home products to market as quickly and cost-effectively as possible."

Initially implemented in Tatung's prototype smart-home products, ST's new intelligent communication hub/gateway technology will be available on the open market later in 2013.

About STMicroelectronics
ST is a global leader in the semiconductor market serving customers across the spectrum of sense and power and automotive products and embedded processing solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's life. By getting more from technology to get more from life, ST stands for life.augmented.

In 2011, the Company's net revenues were $9.73 billion. Further information on ST can be found at www.st.com [1].

About Tatung (www.tatung.com [2])
As the company that best represents Taiwan by media's choice, Tatung Company has three business groups covering power related business, consumer electronics, and system integration. The Company focuses particularly on the development of advanced technologies and global network of operation. Specializing in serving branded customers on a global basis, Tatung offers its customers tremendous advantages on cost, speed, and seamless backend support.

With smart home solutions and smart grid applications, Tatung demonstrates its synergy on home area networking (HAN) and energy management to make it affordable and complete. Its cutting-edge new products include PLC module, machine-to-machine bridge, smart plug with HomePlug & ZigBee, smart meter with command & control, in-home display, surveillance camera, and addressable LED lighting speaker.

Research and development collaborations between the Company and Tatung University also lay a solid foundation for Tatung to yield advancement and excellence.

ST and Tatung Smart Home: http://hugin.info/152740/R/1668562/541788.pdf [3]

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