

IBM et Semtech proposent une technologie de réseau à faible consommation d'énergie visant à permettre aux telcos de lancer de nouveaux services pour l'Internet des objets

Paris - 12 mars 2015: IBM Recherche (NYSE:[IBM](#)) et Semtech (Nasdaq: SMTC) annoncent aujourd'hui une nouvelle technologie basée sur un réseau étendu à faible consommation d'énergie (LPWANs) qui offre des avantages significatifs par rapport au réseau cellulaire et au Wifi pour permettre des communications machine to machine (M2M).

Depuis des années, l'énorme potentiel de l'Internet des objets (IoT) pour les entreprises – pour collecter les données issues de nombreux appareils, les analyser et les traiter de façon à prendre des décisions rapides et pertinentes – a été entravé par des difficultés techniques telles qu'une durée de vie limitée des batteries, des distances de communication courtes, des coûts élevés et un manque de normes.

La technologie nommée LoRaWAN™ (Long Range wide-area networks : réseaux étendus à longue portée) surmonte ces difficultés. Basée sur une nouvelle spécification et un nouveau protocole pour les réseaux étendus à faible consommation d'énergie qui exploite un spectre sans fil qui ne nécessite pas de licence, cette technologie permet de connecter des capteurs sur de longues distances, tout en bénéficiant d'une durée de vie optimale de la batterie et d'une infrastructure minimum. Ceci permet une mobilité, une sécurité, une bi-directionnalité et une localisation accrue, à moindre coût.

En support à la technologie LPWAN, IBM, Semtech ainsi que d'autres sociétés annoncent également l'Alliance LoRa™, une nouvelle association pour soutenir et développer une normalisation LoRaWAN.

L'Alliance LoRa a pour objectif d'associer du matériel et du logiciel basés sur le standard LoRaWAN des opérateurs de télécommunications et des opérateurs de réseaux. Ces derniers peuvent ainsi offrir aux entreprises et aux consommateurs des services associés à l'Internet des objets. Bientôt, connecter des milliards d'appareils entre eux, que ce soit des capteurs, des machines, des moniteurs ou des dispositifs portables, sera aussi simple que d'envoyer un SMS à votre prestataire local de services de télécommunications.

Low Power Networking Technology from IBM and Semtech to Help Enable Telcos to Launch New Services for the Internet of Things

ARMONK, N.Y. - 11 Mar 2015: IBM Research (NYSE:[IBM](#)) and Semtech (Nasdaq: SMTC) today announced a new technology based on low-power, wide-area networks (LPWANs) that offers significant advantages over cellular networks and Wifi for providing machine to machine (M2M) communications.

For years, the enormous potential of the Internet of Things (IoT) for business — to collect data from scores of devices, analyze and act upon it to make quick and accurate decisions — has been held back by technical challenges such as limited battery life, short communication distances, high costs and a lack of standards.

The technology, called LoRaWAN™ (Long Range wide-area networks), overcomes these hurdles. Based on a new specification and protocol for low-power, wide-area networks that taps an unlicensed wireless spectrum, the technology can connect sensors over long distances, while offering optimal battery life and requiring minimal infrastructure. This allows it to deliver such benefits as improved [mobility](#), [security](#), bi-directionality, and localization/positioning, as well as lower costs.

In support of LPWAN technology, IBM, Semtech, and other companies also announced the LoRa™ Alliance, a new association to support and develop and standardization LoRaWAN.

The LoRa Alliance aims to combine hardware and software based on the LoRaWAN standard for telecom operators and network operators, enabling them to offer IoT services to both businesses and consumers. From sensors and machines to monitors and wearables, soon connecting billions of devices together could be as seamless as sending an SMS to your local telecom provider.

LoRaWAN sensors can communicate over distances of more than 100 km (62 miles) in favorable environments, 15 km (9 miles) in typical semi-rural environments and more than 2 km (1.2 miles) in dense urban environments at data rates from 300 bit/s up to 100 kbit/s. This makes them well suited for sending small amounts of data, such as GPS coordinates and climate readings, where broadband can't reach. The sensors also require very little energy to operate; most can run for 10 years or more on a single AA battery and AES128 keys make communication tampering and eavesdropping virtually impossible.

Telecom operators and other network operators around the world see dozens of applications for LPWANs, including:

- vending machines could alert distributors when a product is sold out or when it requires maintenance
- cities could offer smart metering and apps to help drivers find parking spaces
- animal lovers could track their pets or study migration patterns over longer distances
- logistics providers could track cargo containers on trucks, ships and trains
- home heating oil companies could receive automatic alerts when home oil tanks are running low

*"We see a tremendous opportunity for LPWAN in South Africa, particularly for energy management applications," said **John Myers, CEO of FastNet**. "There is a vast range of applications for this technology ranging from medical solutions to agricultural systems. This is another example of Africa being on the cutting-edge of innovation to drive new hi-tech markets"*

When combined with IBM's Long Range Signaling and Control (LRSC) software and the [IBM Internet of Things](#)

[Foundation cloud hosted service](#), LoRaWAN enables easy, large-scale M2M/IoT deployments. The LRSC is the middleware layer or glue enabling users to connect, manage and scale to millions of devices. IBM has also made the LoRaWAN protocol open source (Eclipse Public License) for end-node development known as “LoRaWAN in C”.

*“The Internet of Things is already changing our world – from [better traffic control](#) on our highways, to [greater energy efficiency](#) in buildings and manufacturing operations, to reduced crime on our city streets,” said **Thorsten Kramp, Master Investor, IBM Research**. “Technology advancements like the one we’re announcing today will help significantly advance that vision by extending the reach, range and longevity of sensors that make up an intelligent world.”*

[Senet](#), a Network as a Service (NaaS) M2M operator based in New Hampshire, is currently installing 20,000 Semtech LoRa sensors with IBM’s LRSC software to track the fuel levels of propane and oil tanks located at residences and businesses on the west and east coasts of the United States. Every hour the sensors collect and securely transmit data, including fuel levels, gauge status, sensor status, and sensor recalibration reports, to fuel providers, who then determine when to dispatch deliveries and replenish supplies.

*“We have eliminated the guessing game,” said **George Dannecker, CEO of Senet**. “Our gauges are accurate and thanks to the LoRa technology they work over longer distances, reducing our infrastructure costs, which are savings we can pass to our clients. Consumers also benefit from never running low on fuel.”*

About Semtech

Semtech Corporation is a leading supplier of analog and mixed-signal semiconductors for high-end consumer, computing, communications and industrial equipment. Products are designed to benefit the engineering community as well as the global community. The company is dedicated to reducing the impact it, and its products, have on the environment. Internal green programs seek to reduce waste through material and manufacturing control, use of green technology and designing for resource reduction. Publicly traded since 1967, Semtech is listed on the NASDAQ Global Select Market under the symbol SMTC. For more information, visit www.semtech.com

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About FastNet

FastNet is a leading wireless data communications service provider. With 20 years' experience pioneering Point-Of-Sale (POS) communications in South Africa, FastNet provides a Payment Card Industry (PCI) compliant network that is reliable, secure and provides end-to-end data communication solutions for businesses of all sizes. The company specializes in POS, Virtual Private Network, Machine-to-Machine Communication and Wi-Fi technology.

With its national footprint, FastNet is well positioned to deliver a superior service and 24/7 technical support across South Africa. FastNet is also a fully licensed, Electronic Communications Network Services (ECNS) and Electronic Communication Services (ECS) service provider with the advantage of extensive coverage provided by both wireless and fixed line networks.

FastNet is a wholly owned subsidiary of Telkom SA SOC Limited. For further information, please visit www.fastnet.co.za.

About Senet

Senet, Inc. is a leader in the rapidly-emerging Internet of Things (IoT) / Machine-to-Machine (M2M) marketplace and the first public Network as a Service (NaaS) provider in the US for a low cost / long range ISM network. Through its established countrywide network, Senet enables monitoring services that help America's most efficient and environmentally-conscious businesses improve profits by managing and measuring the status of widely distributed assets -- businesses such as residential fuel oil and propane tank automation, water and gas metering, commercial lubrications distribution, solar irradiance, and many more. For additional information, visit www.senetco.com

About LoRa Alliance

LoRa™ Alliance is an open, non-profit association of members that believe the internet of things era is now. Our mission to standardize Low Power Wide Area Networks (LPWAN) being deployed around the world to enable Internet of Things (IoT), machine-to-machine (M2M), and smart city, and industrial applications. For more information, visit www.lora-alliance.org

About IBM Research

Now entering its 70th year, IBM Research continues to define the future of information technology with more than 3,000 researchers in 12 labs located across six continents. Scientists from IBM Research have produced six Nobel Laureates, 10 U.S. National Medals of Technology; five U.S. National Medals of Science, six Turing Awards, 19 inductees in the National Academy of Sciences and 14 inductees into the U.S. National Inventors Hall of Fame. For more information, visit www.research.ibm.com

Join the conversation on Twitter @IBMResearch #LRSC and follow IBM scientist @thorstenkramp.

Photos and video can be found

at https://www.flickr.com/gp/ibm_research_zurich/5DHeQ4/, <http://youtu.be/OTzBSTROcy8> and <http://youtu.be/gjK3rK-v3xM>

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