



Swisscom sets up a Swiss-wide network for the Internet of Things

The Internet of Things has long connected millions of objects and devices to one another and to people. In the future, this number will reach into the billions worldwide. Swisscom is the first provider in Switzerland to set up an additional network dedicated to the Internet of Things: the Low Power Network, designed for the transmission of small amounts of data independently of the electrical network.

Swisscom is setting up a Swiss-wide additional network for the Internet of Things, with the initial stage ready by the end of 2016. The Low Power Network (LPN) forms the basis for the Internet of Things and thus for smart cities, energy-efficient buildings, machine-to-machine networking and new digital applications. It grows exponentially, and various studies suggest that there will be billions of devices communicating with one another on a global level in future. To name just a few examples:

- Parking spaces log information about their occupancy and send this information to the traffic control system.
- Cities optimise collection routes in line with the fill levels of recycling containers and in doing so reduce both costs and CO₂ emissions.
- Letterboxes send a notification when packages arrive.
- Heating meters transmit the current meter reading directly to the real estate agency for exact billing.
- Machines and devices report breakdowns and failures as they happen.
- Sensors transmit information on the current nature of the ground in fields, helping farmers to achieve a good yield.

Objects learning to speak

The Low Power Network enables objects and devices to communicate with one another – simply and cost-effectively. This makes it possible to ascertain the status of an object, such as whether it is bright



or dark, warm or cold, moving or stationary. In combination with the Swisscom Cloud, users of the new network can develop new business models and service offerings that are based on the Internet of Things. Over 100 companies, public authorities and universities have shown an interest in the pilot project, which was launched in spring 2015 in Geneva and Zurich. Since then, more than 15 concepts have been developed, established as a prototype or are already in operation.

Why do we need an additional network?

Christian Petit, Head of Swisscom Enterprise Customers, says: “In many cases, we only need devices to be able to transmit the smallest units of information. This is precisely why we are setting up this network: in order to efficiently network objects such as fire hydrants, bicycles, umbrellas and much more.” The network offers a narrow bandwidth, which gives it a wide reach as well as energy-efficient transmission and reduces networking costs. Depending on the application, sensors can transmit information all year long, independently of the electrical network and powered by batteries. Applications with high data requirements, such as cars, remote maintenance or real-time control systems, will in future also use the mobile network. They will benefit from the combination of various networks with individual characteristics.

Swiss-wide expansion over the coming year

The basic offering is planned to have been expanded by the end of 2016, partly through Swisscom Broadcast’s existing transmitter sites. This means that 80% of Switzerland’s population will have outside coverage by the end of 2016. In ten cities, partial indoor coverage is also planned. The Low Power Network operates on the non-licensed SRD band and transmits information with a maximum of 0.5 watts. The network’s immissions are extremely low, far below the legal limits. Swisscom’s pilot network, launched in early 2015, was the first of its kind in Switzerland. Similar initiatives are under way in France, the Netherlands, Belgium, Luxembourg, the United Emirates, South Africa, the US, Russia and India. In the Netherlands, the major expansion of the network has accelerated due to high demand.

Berne, 14 March 2016



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Press release

www.swisscom.ch/lpn

The Low Power Network

The Low Power Network is based on the open LoRaWAN industry standard. Swisscom has been part of the LoRa Alliance since January 2015 (www.lora-alliance.org). Consulting firm Machina Research estimated in February 2015 that by 2023 over 3 billion M2M connections will be running via LPN worldwide.