Intel Outlines IoT Ambitions
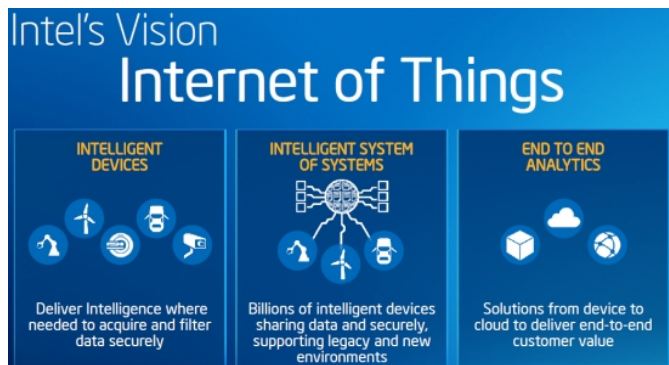
Written by Marco Attard
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"It's full of Quarks and Atoms!" one might remark after looking at the Intel Internet of Things (IoT) roadmap-- one promising to "drive business transformation" by connecting intelligent devices, end-to-end analytics and legacy devices to the cloud.

"The IoT consists of a wide range of internet-connected devices, from a simple pedometer to a complex CT scanner," the company explains. "The true value in the IoT is realized when these intelligent devices communicate and share data with each other and the cloud, uncovering information and actionable insight that can transform business... Intel is focused on driving intelligence in new devices and gateways to help connect the billions of existing devices."

To reach such lofty goals Intel will make use of a pair of product lines-- the newly announced ultra low-power Quark X1000 SoC series and the 64-bit Atom E3800 family.

Quark X1000 SoCs features error-correcting code (ECC) industrial temperature range and integrated security within a 32-bit, single-core, single-thread ISA-compatible CPU running at up to 400MHz.

Meanwhile the Atom E3800 family promises improved media and graphics performance, ECC, industrial temperature range, integrated security and integrated image signal processing, and is designed for digital signage applications such as interactive kiosks, intelligent vending, ATMs and POS terminals as well as portable medical devices and in-vehicle infotainment systems.

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According to Intel 85% of devices currently in used are based on existing legacy systems-- pointing out an opportunity for an interim step addressing interoperability, as opposed to replacement, of exising infrastructure. Thus the company is working on intelligent gateway solutions providing common interfaces between legacy devices and the cloud.

Based on Quark and Atom processors, such gateways will target industrial, energy and transportation markets and should ensure sharing of generated data between the cloud and intelligent devices.

Intel has no plans to directly sell gateways. Instead it will provide OEMs with an integrated software stack, interfaces, APIs and middleware functionality as integrated building blocks. Of course, such gateways are not powerful enough to handle enterprise IoT needs-- meaning customers will eventually demand gateways powered by Core and Xeon chips.

Will Intel be the trailblazer of an IoT revolution? We will know once its first products hit the market sometime during Q1 2014.

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