

# Fact Sheet

#### 2011 Year-In-Review

### **Intel Product and Technology Highlights**

#### 1) Power Becomes Increasingly More Important

Power efficiency has never been more important in the modern world. Power is at a premium and companies are looking for more power-efficient options to reduce costs. Intel Corporation recognizes the growing importance of energy efficiency and is focused on driving down power requirements in products ranging from big-iron cloud offerings to handheld mobile devices. On the product side, <u>Haswell</u> is the codename for Intel's next-generation micro-architecture due in 2013, which Intel plans to deliver a 20x reduction in connected standby power use. Haswell will be built using Intel's 22nm Tri-Gate Transistor Technology and will be at the heart of Ultrabook<sup>™</sup> devices and a multitude of other PC platforms. 2013 Ultrabook devices will have more than 10 days of standby battery life. Intel Labs built a <u>Near-Threshold Voltage Processor</u>, powered only by a solar cell the size of a postage stamp, which could reduce power consumption by five-fold or more and extend always-on capability to a wider range of computing devices.

#### 2) Rise of Devices that Compute

Just as more and more devices are connecting to the Internet, devices of all types today have evolved from a pure communications or static systems into mini-computers that require the power of an advanced microprocessor. Mobile phones used to be only a communications device; now smartphones are used to browse the Internet, stream music and watch movies. In addition to delivering new innovation for PCs, a market segment where approximately 1 million computers are sold each day, Intel is bringing computing innovation to a wide range of new intelligent devices including embedded systems, tablets, netbooks and smartphones. With the rise of these new computing devices, security has never been more important.

• <u>Security</u>: Today's PC-only security solutions are insufficient for the future, as more data is transmitted via smartphones, tablets and even cars. The malware targeted at smartphone and tablet platforms has increased by 250<sup>1</sup> percent. Next-generation solutions need to address multiple device types, the smaller memory footprint of mobile devices and continuous connectivity. Intel and McAfee are working together on hardware and software solutions that extend what McAfee is developing for this new mobile world. The

<sup>&</sup>lt;sup>1</sup> Juniper Networks, State of Mobile Security 2010 Report, Oct. 26, 2010

first product from their collaboration is the McAfee DeepSAFE technology platform, which taps into hardware capabilities found in the Intel® Core<sup>TM</sup> i3, i5 and i7 processors.

- Embedded: IDC highlighted a shift within the traditional embedded market segment from fixed function and isolated embedded systems to a new category of connected intelligent systems. According to IDC<sup>2</sup>, the market for intelligent systems is developing rapidly with over 1.8 billion units and over \$1 trillion in revenue today. Intel is accelerating this shift with new products and technologies from its data center, storage, and intelligent systems businesses to drive more intelligence across the spectrum of computing from devices to the cloud. Connectivity, security and manageability are the foundational building blocks for delivering service-ready platforms in the communications, healthcare, retail and transportation sectors that intelligent systems address. Intel introduced the Intel® AIM Suite technology, an audience detection technology for retail and digital signage applications that anonymously monitors viewer metrics such as gender, age bracket and length of viewer attention. With viewer metric data, brands are able to better monitor campaign success while delivering more relevant content to shoppers for an enhanced shopping experience.
- <u>Tablets & Netbooks</u>: Design wins from key companies including Evolve III\*, Fujitsu Limited\* and Motion Computing\* are running on the Intel® Atom<sup>TM</sup> processor Z670, formerly codenamed "Oak Trail." The processor is built for tablet form factors, offering reduced power consumption and thermals, and running multiple operating systems, including Google's Android\* platform and Microsoft Windows\*. Intel's next offering for the netbook category is the upcoming Intel Atom platform, codenamed "Cedar Trail," the solution of choice for the next generation of cool, quiet, sleek, fanless and innovative netbooks, entry desktop and all-in-one designs. Intel has shipped more than 100 million processors for netbooks since 2008.
- <u>Smartphones</u>: Intel has made significant progress in its mobile portfolio across a broad spectrum of <u>silicon</u>, <u>software and connectivity</u>. <u>Intel and Google</u>\* are working together to enable and optimize future releases of the Android<sup>TM</sup> platform for Intel's family of low-power Intel® Atom<sup>TM</sup> processors. The joint effort is designed to speed time-to-market of Intel technology-based smartphones running the Android platform. Medfield, a platform designed to extend the performance benefits of Intel x86 architecture into a low-power solutions for the smartphone and tablet market segments, is expected to be in production later this year with first designs scheduled to begin appearing in the first half of 2012 as Intel works closely with customers developing phones based on Intel architecture.
- <u>Software</u>: Intel's commitment to delivering products and technologies that enable a great user experience is evidenced by its growing Software and Services Group, focused on enhancing the performance of Intel processors through collaboration with software developers and partners to achieve the optimal experience. The software group is focused on security; software for mobile and embedded devices including tablets, netbooks and

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<sup>&</sup>lt;sup>2</sup> IDC: Intelligent Systems: The Next Big Opportunity, Sept. 9, 2011

in-vehicle-infotainment (IVI) systems; and operating system innovation including Microsoft Windows\*, Google Android\* and other open source options. Linux Foundation\* and LiMo Foundation\* created a new Linux\*-based open source software platform called Tizen<sup>TM</sup>, which builds upon MeeGo and LiMo8 operating systems. The Intel AppUp<sup>SM</sup> center has expanded from netbooks to host applications for laptops and Ultrabooks and will include support for HTML5-based applications, as well as location-based applications due to the recent Intel acquisition of Telmap. When available, the combination of Microsoft\* Windows\* 8 and Intel's industry-leading 22nm processors will deliver the world's best client computing experience. Microsoft\* Windows\* 8 presents a significant growth opportunity for Intel in extending our leadership to form factors like tablets and hybrid devices on our next-generation system-on-chip (SoC) platforms.

## 3) 40<sup>th</sup> Anniversary of the First General-Purpose Microprocessor

Nov. 15 marks the 40th anniversary of the invention of the Intel® 4004 processor, the first general-purpose microprocessor to be commercially available. This microprocessor reduced the cost of a computer by 100 times and eliminated the need to build specific hardware for each application, shifting the design task to software. This changed the entire economics of the electronics industry – creating a new market for a low-end class of computer and applications that was previously unfathomable. At the time, neither the inventors nor Intel could have predicted that this invention would ultimately spawn a \$300 billion global semiconductor industry and impact trillions of dollars of commerce globally. Today, the microprocessor touches every aspect of people's daily lives. It is the platform on which thousands of innovations have been built – from personal computers, cellular phones and the Internet to ATMs, spacecraft, prosthetic limbs and automotive controls. The worldwide market for just personal computers, mobile phones and consumer electronics is nearly \$1 trillion.

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