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Intel's Priority: A Total Mobile Computing Experience

New Laptop Chips, Software Developer Programs Unveiled

SAN FRANCISCO--(BUSINESS WIRE)-- At its developer conference today, Intel Corporation demonstrated how from handhelds and netbooks for light-computing to the balanced performance and style of ultra-thin laptops to full-function laptop computing, the company delivers the right combination of priorities for every mobile experience. The Intel Developer Forum keynote by David (Dadi) Perlmutter, executive vice president and general manager, Intel Architecture Group, also marked the debut of three new super-fast and intelligent Intel(R) Core(TM) i7 processors for laptops.

"Staying connected on an increasingly broad array of mobile devices has become the most exciting and quickly evolving part of technology," said Perlmutter. "Intel is delivering the total mobile experience on each device, offering different levels of performance and power in sleek form factors coupled with compatibility, a superior mobile Internet experience and embedded WiMAX wireless broadband. We're truly taking mobility to the next level of cool."

Based on Intel's award-winning Nehalem microarchitecture, the new Intel(R) Core(TM) i7 processors and a new chipset include such features as Intel(R) Turbo Boost Technology[1] and Intel(R) Hyper-Threading[2] Technology. The quad-core chips deliver unmatched processing power on-the-go for the most demanding PC users who create digital video, play intense games or run compute-intensive business applications.

Perlmutter also highlighted Intel's next generation of mobile processors, codenamed "Arrandale," which brings the Nehalem microarchitecture to mainstream laptops. These chips will integrate the dual-core CPU and graphics in the package and incorporate the 32nm manufacturing process and second-generation high-k metal gate transistors for increased performance and power efficiency for mainstream mobile PCs. This integration of platform components will continue into the future with a fully monolithic processor on 32nm, codenamed "Sandy Bridge."

Citing a combination of architectural, design and process enhancements, Perlmutter detailed progress with Intel's "Moorestown" platform, scheduled for 2010 and targeting MIDs and smartphones. He discussed some of the innovative techniques that Intel is implementing, such as Distributed Power Gating, for improved performance and major reductions in power and thermal envelope.

These technologies help to achieve up to a 50x improvement in platform idle power reduction compared to Intel's first generation "Menlow" platform. The reductions are enabling Intel to establish new thresholds in ultra low power while making it possible to run the full Internet and media-rich applications in handheld devices.

Perlmutter also touched on Intel's third generation ultra-low power platform, codenamed "Medfield." Expected in 2011, Medfield will be a single-chip 32nm system-on-chip (SoC) design that will enable a much smaller form factor and lower power designs than Moorestown, helping extend Intel squarely into smartphone segments.

Perlmutter demonstrated a new high-speed optical cable technology ready by next year to connect mainstream electronic devices such as laptops, HD displays, cameras, video players, iPods*, docking stations and solid-state drives (SSDs) to each other using optical fiber rather than copper wires, paving the way for a new generation of extreme input and output (I/O) performance. Developed by Intel and codenamed "Light Peak," this proposed technology will spawn a new generation of extreme computer I/O performance, delivering 10Gb/s of bandwidth, with the potential ability to scale to 100Gb/s over the next decade. At 10Gb/s, a user could transfer a full-length Blu-ray* movie in less than 30 seconds. The company intends to work with the industry to determine the best way to make this new technology a broadly available standard.

In addition, Perlmutter announced Intel(R) Anti-Theft Technology (Intel(R) AT) version 2.03, an intelligent technology in PC hardware that disables laptop PC and access to encrypted data if it's lost or stolen. Collaborating with key security ISVs, Intel AT will enable enhanced data protection, PC theft deterrence for consumers as well as a broad number of consumer and business laptops from leading PC OEMs in 2010.

James: Developing for the Continuum of Intel Platforms

In the day's second keynote, Renee James, corporate vice president and general manager of Intel's Software and Services Group, unveiled the Intel Atom Developer Program. This effort encourages independent software vendors and developers to create mobile applications. Intel is partnering with manufacturers, including Acer* and ASUS*, to create multiple application stores where applications and application building blocks for Intel-based netbooks and handhelds will be sold.

"The Intel Atom Developer Program will drive new innovative applications for consumers and new revenue streams for software developers," said James. "The new program facilitates the creation of applications that consumers can use with confidence knowing they were optimized and validated for Intel Atom processor-based devices."

Microsoft* Silverlight and Moblin*

Additionally, operating system support for Microsoft* Silverlight will be expanded to include Moblin* early next year. Moblin is an open-source operating system project for netbooks, handhelds, smartphones and in-car computers. Using Silverlight's cross-platform foundation, developers will be able to write applications once and have them run on Windows and Moblin devices, expanding the reach of Silverlight applications to more devices and consumers, and thus demonstrating the continued push into PC, TV and phone.

Demonstrating industry momentum for netbooks and the Moblin operating system, James announced the Dell* Inspiron Mini 10v with Ubuntu Moblin Remix Developer Edition pre-installed will be available starting Sept. 24. James also announced that ASUS* and Acer* have launched - and Samsung* planning to launch - Moblin version 2-based netbook devices. Multiple operating system vendors, including Canonical, CS2C, Linpus, Mandriva,

Novell, Phoenix and Turbolinux, announced production-ready Moblin version 2-based operating systems are now available.

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[1]Intel(R) Turbo Boost technology (Intel(R) TBT) requires a PC with a processor with Intel TBT capability. Intel TBT performance varies depending on hardware, software and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel TBT. See www.intel.com/technology/turboboost for more information.

[2]Intel(R) Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. For more information, including details on which processors support HT Technology, see www.intel.com/info/hyperthreading

[3]Intel(R) Anti-Theft Technology (Intel(R) AT). No computer system can provide absolute security under all conditions. Intel(R) Anti-Theft Technology (Intel(R) AT) for PC protection (also referred to as the 'poison pill') requires the computer system to have an Intel(R) AT-enabled chipset, BIOS, firmware release, software and an Intel AT-capable Service Provider/ISV application and service subscription. Intel(R) AT (PC Protection) performs the encrypted data access disable by preventing access to or deleting cryptographic material (e.g. encryption keys) required to access previously encrypted data. ISV-provided Intel-AT-capable encryption software may store this cryptographic material in the PC's chipset. In order to restore access to data when the system is recovered, this cryptographic material must be escrowed/backed up in advance in a separate device or server provided by the security ISV/service provider. The detection (triggers), response (actions), and recovery mechanisms only work after the Intel(R) AT functionality has been activated and configured. The activation process requires an enrollment procedure in order to obtain a license from an authorized security vendor/service provider for each PC or batch of PCs. Activation also requires setup and configuration by the purchaser or service provider and may require scripting with the console. Certain functionality may not be offered by some ISVs or service providers. Certain functionality may not be available in all countries. Intel assumes no liability for lost or stolen data and/or systems or any other damages resulting thereof.

Source: Intel Corporation