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Backgrounder

Intel® Software and Services Group

The Intel Software and Services Group (SSG) is led by <u>Renée J. James</u>, senior vice president and SSG general manager, who has been with the company since 1988. SSG employs thousands of software-focused professionals and on that measure, if it were an independent company, it would be among the world's top 10 software companies.

Recognizing that software is tightly coupled with, and a vital element of, all Intel platforms and processors, SSG provides software products and services, design resources, technical expertise and consulting worldwide. SSG primarily works with software companies, such as Adobe**, Google**, Microsoft**, Oracle** and VMware**, collaborates directly with CIOs of major corporations, such as DreamWorks** and Reuters Financial** and also aids individual software developers.

Through SSG's comprehensive enabling efforts, the software community can take advantage of Intel processor technologies across the computing spectrum – from the Intel® Atom™ processor for mobile computing devices to Intel® Core™ processor and Intel® Xeon® processor families for PCs, servers and IT infrastructures. SSG works with developers to enhance innovation and gain the best possible performance, uptime and efficiency. In addition, SSG takes part in the integral microprocessor design process, ensuring software requirements are comprehended in the development of future architectures and silicon designs.

While SSG collectively works on a broad range of software-related areas, its priorities include: security; software for mobile and embedded devices including smart phones, tablets, Ultrabooks, netbooks and in-vehicle-infotainment (IVI) systems; visual computing and multi-core software design, also known as parallel programming. In addition, virtualization, manageability and worldwide developer training are key areas of focus for the group.

SSG Focus Areas & Capabilities:

Enabling: SSG formally engages with more than 20,000 independent software vendors (ISV) worldwide through a collaborative online application and software development community. Intel also engages with more than 8.3 million software developers throughout the year with an online network offering design tools, resources and expert consulting. Additionally, SSG has provided more than 2,882 academic institutions with parallel programming and visual computing curricula, developer tools, training, research and more in an effort to enhance software education and prepare the next generation of software developers around the world. To support the ecosystem of application developers, SSG developed the Intel AppUpSM developer program, a framework for ISVs and software developers to create and sell applications for netbooks, laptops and other devices. These applications are collected, categorized and validated for the Intel AppUpSM center and associated stores. The Intel AppUp center houses a selection of more than 4,000 applications and has been downloaded by more than one million consumers.

Products and Services: SSG creates software tools that help engineers accelerate the development of applications that are optimized, scalable and multi-threaded to make the most out of Intel multi-core processors. Hundreds of thousands of developers use Intel developer products, including compilers, debuggers and libraries. Intel® Parallel® Parallel® Studio is a line of software tools that aid Windows developers in adopting parallelism for multi-core processors. Intel's Wind River subsidiary delivers software products for embedded systems and mobile handheld devices. Intel's Havok subsidiary creates middleware products that help accelerate innovation on the company's platforms in the

visual computing domain. Intel's McAfee subsidiary provides proactive and proven security solutions and services that help secure systems, networks, and mobile devices around the world, allowing users to safely connect to the Internet, browse and shop the Web more securely.

Software Infrastructure: To build a foundation for robust solutions and industry innovation, SSG works with the software community to set standards, establish industry benchmarks and participate in open source projects. Through direct engagements with middleware and operating system vendors (OSVs), SSG helps these vendors take advantage of the latest Intel technology and features. SSG characterizes software behavior and anticipates future needs to define future requirements for Intel silicon and architecture. Hundreds of SSG employees work on open source software projects through www.lesswatts.org, www.intellinuxgraphics.org and www.kernel.org. In 2009, CNET ranked Intel as the No. 2 Linux contributor. Many prominent open source designers are employed by Intel and continually contribute to open source community projects.

SSG also provides the most flexible platform of choice by enabling operating systems such as Android, Chrome OS and Windows 7 on multiple form factors. To ensure consumers and organizations have multiple operating system options, Intel works closely with Google, Microsoft and other OSVs to help optimize and deliver Intel Atom processor-based devices that work best with their software. In addition, SSG also participates in the fully open software platform, Tizen**, an evolution of the MeeGo project. Tizen is an open source project led by the LiMo Foundation and the Linux Foundation. It is a Linux-based operating system platform based on emerging standards including an application programming interface based on HTML5 and other web standards. Tizen is intended for a wide range of devices including netbooks, tablets, connected TVs, smartphones and IVI systems.

SSG pioneered next-generation Basic Input/Output System (BIOS), a class of firmware that initializes the platform hardware, by gathering key players to create Unified Extensible Firmware Interface (UEFI) industry standard specifications that define a software interface between an operating system and platform firmware. Along with device manufacturers including Apple**, Dell**, IBM**, HP**, Lenovo** and other players such as Microsoft**, Linux** vendors and BIOS vendors in addition to more than 170 other companies, Intel also created an open source reference implementation through www.tianocore.org that is now being adopted as new BIOS and boot loader on the majority of Intel platforms. UEFI standard enables manufacturers to reduce development costs and product deployment time. It offers customers new innovations and enhanced platform capabilities in various areas including boot performance, manageability, platform security and ease of use.

Acquisitions:

- 2011 Telmap, navigation, location-based services, search and content software
- 2011 McAfee, anti-malware, anti-spyware, virus protection and security management products
- 2011 Nordic Edge, security solutions, identity management, and authentication
- 2010 Virtutech, products and technology for virtualized systems development
- 2009 Cilk Arts, technology for parallel programming for multi-core processors
- 2009 Rapid Mind, technology for data parallel programming for multi-core processors
- 2009 Wind River, an embedded software company
- 2009 Swiftfoot Graphics, experts in real-time rendering and graphics algorithms
- 2009 Offset, visual computing game and middleware experts
- 2008 OpenedHand, Linux user interface experts; helps design mobile user experiences
- 2007 Havok, a visual computing game engine and middleware company
- 2007 Neoptica, visual computing software experts
- 2005 Sarvega, XML engineers and intellectual property
- 2004 Elbrus/Unipro, JAVA, compilers and software skills in Russia

Key Partnerships:

- SSG strives to make all software run best on Intel architecture by working with the software community, including operating systems through our partners Microsoft**, Google** and the open source community, as well as runtime suppliers. A few of Intel's collaborations in this realm include: Adobe**, Citrix**, Oracle**, Novell**, SAP**, Symantec** and VMware**.
- SSG has played a key role in securing Intel customers, including Cisco**, DreamWorks**, LG**, Sun** and many others.

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