

INTEL CORP
Form 10-K
February 13, 2015

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K
(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 27, 2014.

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____.

Commission File Number 000-06217

INTEL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

94-1672743

State or other jurisdiction of incorporation or organization

(I.R.S. Employer Identification No.)

2200 Mission College Boulevard, Santa Clara, California 95054-1549
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code (408) 765-8080

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which registered

Common stock, \$0.001 par value

The NASDAQ Global Select Market*

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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PART I

ITEM 1. BUSINESS

Company Overview

We design and manufacture advanced integrated digital technology platforms. A platform consists of a microprocessor and chipset, and may be enhanced by additional hardware, software, and services. We sell these platforms primarily to original equipment manufacturers (OEMs), original design manufacturers (ODMs), and industrial and communications equipment manufacturers in the computing and communications industries. Our platforms are used to deliver a wide range of computing experiences in notebooks (including Ultrabook™ devices), 2 in 1 systems, desktops, servers, tablets, smartphones, and the Internet of Things (including wearables, transportation systems, and retail devices). We also develop and sell software and services primarily focused on security and technology integration. We were incorporated in California in 1968 and reincorporated in Delaware in 1989.

Company Strategy

Our vision is if it is smart and connected, it is best with Intel. As a result, we offer complete and connected computing solutions, both hardware and software, and continue to drive "Moore's Law." Over time, the number of devices connected to the Internet and to one another has grown from hundreds of millions to billions. This number continues to grow and the variety of devices also continues to increase. The combination of embedding computing into devices and connecting them to the Internet, known as the Internet of Things, as well as a build-out of the cloud infrastructure supporting these devices, is driving fundamental changes in the computing industry. As a result, we are transforming our primary focus from the design and manufacture of semiconductor chips for personal computers (PCs) and servers to the delivery of more complete platform solutions consisting of hardware and software platforms and supporting services. These solutions span the compute continuum, from high-performance computing systems running trillions of operations per second to embedded applications consuming milliwatts of power. Additionally, computing is becoming an increasingly mobile, personal, and ubiquitous experience. End users value smart devices that connect seamlessly and securely to the Internet and to each other. We enable this experience by innovating around energy-efficient performance, connectivity, and security.

To succeed in this changing computing environment, we have the following key objectives:

- relentless pursuit of Moore's Law to maximize and extend our manufacturing technology leadership;
- strive to ensure that Intel® technology is the best choice across the compute continuum, including PCs, data centers, ultra-mobile devices, and the Internet of Things;
- expand platforms into adjacent market segments to bring compelling new System-on-Chip (SoC) solutions and user experiences to ultra-mobile form factors including tablets and smartphones, as well as PC platforms (including Ultrabook devices, 2 in 1 systems, and all-in-ones), data center applications, and the Internet of Things (including wearables, transportation systems, and retail devices);
- increase the utilization of our investments in intellectual property and research and development (R&D) across all market segments;
- be the platform of choice for any operating system;
- expand data center, security, and big data analytics;
- scale our manufacturing capabilities into foundry; and
- strive to reduce the environmental footprint of our products and operations as well as be an asset to the communities we work in.

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We use our core assets to meet these objectives. We believe that applying our core assets to our key objectives provides us with the scale, capacity, and global reach to establish new technologies and respond to customers' needs quickly. Our core assets and key objectives include the following:

Silicon and Manufacturing Technology Leadership. We have long been a leader in silicon process technology and manufacturing, and we aim to continue our lead through investment and innovation in this critical area. Moore's Law predicted that transistor density on integrated circuits would double about every two years. We continue executing to Moore's Law by enabling new devices with higher functionality and complexity while controlling power, cost, and size. In keeping with Moore's Law, we drive a regular and predictable upgrade cycle—introducing a new microarchitecture approximately every two to three years and ramping the next generation of silicon process technology in the intervening periods. We refer to this as our "tick-tock" technology development cadence. Through this cycle, we continue to push progress by designing and putting transistor innovations into high-volume production. We aim to have the best process technology, and unlike many semiconductor companies, we primarily manufacture our products in our own facilities. This in-house manufacturing capability enables us to optimize performance, shorten our time to market, and scale new products more rapidly. We believe this competitive advantage will be extended in the future as the costs to build leading-edge fabrication facilities increase, and as fewer semiconductor companies will be able to combine platform design and manufacturing.

Architecture and Platforms. We are developing a wide range of solutions for devices that span the compute continuum and allow for computing experiences in notebooks, desktops, servers, tablets, smartphones, and the Internet of Things. We believe that users want consistent computing experiences and interoperable devices and that users and developers value consistency of architecture. This provides a common framework that results in shortened time-to-market, increased innovation, and the ability to leverage technologies across multiple form factors. We believe that we can meet the needs of users and developers to offer complete solutions across the compute continuum through our partnership with the industry on open, standards-based platform innovation around Intel® architecture. We continue to invest in improving Intel architecture to deliver increased value to our customers and expand the capabilities of the architecture in adjacent market segments. For example, we focus on delivering improved energy-efficient performance, which involves balancing higher performance with the lowest power. In addition, we are focusing on perceptual computing, which brings exciting experiences through devices that sense, perceive, and interact with the user's actions.

Software and Services. We offer software and services that provide solutions through a combination of hardware and software for consumer and corporate environments. Additionally, we seek to enable and advance the computing ecosystem by providing development tools and support to help software developers create software applications that take advantage of our platforms. We seek to expedite growth in various market segments, such as the embedded market segment and big data analytics, through our software offerings. We continue to collaborate with companies to develop software platforms that are optimized for Intel® processors, support multiple hardware architectures, and operating systems.

Security. Through our expertise in hardware and software, we are able to embed security into many facets of computing and offer proactive solutions and services to help secure the world's most critical systems and networks. We protect consumers and businesses of all sizes, and bring unique hardware, software, and end-to-end security solutions to the market to help enable increased protection against ever-evolving security risks.

Customer Orientation. We focus on providing compelling user experiences by developing our next generation of products based on customer needs and expectations. In turn, our products help enable the design and development of new user experiences, form factors, and usage models for businesses and consumers. For example, we enhance the customer computing experience by providing Intel® RealSense™ technology, wireless charging, and password elimination. We offer platforms that incorporate various components and capabilities designed and configured to work together to provide an optimized solution that customers can easily integrate into their end products.

Additionally, we promote industry standards that we believe will yield innovation and improved technologies for users.

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Strategic Investments. We make investments in companies around the world that we believe will further our vision, mission, and strategic objectives: support our key business initiatives: and generate financial returns. Our investments—including those made through Intel Capital—generally focus on companies and initiatives that we believe will stimulate growth in the digital economy, create new business opportunities for Intel, and expand global markets for our products. In 2014, we completed an investment in Cloudera, Inc. (Cloudera) to bring big data analytics into the mainstream through the joining of Cloudera's software platform and our data center architecture based on Intel® Xeon® processors. Additionally, we plan to continue to purchase and license intellectual property to support our current and expanding business.

Corporate Stewardship. We are committed to developing energy-efficient technology solutions that can be used to address major global problems while reducing our environmental impact. We have led the industry in the journey to produce products that are free of conflict minerals, and have made our learnings from this journey open to others in the industry. We also believe that creating a fully diverse and inclusive workplace is fundamental to how we deliver business results. To this end in January 2015, our Chief Executive Officer, Brian Krzanich, announced the Diversity in Technology initiative and a goal to achieve full representation of women and under-represented minorities at Intel by 2020. We are also committed to empowering people and expanding economic opportunity through education and technology, driven by our corporate and Intel Foundation programs, policy leadership, and collaborative engagements. In addition, we strive to cultivate a work environment in which engaged, energized employees can thrive in their jobs and in their communities.

Our continued investment in developing our assets and execution in key objectives are intended to help strengthen our competitive position as we enter and expand into adjacent market segments, such as tablets, smartphones, and the Internet of Things. These market segments change rapidly, and we need to adapt to new environments. A key characteristic of these adjacent market segments is low-power consumption based on SoC products. We are making significant investments in this area with the accelerated development of our SoC solutions based on the 64-bit Intel® Atom™ microarchitecture and Intel® Quark™ technology. We are also optimizing our server products for energy-efficient performance, as we believe that increased Internet traffic and the use of ultra-mobile devices, the Internet of Things, and data center applications have created the need for improved data center infrastructure and energy efficiency.

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Business Organization

In Q1 2014, we made certain changes to our organizational structure to align with our critical objectives. As of December 27, 2014, we managed our business through the following operating segments:

For a description of our operating segments, see "Note 26: Operating Segments and Geographic Information" in Part II, Item 8 of this Form 10-K.

Products

Platforms

We offer platforms that incorporate various components and technologies, including a microprocessor and chipset, a stand-alone SoC, or a multichip package. A platform may be enhanced by additional hardware, software, and services. A microprocessor—the central processing unit (CPU) of a computer system—processes system data and controls other devices in the system. We offer microprocessors with one or multiple processor cores. Multi-core microprocessors can enable improved multitasking and energy-efficient performance by distributing computing tasks across two or more cores. In addition, our Intel® Core™ processor families integrate graphics functionality onto the processor die.

A chipset sends data between the microprocessor and input, display, and storage devices, such as the keyboard, mouse, monitor, hard drive or solid-state drive, and optical disc drives. Chipsets extend the audio, video, and other capabilities of many systems and perform essential logic functions, such as balancing the performance of the system and removing bottlenecks.

We offer and continue to develop SoC products that integrate our CPUs with other system components, such as graphics, audio, imaging, communication and connectivity, and video, onto a single chip. SoC products are designed to reduce total cost of ownership, provide improved performance due to higher integration and the lowest power, and enable ultra-mobile form factors such as tablets, smartphones, Ultrabook devices, and 2 in 1 systems, as well as notebooks, desktops, data center products, and the Internet of Things.

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We offer a multichip package that integrates the chipset on one die with the CPU and graphics on another die, connected via a lower-power, on-package interface. Similar to an SoC, the multichip package can provide improved performance due to higher integration coupled with the lowest power consumption, which enables smaller form factors. In 2014, we introduced our 5th generation Intel Core processor, code-named "Broadwell."

We also offer features designed to improve our platform capabilities. For example, Intel® vPro™ technology is a solution for manageability, security, and business user experiences in the notebook, desktop, and 2 in 1 systems market segments. Intel vPro technology is designed to provide businesses with increased manageability, upgradeability, energy-efficient performance, and security while lowering the total cost of ownership. We also offer Intel® Iris™ technology, which provides enhanced integrated graphics for our 4th and 5th generation Intel Core processors. In 2014, we announced Intel RealSense technology, which includes software and depth cameras that enable more natural and intuitive interaction with personal computing devices.

We offer a range of platforms based upon the following microprocessors:

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McAfee, Inc.

McAfee, Inc. (McAfee) offers software and hardware products that provide security solutions designed to protect systems in consumer, mobile, and corporate environments from malicious virus attacks and loss of data. McAfee's products include software solutions for end-point security, network and content security, risk and compliance, and consumer and mobile security and privacy.

Communication and Connectivity

Our communication and connectivity offerings for tablets, smartphones, and other connected devices include baseband processors, radio frequency transceivers, and power management integrated circuits. We also offer comprehensive smartphone, tablet, and Internet of Things solutions, which include multimode Long Term Evolution (LTE*) modems, Bluetooth® and Global Positioning System (GPS) receivers, software solutions, customization, and essential interoperability tests.

Non-Volatile Memory Solutions

We offer NAND flash memory products primarily used in solid-state drives. Our NAND flash memory products are manufactured by IM Flash Technologies, LLC (IMFT) and Micron Technology, Inc. (Micron).

Intel Custom Foundry

We offer manufacturing technologies and design services for our customers. Our foundry offerings include full custom silicon, packaging, and manufacturing test services. We also provide semi-custom services to tailor Intel architecture-based solutions with customers' intellectual property blocks. To enable our customers to use our custom foundry services, we offer industry-standard design kits, intellectual property blocks, and design services.

Products and Product Strategy by Operating Segment

Our PC Client Group operating segment offers products that are incorporated in notebook (including Ultrabook devices), 2 in 1 systems, and desktop computers for consumers and businesses. In 2014, we introduced the 5th generation Intel Core processor family for use in 2 in 1 systems, and we will soon release the 5th generation Intel Core processors for other notebooks. These processors use 14-nanometer (nm) transistors and our Tri-Gate transistor technology. Our Tri-Gate transistor technology extends Moore's Law by providing improved performance and energy efficiency. In combination, these enhancements can provide significant power savings and performance gains when compared to previous-generation technologies.

Notebook

Our strategy for the notebook computing market segment is to offer notebook technologies designed to bring exciting new user experiences to life and improve performance, battery life, wireless connectivity, manageability, and security. In addition, we are designing for innovative smaller, lighter, and thinner form factors. We believe that our 5th generation Intel Core processors will continue to deliver increasing levels of performance, graphics, and energy efficiency, and will provide our customers and end users with multiple choices in operating system compatibility, processor cores, graphic performance, and battery life.

We have worked to help our customers develop a new class of personal computing devices that includes Ultrabook devices and 2 in 1 systems. These computers combine the energy-efficient performance and capabilities of today's notebooks and tablets with enhanced graphics and improved user interfaces such as touch and voice in a thin, light form factor that is highly responsive and secure, and that can seamlessly connect to the Internet. In 2014, we introduced the Intel® Core™ processor, our first commercially available 14nm processor designed to enable responsive performance and improved battery life for new tablet-thin, fanless devices. We believe the renewed innovation in the PC industry that we fostered with Ultrabook devices and expanded to 2 in 1 systems will continue.

Desktop

Our strategy for the desktop computing market segment is to offer exciting new user experiences and products that provide increased manageability, security, and energy-efficient performance. We are also focused on lowering the total cost of ownership for businesses. The desktop computing market segment includes all-in-one desktop products, which combine traditionally separate desktop components into one form factor. Additionally, all-in-one computers have transformed into portable and flexible form factors that offer users increased portability and new multi-user applications and uses. For desktop consumers, we also focus on the design of products for high-end enthusiast PCs and mainstream PCs with rapidly increasing audio and media capabilities.

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Our Data Center Group operating segment offers products designed to provide leading energy-efficient performance for all server, network, and storage platforms. In addition, the Data Center Group (DCG) focuses on lowering the total cost of ownership and on other specific optimizations for the enterprise, cloud, communications infrastructure, and technical computing segments. In 2014, we launched our next-generation Intel Xeon processor E5 family platform for our 22nm process technology. The 22nm Intel Xeon processors provide improved performance and better power consumption across server, network, and storage platforms. We also launched our next-generation Intel Xeon processor E7 family. These products are targeted at platforms requiring four or more CPUs and industry leading reliability, availability, and serviceability. DCG is continuing to ramp the Intel® Xeon Phi™ coprocessor with 60 or more high-performance, low-power Intel processor cores. The Intel Xeon Phi coprocessors are positioned to boost the power of the world's most advanced supercomputers, enabling trillions of calculations per second.

Our Internet of Things Group operating segment offers platforms for customers to design products for the retail, transportation, industrial, and buildings and home market segments. In addition, the Internet of Things Group (IOTG) focuses on establishing an end-to-end secure and manageable architecture that captures actionable information for consumers. In 2014, we shipped our first Intel Quark SoC 32-bit microprocessor. We also launched the Intel® Edison development platform, which is designed to empower the next generation of wearables, robotics, and other small devices connecting, creating, and consuming data.

Our Mobile and Communications Group operating segment offers products that incorporate hardware, software, and connectivity for tablets, smartphones, and other mobile devices. In addition, our Mobile and Communications Group (MCG) focuses on a broad range of wireless connectivity options by combining Intel® WiFi technology with our 2G and 3G technologies, and creating a path to accelerate industry adoption of 4G LTE. In 2014, we began selling our second-generation LTE solution, featuring CAT6 and carrier aggregation. In addition, MCG developed the first Intel Atom SoC application processor integrated with leading global 3G modem, code-named "SoFIA." SoFIA is designed for the entry and value mobile devices market segment.

Our software and services operating segments seek to create differentiated user experiences on Intel®-based platforms. We differentiate by combining Intel platform features and enhanced software and services. Our three primary initiatives are:

- enabling platforms that can be used across multiple operating systems, applications, and services across all Intel products;
- optimizing features and performance by enabling the software ecosystem to quickly take advantage of new platform features and capabilities; and
- enable a more secure online experience by using software, services, and hardware to deliver comprehensive solutions, such as our McAfee LiveSafe* service, which provides a comprehensive security suite that offers consumer protection across a range of devices such as PCs, tablets, and smartphones.

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Revenue by Major Operating Segment

Net revenue for the PC Client Group (PCCG) operating segment, the Data Center Group (DCG) operating segment, the Internet of Things Group (IOTG) operating segment, the Mobile and Communications Group (MCG) operating segment, and the aggregated software and services (SSG) operating segments is presented as a percentage of our consolidated net revenue. SSG includes McAfee and the Software and Services Group operating segment. The "all other" category consists primarily of revenue from the Non-Volatile Memory Solutions Group, the Netbook Group, and the New Devices Group operating segments.

Percentage of Revenue by Major Operating Segment

(Dollars in Millions)

Percentage of Revenue by Principal Product from Reportable Segments*

(Dollars in Millions)

*Note images are not to scale

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Competition

The computing industry continuously evolves with new and enhanced technologies and products from existing and new providers. The marketplace can change quickly in response to the introduction of such technologies and products and other factors such as changes in customer and end-user requirements, expectations, and preferences. As technologies evolve and new market segments emerge, the boundaries between the market segments that we compete in are also subject to change.

Intel faces significant competition in the development and market acceptance of our products in this environment. Our platforms, based on Intel architecture, are positioned to compete across the compute continuum, from the lowest power and ultra-mobile devices to the most powerful data center servers. Our platforms, which have integrated hardware and software, offer customers benefits such as ease of use, savings in total cost of ownership, and the ability to scale systems to accommodate increased usage.

Competitors

We compete against other companies that make and sell platforms, other silicon components, and software to businesses that build and sell computing and communications devices to end users. Our competitors also include companies that sell goods and services to businesses that utilize them for their internal and/or customer-facing processes (e.g., businesses running large data centers). In addition, we face competition from OEMs, ODMs, and other industrial and communications equipment manufacturers that, to some degree, choose to vertically integrate their own proprietary semiconductor and software assets. By doing so, these competitors may be attempting to offer greater differentiation in their products and to increase their share of the profits for each finished product they sell. Continuing changes in industry participants through, for example, acquisitions or business collaborations could also have a significant impact on our competitive position.

We are a leading provider in the PC and data center segments, where we face existing and emerging competition. In the PC market segment, ultra-mobile devices—such as tablets and smartphones offered by numerous vendors—have become significant competitors to PCs for many usages. Most of these small devices currently use applications processors based on the ARM* architecture; feature low-power, long battery-life operation; and are built in SoC formats that integrate numerous functions on one chip.

In the data center segment, our data center platforms face emerging competition from companies using ARM architecture or other technologies. Internet cloud computing and high-performance computing are areas of significant targeted growth for us in the data center segment, and we face strong competition in these market segments.

We are a relatively new entrant to the segments for tablets, smartphones, and similar ultra-mobile devices. We have adjusted our product roadmaps to emphasize the development of low-power SoC chips for such devices, as well the Internet of Things.

In the Internet of Things market segment, we have a long-standing position as a supplier of components and software for embedded products, and this marketplace is significantly expanding with increasing types and numbers of smart and connected devices for industrial, commercial, and consumer uses. In this growing market segment, we face numerous large and small incumbent competitors as well as new entrants that use ARM architecture and other operating systems and software.

McAfee is a major provider of digital security products and services to businesses and consumers. Numerous competitors offer security products and services, and we seek to offer competitive differentiation by integrating hardware and software security features in many of our offerings and to have security offerings in numerous market segments, including mobile and embedded devices and for data centers.

Our products primarily compete based on performance, energy efficiency, integration, innovative design, features, price, quality, reliability, brand recognition, and availability. The importance of these factors will vary by the type of end system for the products. For example, performance might be among the most important factors for our products for data center servers, while price and integration might be among the most important factors for our products for tablets, smartphones, and other mobile devices.

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Competitive Advantages

Our products' ability to operate on multiple operating systems in end-user products and platforms operated or sold by third parties, including OEMs, is a key competitive advantage. We seek to optimize our products for multiple operating systems and invest substantial resources working with third parties to do so, but such investments are risky given that it is not clear which products will succeed in the market.

Another key competitive advantage is our market lead in transitioning to the next-generation process technology and bringing products to market using such technology. We have products in the market manufactured using our 14nm process technology and are currently working on the development of our next-generation 10nm process technology. We believe that these transitions will offer significant improvements in one or more of the following areas: performance, new features, energy efficiency, and cost.

Moreover, the combination of our network of manufacturing and assembly and test facilities with our global architecture design teams is another important competitive advantage. We have made significant capital and R&D investments into this integrated manufacturing network, which enables us to have more direct control over our processes, quality control, product cost, production timing, performance, power consumption, and manufacturing yield. The increased cost of constructing new fabrication facilities supporting smaller transistor geometries and larger wafers has led to a smaller pool of companies that can afford to build and equip leading-edge manufacturing facilities. Most of our competitors rely on third-party foundries and subcontractors such as Taiwan Semiconductor Manufacturing Company, Ltd. and GlobalFoundries Inc. for manufacturing and assembly and test needs. We provide foundry services as an alternative to such foundries.

Manufacturing and Assembly and Test

As of December 27, 2014, 70% of our wafer fabrication, including microprocessors and chipsets, was conducted within the U.S. at our facilities in Arizona, New Mexico, Oregon, and Massachusetts. Our Massachusetts fabrication facility is our last manufacturing facility on 200 millimeter (mm) wafers and is expected to cease production in Q1 2015. The remaining 30% of our wafer fabrication was conducted outside the U.S. at our facilities in Israel and China. Our fabrication facility in Ireland is currently transitioning to our 14nm process technology, with manufacturing expected to ramp in the second half of 2015. Wafer fabrication conducted within and outside the U.S. may be impacted by the timing of a facility's transition to a newer process technology, as well as a facility's capacity utilization.

As of December 27, 2014, we manufactured our products in wafer fabrication facilities at the following locations:

Products	Wafer Size	Process Technology	Locations
Microprocessors	300mm	14nm	Arizona, Oregon
Microprocessors	300mm	22nm	Israel, Arizona, Oregon
Microprocessors and chipsets	300mm	32nm	New Mexico
Microprocessors	300mm	45nm	New Mexico
Chipsets	300mm	65nm	China
Chipsets and other products	300mm	90nm	China
Chipsets	200mm	130nm	Massachusetts

As of December 27, 2014, a substantial majority of our microprocessors were manufactured on 300mm wafers using our 14nm, 22nm, and 32nm process technology. As we move to each succeeding generation of manufacturing process technology, we incur significant start-up costs to prepare each factory for manufacturing. However, continuing to advance our process technology provides benefits that we believe justify these costs. The benefits of moving to each succeeding generation of manufacturing process technology can include using less space per transistor, reducing heat output from each transistor, and increasing the number of integrated features on each chip. These advancements can result in new devices with higher functionality and complexity while controlling power, cost, and size. In addition, with each shift to a new process technology, we are able to produce more microprocessors per square foot of our wafer fabrication facilities. The costs to develop our process technology are significantly less than adding capacity by building additional wafer fabrication facilities using older process technology.

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We use third-party foundries to manufacture wafers for certain components, including communication and connectivity products. In 2014, we qualified our first SoC application processor and baseband 3G solution, code-named "SoFIA," which will be fabricated by a third-party foundry. In addition, we primarily use subcontractors to manufacture board-level products and systems. We purchase certain communication and connectivity products from external vendors primarily in the Asia-Pacific region.

Following the manufacturing process, the majority of our components are subject to assembly and test. We perform our components assembly and test at facilities in Malaysia, China, and Vietnam. Our assembly and test facility in Costa Rica ceased production in Q4 2014. To augment capacity, we use subcontractors to perform assembly and test of certain products, primarily chipsets and communication and connectivity products.

Our NAND flash memory products are manufactured by IMFT and Micron using 20nm or 25nm process technology, and assembly and test of these products is performed by Micron and other external subcontractors. For further information, see "Note 5: Cash and Investments" in Part II, Item 8 of this Form 10-K.

Our employment and operating practices are consistent with, and we expect our suppliers and subcontractors to abide by, local country law. Intel expects all suppliers to comply with our Code of Conduct and the Electronic Industry Citizenship Coalition (EICC) Code of Conduct, both of which set standards that address the rights of workers to safe and healthy working conditions, environmental responsibility, compliance with privacy and data security obligations, and compliance with applicable laws.

We have thousands of suppliers, including subcontractors, providing our various materials, equipment, and service needs. We set expectations for supplier performance and reinforce those expectations with periodic assessments and audits. We communicate those expectations to our suppliers regularly and work with them to implement improvements when necessary. Where possible, we seek to have several sources of supply for all of these materials and resources, but we may rely on a single or limited number of suppliers, or upon suppliers in a single country. In those cases, we develop and implement plans and actions to reduce the exposure that would result from a disruption in supply. We have entered into long-term contracts with certain suppliers to help ensure a stable supply of silicon and semiconductor manufacturing tools.