PREPARED STATEMENT OF

INTEL CORPORATION

Before the

COMMITTEE ON FINANCE

SUBCOMMITEE ON INTERNATIONAL TRADE, CUSTOMS, AND GLOBAL COMPETITIVENESS

U.S. SENATE

On

"International Trade in the Digital Economy"

NOVEMBER 18, 2010

I. Introduction

Mr. Chairman and Members of the Subcommittee, I am Greg S. Slater, Director of Global Trade and Competition Policy of Intel Corporation. I appreciate the opportunity to appear before you today to discuss international trade issues involving the digital economy.

We would like to highlight three international trade issues of particular concern for the digital ecosystem: (1) the need to modernize relevant trade rules to effectively address emerging non-tariff barriers to e-commerce; (2) greater governmental support for international standards and best practices that encourage e-commerce and resolve concerns not effectively addressed by trade agreements; and (3) the reduction or elimination of tariffs on digital products.

Intel is the leading manufacturer of computer, networking, and communications products. Intel has over 80,000 employees, with more than half of those in the U.S. In 2009, Intel had over $37 billion in revenue from sales to customers in over 120 countries. While approximately 75% of our manufacturing capacity remains in the U.S., more than 75% of our revenue is generated overseas. We recently announced Intel will be making an investment of $6-8 billion to build a new factory in Oregon and upgrade several factories in Oregon and in Arizona, and we also are making new investments in countries where our major customers are located. Most of the product manufactured from our significant U.S. investments will be sold to the 95% of worldwide consumers that live outside the U.S. The ability to access markets worldwide is essential to Intel's continued growth and prosperity.

In its simplest form, the "digital economy" is an economy based on electronic goods and services traded through electronic commerce (e-commerce).[1] Because the digital economy is dependent on cost-effective access to the equipment and devices that make e-commerce possible, trade rules intended to promote the digital economy need to focus on policies that promote innovation and remove trade barriers in the *entire* global digital ecosystem. Thus, to increase the growth of the digital economy, we believe that it is essential for Congress and the Administration to advocate for innovation-oriented policies with other governments whenever possible.[2]

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[1] The digital economy is still in its relative infancy. By 2015, for example, Intel expects to see 15 billion computing devices in circulation and one billion additional users. E-commerce now includes e-government, e-education and e-entertainment. The growing user base will expect a wide assortment of applications and on-demand services—all with a rewarding user experience.

[2] Many governments are trying to determine how to spur greater innovation to jump start or further strengthen their economies due to increasing global competitiveness. Some government policies that have been issued or are being contemplated, however, are counter-productive. *See generally* Stephen J. Ezell and Robert D. Atkinson, "The Good, the Bad, and The Ugly (and the Self-Destructive) of Innovation Policy," A Policymakers Guide to Crafting Effective Innovative Policy, The Information Technology and Innovation Foundation (Oct. 2010), *available at* http://www.itif.org/publications/good-bad-and-ugly-innovation-policy. There also is a recent and growing effort by the business community to develop a set of "innovation policy principles and recommendations" designed to strengthen innovation. For instance, the TransAtlantic Business Dialogue (TABD), a formal, CEO-level business partner of the U.S. government and the European Commission and the official business adviser to the Transatlantic Economic Council, recently endorsed ten innovation policy principles that it hopes will promote a barrier-free transatlantic market. Of most relevance to the digital economy, the policies include: (1) prevent the erosion of IP

II. Intel's Engagement in the Digital Economy

A. Microprocessors

Intel develops semiconductor products for a broad range of computing applications that create, receive, and/or edit digital content used by businesses and consumers around the globe. Our integrated circuits are some of the most innovative and complex products in history.[3]

Intel is engaged in the development of a computing continuum where an individual's applications and data will move with that person as he or she engages in different activities through his or her day. The person will awake to a medical device that can take vital health readings, will check business data on a certain computing device in his or her home, will transition to a car that has access to those applications and data, will have ready access on a smart phone and at work (which often will not be in a traditional office), and then will receive the data and applications on demand after work either at home or while socializing. To manage these applications and data, the individual will use a wide assortment of digital devices including smart phones, servers, laptop computers, netbooks, tablets, televisions with internet access, and handheld PCs. Intel's goal is to provide the semiconductor products that will serve as the primary computing components for those devices that will be interoperable.

B. Cloud Computing

Rather than a revolution, cloud computing[4] is an important paradigm shift in information technology (IT) delivery – one that has broad impact and important challenges to consider. Cloud computing offers the potential for a transformation in the design, development, and deployment of next-generation technologies that will enable flexible business models that could alter the future of computing from mobile platforms to the data center. The impetus behind cloud computing is the ever-increasing demands placed on data centers that are near capacity and resource constrained. These demands include growing needs to manage business growth and increase IT flexibility. In response to these challenges, cloud computing is evolving in the forms of both public clouds (deployed by Internet companies, telecommunications companies, hosting service providers, and others) and private or enterprise clouds (deployed by enterprises behind a firewall for an organization's internal use).

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rights and ensure their consistent and effective enforcement; (2) promote the use of international standards and, where necessary, performance-based technology regulations; (3) promote national deployment and maintenance of robust information technology infrastructure and allow access to innovative technologies; and (4) assess the implications of government policies on the process of innovation and share lessons learned with third countries. *See* http://www.tabd.com/storage/tabd/documents/10_innovation_principles.pdf.

[3] For example, an Intel Core i7 processor has over 781 million transistors on each chip.

[4] The National Institute for Standards and Technology has defined cloud computing as "A model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction." *See, e.g.,* http://csrc.nist.gov/cyber-md-summit/documents/posters/cloud-computing.pdf.

Intel recently announced the creation of the Open Data Center Alliance of more than 70 top global businesses that will create a roadmap to drive interoperability, flexibility, and industry standards for the cloud and next generation data centers. The Open Data Center Alliance represents more than $50 billion in annual IT investment. Intel plays a unique advisory role within the alliance, whose initial membership is focused on end user companies rather than technology providers.

C. Digital Services

In addition to promoting cloud computing, Intel also is an active participant in the provision of digital services through this year's launch of its software application (app) store – the Intel AppUp center – for netbook computers. The Intel AppUp center is designed to offer netbook computer users an easy way to access applications designed for mobile computing. The purpose of the app store is to help consumers take advantage of the rapid expansion of net book computer use. The apps in the store cover education, entertainment, games, health, social networking, and other categories. Over time, Intel expects to expand the store to include applications for the large categories of handheld consumer electronics devices, smart phones, consumer electronic appliances, TVs, and other devices using Intel processors.

Additionally, as a leader in digital technology, Intel has been at the forefront of enabling digital commerce for more than a decade by developing successful business models to protect intellectual property (IP) rights connected with premium digital entertainment products. Like a brick and mortar business, digital commerce depends on respect for and protection of IP rights. Although digital commerce today includes a wide range of digital goods and services, our experience in helping others secure digital content from unauthorized uses has better enabled us to understand how to properly balance the use of private agreements, voluntary standards, and regulatory initiatives to effectively address potential obstacles to further growth in the digital economy.

III. Trade Issues in the Digital Economy

It is becoming increasingly clear that many of the policies that encourage traditional cross-border transactions are even more important in the realm of digital products and services. However, the rules that prevent or remove impediments to the movement of physical goods and services are not always equally effective when applied to trade in electronic goods and services.

Specifically, concerns (whether legitimate or not) regarding IP rights, privacy, security, and consumer protection often manifest themselves differently when dealing with bits and bytes. For instance, cloud computing could significantly reduce piracy by providing access to digital content rather than transferring its physical possession. Yet moving from physical trade in digital goods to only providing access raises another problem where U.S. companies are restricted from offering data services overseas due to limitations on World Trade Organization (WTO) commitments negotiated before the digital economy developed. Moreover, some countries have indirectly implied that the security

provisions in several WTO agreements exempt a WTO member from protecting foreign IP rights and allow discriminatory treatment against widely available foreign information technology products containing encryption technologies.

We would like to highlight three general international trade issues of particular concern for the digital ecosystem: (A) the need to modernize relevant trade rules to effectively address emerging non-tariff barriers to e-commerce; (B) greater governmental support for international standards and best practices that encourage e-commerce and resolve concerns not effectively addressed by trade agreements; and (C) the reduction or elimination of tariffs on digital products.

Trade agreements need to be modernized to ensure their commitments effectively address actual or potential barriers unique to the digital world. Even so, the most advanced agreements cannot keep pace with the rapid innovation in the digital world. Industry also must develop appropriate private agreements, best practices, and voluntary standards to fill in the "regulatory gaps" not suited for binding international agreements. International best practices and voluntary standards are more flexible than technical regulations, ensure interoperability, and are easier to update to accommodate evolving technologies and address any legitimate privacy, security, IP and other concerns that arise with new electronic products and services. Governments also should work to reduce or eliminate tariffs on digital goods. In sum, we need both proactive standards and practices (typically the "do's") and binding international rules (generally the "do not's") to further reap the benefits of a digital economy.

A. Modernizing Relevant Trade Agreements and Rules

The United States Trade Representative (USTR) has done an excellent job of improving free trade agreements over time so that they enable trade in both the equipment and devices that make up the IT infrastructure, and the digital goods and services that this infrastructure enables. Moreover, the latest model language for free trade agreements (FTA) contains various provisions requiring the Parties to cooperate on an ongoing basis to ensure regulatory alignment with international technology standards and prevent deceptive practices in e-commerce to enhance consumer welfare.[5] Such cooperation mechanisms are important to expand an FTA's capability to resolve new trade issues as they arise. Nevertheless, several examples dealing with (1) intellectual property, (2) liberalization of services, and (3) standards development illustrate how existing trade rules can be further updated to better serve the digital economy – especially the rules in current WTO agreements that predate development of the digital economy.

1. Protecting Intellectual Property Rights

Advanced and stable IP regimes enable innovation, technological progress, and additional jobs in the digital services sector. Strong IP rights that are consistently enforced drive private sector

[5] *See, e.g.*, Free Trade Agreement Between The United States of America and the Republic of Korea, Articles 9.4.1 & 15.5.2 & .3.

innovation and investment, and bring clarity and certainty to technology transfer transactions.[6] Without IP, there is nothing to sell, give, or license in the digital arena.

Intel is concerned about the lack of robust IP laws and enforcement mechanisms in many countries. Countries with predictable and robust IP laws and enforcement infrastructures encourage private enterprises to disseminate technology more quickly.[7] By contrast, countries with weak IP enforcement regimes often are denied access to innovation and digital content, hurting both consumers and their economies. Today's innovation-driven economy needs to continuously encourage the development of creative content and technology, such as that exhibited by cloud computing and software applications. Absent a reliable IP system, the incentive to make technology investments in regions where intellectual capital is regularly impaired is drastically reduced.

To address these issues more effectively, USTR has strengthened the IP enforcement provisions in bilateral free trade agreements. For instance, the pending Korea/U.S. Free Trade Agreement (KORUS FTA) contains strong provisions on IP enforcement that include (i) criminalization of end-user piracy and counterfeiting (Art. 18.10.26); and (ii) except in exceptional circumstances, guarantees of authority to seize and destroy not only counterfeit goods but also the materials and equipment used to produce them (Art. 18.10.27). Moreover, the strong IP provisions of that agreement set a precedent for future bilateral and regional trade agreements in the rest of Asia. USTR also has taken a strategic and allied approach by negotiating the Anti-Counterfeiting Trade Agreement (ACTA) among like minded governments, such as the European Union, Canada, Japan, New Zealand, and Mexico.

To further the interests of the digital economy, Congress, the U.S. Department of Commerce, the USTR, the U.S. Patent and Trademark Office, and others must continue to provide global leadership that encourages IP polices that support balanced and sustainable global growth. By aligning with like-minded partners, the U.S. certainly is better positioned to influence emerging powers into developing IP frameworks that advance innovation driven economies for digital goods and services. The U.S. government, however, also needs to fully understand and appreciate the balancing act involved in safeguarding IPR related to the digital economy. The U.S. must ensure that increased enforcement does not stifle innovation by imposing unwarranted regulatory burdens or liabilities on device manufacturers who are not intentionally undermining IP rights as tremendous amounts of content flows through their products.

a. *Managing ACTA's Reach*

Under earlier drafts of ACTA, a plaintiff in some participating countries would merely have needed to show that digital devices were being used to violate copyright for a court to hold device manufacturers secondarily liable. This significant exposure for IT companies like Intel became a major

[6] *See generally* Robert M. Sherwood, "Intellectual Property Systems and Investment Stimulation: The Rating System of Eighteen Developing Countries," The Journal of Law & Technology, 37 IDEA 261 (1997).

[7] *See generally* Robert M. Sherwood, "Symposium: Some Things Cannot be Legislated," 10 Cardozo J. Int'l & Comp. Law 37 (Spring 2002).

concern. Intel and the technology community are pleased that in the final draft of ACTA, USTR removed the secondary liability provision.

IT companies operate under a patchwork of varying national intellectual property laws. In general, these laws, including U.S. law, foster innovation and economic growth by a careful balance of two key concepts -- providing sufficient IP protection to incent investment in new technology and at the same time fostering innovation by recognizing that technology is inherently neutral. While U.S. law depends on the interplay of liability and fair use, other countries achieve that balance in different ways. Thus, in crafting international trade and IP agreements such as ACTA, one must be mindful not to blindly impose parts of U.S. IP enforcement provisions on other countries' IP systems. This is particularly important where those systems are working to promote innovation and growth like the U.S. system.

Specifically, in our country, U.S. Supreme Court rulings have carefully framed the balance between IP owners' rights and the ability of companies to innovate and contribute to economic growth. Basically, as long as an electronic device can be used for substantial noninfringing purposes (e.g., fair use), its innovator cannot be held liable for secondary copyright infringement.[8] Accordingly, American companies are free to innovate without fear of being sued merely because there are those that would use the neutral technology for ill. Without the protection afforded to devices that are capable of substantial non-infringing uses, we might not have had the Xerox machine, the VCR, or the iPod because they can all be used for infringing uses.

Many other countries, however, approach this balance differently. In the Commonwealth countries, for example, their form of secondary liability, known as "authorization liability," differs markedly from U.S. law. Nevertheless, this type of liability achieves a similar balance between protection and innovation as the U.S. system.[9] Thus, while we believe U.S. IP law achieves the vital balance between protection and innovation, pieces of our law simply cannot be mechanically grafted onto the IP laws of other countries. If we are to impose our IP laws overseas through trade agreements, we must do it with care and always with that balance as our goal.

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[8] *See MGM Studios, Inc. v. Grokster*, 545 U.S. 913 (2005) and *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984). As Justice Souter said for a unanimous Court in *Grokster*: "The more artistic protection is favored, the more technological innovation may be discouraged; the administration of copyright law is an exercise in managing the trade-off." Citing Intel's *amicus curiae* brief, Justice Souter noted that condemning distributors of technology "based on its potential for unlawful use could limit further development of beneficial technologies." *See* http://www.law.cornell.edu/supct/pdf/04-480P.ZO.

[9] We found this to be the case in nearly all of the countries participating in ACTA, thus allowing Intel and other companies to produce and sell innovative products around the world. For example, the *iiNET* case in Australia held that an Internet Service Provider (ISP) was not liable where the ISP did not authorize its users' illegal conduct when they used the Internet connection supplied by the ISP for infringement. Had this Commonwealth court been faced with imported US secondary liability principles through ACTA, however, it would have had no choice but to find iiNET liable despite the fact that the ISP's facilities were being used for substantial noninfringing purposes because such countries do not have the balancing fair use doctrine.

b. Erosion of Established IP Rights

Although we support the U.S. government's efforts to promote better enforcement of IP rights internationally, more needs to be done to ensure that the IP rights recognized by the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) are not eroded. The best enforcement mechanisms provide little value if the IP rights being enforced remain weak in the country of concern.

In the name of the "public interest," some countries are calling for compulsory licensing of environmental technologies (most of which are owned by U.S. companies) to enable broader and/or cheaper access to those critical technology solutions developed to address climate change and energy issues.[10] This trend may migrate over to other technologies given their importance in building a digital economy. Providing free or reduced cost to IP access may yield benefits in the short term, but such a result is far from certain and would not be beneficial in the long term. Even if a country achieves access to a desired technology through compulsory licensing, it will damage the incentive for further innovation. Granting patent licenses to entities outside the innovation chain prevents participating entities from recouping their investments. It also cuts off long-term access to technology improvements as it discourages private sector investment. As reflected in the language and drafting history of TRIPS, compulsory licensing should only be applied in extraordinary circumstances and as narrowly as possible to limit its economic impact.[11]

Indirect methods of weakening IP rights are no less harmful. For example, conditioning procurement of technology products based on whether the IPR is owned or registered locally can undermine a government's ability to build a robust IT infrastructure by denying itself access to the best computing and other devices. Moreover, any discriminatory treatment of foreign IP impairs the flow of technology and can damage national efforts to build innovative capacity. Society at large benefits the most when technology spreads quickly supporting enhanced economic growth across all sectors. The

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[10] For instance, in 2007 the European Parliament called for a study on opening and amending TRIPS to provide compulsory licenses to IP rights for "environmentally necessary" technology. European Parliament resolution of 20 November 2007 on trade and climate change (2007/2003(INI)), *available at* http://www.europarl.europa.eu/sides/getDoc.do?Type=TA&Reference=P6-TA-2007-0576&language=EN. In 2008, the Indian Environment Minister Shri Raja wanted a climate change agreement "'paralleling' what he call[ed] 'the successful agreement on compulsory licensing of pharmaceuticals', which has undermined supply, quality and trade." Tim Wilson, Op-Ed, "Attacking Patents Is A Way To Halt Progress On Climate Accord," *The China Post*, Aug. 29, 2008. Shyam Saran, India's special envoy on climate change noted that India wants climate change technologies to be treated as public and common goods and dealt with in the same manner as HIV drugs. "Treat Climate Change Tech As Public," *The Times Of India,* July 27, 2008. And the UN Assistant Secretary General for Economic Development, Jomo Kwame Sundaram, has noted: "Reform to the current IPRs regime will need to be addressed to make possible the extensive use of technological solutions to address climate change." Jomo Kwame Sundaram, "The Climate Change Challenge," *UN Chronicle* (Jan. 26, 2008), *available at* www.un.org.

[11] Consistent with TRIPS, the KORUS FTA acknowledges that "[e]ach Party may provide *limited* exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties." (Art. 18.8.3) (emphasis added). That agreement, however, does not specifically reinforce the significant procedural and substantive restrictions on compulsory licensing found in TRIPS Article 31, and we encourage future FTAs to do so given recent requests by some countries for broader IP flexibilities and patent exemptions than TRIPS allows.

key to effective innovation lies in an open, collaborative, and fair approach to IP rights. In contrast, government regulations favoring resident enterprises by purposely shielding them from competition obstruct adoption of the best technologies and thus undermine the incentive to innovate.

2. Liberalization of Telecom and Digital Services

a. *E-Commerce Generally*

The e-commerce chapters of free trade agreements over the last several years have all contained the fundamentals needed for e-commerce to flourish, including non-discriminatory treatment of foreign digital goods and tariff/duty protection for digital products imported or exported by electronic transmission or fixed on a medium.[12] The latest e-commerce provisions of FTAs continue to enable e-commerce by ensuring technology choice while recognizing legitimate exceptions such as law enforcement activity and harm to the network. [13]

We recommend, however, that USTR further expand this principle by including in future FTAs two additional provisions. First, we support a provision expressly allowing the free transfer of data across borders in conjunction with relevant service commitments made by each Party (e.g., computer and related services),[14] assuming appropriate privacy protections are included. This provision will become increasingly important as countries begin to allow foreign direct investment related to digital services, but at the same time may decide to interfere with associated data flows. Second, we support a provision that expressly prohibits any requirements to locate IT infrastructure (e.g., servers) within a country as a condition of providing digital services. Efforts to sever treatment of the data from service commitments or to require in-country infrastructure often have protectionist purposes even when security or privacy concerns are raised; legitimate security and privacy concerns can be addressed in other ways, as discussed below.

b. *Impediments to Telecom and Digital Services*

We note two major trade impediments involving telecommunications and digital services. First, some countries are imposing barriers to foreign companies providing telecommunications services by requiring that a domestic telecommunications company operate in conjunction with the foreign telecommunications company. For instance, in China, a foreign company must select a domestically owned and licensed telecom company as a joint venture (JV) partner before providing

[12] *See, e.g.*, United States – Bahrain Free Trade Agreement, Chapter 13 (2006); Australia-United States Free Trade Agreement, Chapter 16 (2005).

[13] For example, the KORUS FTA requires each Party to recognize the right of consumers to "run applications and services of their choice, subject to the needs of law enforcement" (Art. 16.7(b)); "connect their choice of devices to the Internet, provided that such devices do not harm the network and are not prohibited by the Party's law" (Art. 15.7(c)); and "have the benefit of competition among network providers , application and service providers, and content providers" (Art. 15.7(d)).

[14] Of course, ongoing efforts in the WTO Doha Round to further liberalize computer and related services, if concluded, will also help promote digital services.

telecommunications or digital services (such as managing an applications store), and the foreign company cannot own more than 50 percent of the JV.[15] These requirements impair innovation by forcing the creation of JVs in circumstances where the business model may not be desirable due to competitiveness concerns related to the technologies involved.

Second, some countries refuse to timely auction or license spectrum that has been allocated for commercial services. Spectrum is an essential ingredient to enabling the development of a robust IT infrastructure that provides the backbone of a digital economy. Telecommunications service commitments made in trade agreements often are weak because of the significant negotiation leeway granted to Parties under the WTO General Agreement on Trade in Services, including the Annex on Telecommunications.[16] Moreover, when spectrum allocation is discretionary, it is easy for a government to conceal restrictions on technology choices as a condition for issuing licenses. Thus, we urge USTR to consider mandating in FTAs the timely assignment of spectrum that already has been allocated for commercially services.[17]

3. Public Participation in Developing Technology Regulations and Standards

Technology regulations and standards can be significant enablers or impediments to the digital economy given the need for diverse devices to be interoperable and communicate with each other. For example, technology standards are critical because they allow devices that share common protocols, such as smart phones and laptop computers, to communicate with each other and even to be built in the first place.[18] The international standards used to build these devices are revised and improved over time, enabling more capable products and faster communication networks. In contrast, by promulgating a technical regulation or standard that favors local technologies, a country can protect its market from foreign digital products.

For this reason, the WTO Technical Barriers to Trade (TBT) Agreement strongly favors the use of international voluntary standards and contains a notice and comment provision that allows WTO members to provide input on draft national technical regulations and standards[19] supported by the

[15] In China, business-related Internet services are categorized as value added services that can only be lawfully performed by obtaining the required approvals and a license from the government. The license must be obtained from the Ministry of Industry & Information Technology.

[16] General Agreement on Trade in Services, Annex on Telecommunications; *see also* WTO Chairman's Note, Market Access Limitations on Spectrum Availability, S/GBT/W/3 (Feb. 3, 1997).

[17] Note that US policy with regard to the so called Advance Wireless Spectrum (in particular licensing the 2.6 and 700 bands in a technology neutral fashion well before the rest of the world) has enabled the U.S. to regain the lead in mobile technology.

[18] A recent study documented 251 technical interoperability standards implemented in a modern laptop. Many of these standards enable companies with different areas of competence (e.g., display, storage, microprocessors, memory), based in different parts of the world, to contribute to the design and manufacturing of a complex yet cost effective product. Brad Biddle, Andrew White, and Sean Woods, "How Many Standards in a Laptop? (And Other Empirical Questions)," (Sept. 10, 2010), *available at* http://ssrn.com/abstract=1619440.

[19] In contrast to voluntary international standards, prescriptive technical regulations and national standards constrain product designs and/or limit the type of technologies allowed. For example, if energy efficiency requirements apply to all components of an electronic good, rather than the overall performance of that good,

central government.[20] This commitment is often ignored, however, and, even if adhered to, is not very effective in terms of preventing on a timely basis discriminatory technical regulations and standards that can impede the sale of IT products essential to the digital economy.

The latest bilateral FTA being negotiated allows U.S. stakeholders, including private parties, to participate and comment on an equal basis with national stakeholders in regulatory proceedings and standards development that are required to be notified under the TBT Agreement. We support this public participation right, which goes beyond the provisions in the TBT Agreement requiring only equal treatment for governments, not citizens or industry. Future trade agreements, however, need to go further. We recommend that future FTAs make clear that signatory governments generally should not be involved in dictating or directing the development of IP rights policies in conjunction with standard setting activities. Additionally, future FTAs should make clear that the TBT Agreement does not allow the national standards of signatory governments to significantly deviate from international standards;[21] governments also cannot slightly modify international standards to favor local technologies (and thus gain a presumption of compliance with the TBT Agreement if they are later proposed for acceptance as international standards).[22]

B. Greater Government Support for Best Practices and International Standards

The development of international best practices and voluntary standards can fill in the "regulatory gaps" not suited for binding international agreements. These alternatives to national regulation have the unique benefits of being more flexible (e.g., not locking in technology), are easier to update, and ensure greater interoperability. Because of its non-binding nature, the Asia Pacific Economic Cooperation (APEC) has experimented extensively with principles and practices as guidelines to further enable the digital economy in its 21 member economies while balancing IP rights, privacy, security, and other concerns.

For instance, APEC's Digital Prosperity Checklist (DPCL) is "designed to assist APEC economies in promoting the use and development of ICTs [information and communication technologies] as a means to enhance their ability to participate in the global digital economy." To that end, the DPCL "will provide a unique, yet critical tool for individual APEC economies to evaluate whether their domestic legal, regulatory, and trade policy frameworks are designed to positively impact the capacity of ICTs to

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flexibility to achieve the same efficiency goals in the most cost effective and innovative manner is severely restrained. When prescriptive regulations affect a particular product, and vary significantly across geographies, they can readily chill innovation and create major compliance and cost barriers by reducing economies of scale. The WTO generally requires that its members use performance-based regulations and avoid prescriptive regulations. TBT Agreement, Art. 2.8. The Organization for Economic Cooperation and Development and the Asia-Pacific Economic Cooperation also stress the same principle. However, there is an emerging trend in some countries to pursue national technology standards and enact prescriptive regulations in the technology sector as they develop their own high tech industry to increase domestic innovative capabilities.

[20] TBT Agreement, Art. 2.9 & Annex 3.L.

[21] TBT Agreement, Art. 2.4 & Annex 3.F.

[22] TBT Agreement, Art. 2.5.

generate value for their economies."[23] The DPCL references a number of ICT best practices and standards in connection with investment, infrastructure, innovation, intellectual capital, information flows, and integration of industries with the global economy. The DPCL best practices and standards developed with industry assistance serve as guides for national legislation where appropriate.

There are various ways that the U.S. government could provide even more support than it already does for international technology standards and best practices that address trade issues not capable of adequately being solved through FTAs. For instance, as noted below, by pointing to such standards and best practices in official documents and trade agreements as non-binding examples of ways to balance commercial interests with other considerations, the U.S. government gives them more credence. This increases the chances they will be used instead of, or as a basis for, national regulation.

1. APEC Cross-Border Privacy Rules

Industry supports USTR's current direction in exploring the possible value in referencing APEC's Cross-Border Privacy Rules in future FTAs as one way to address privacy rights without interfering with e-commerce.[24] Since the APEC Ministers endorsed the Privacy Framework in 2004, the Department of Commerce, in conjunction with other federal agencies and the private sector, has taken a leadership role and made great progress to develop a system of Cross-Border Privacy Rules that would ensure accountable cross-border flows of information while ensuring both the protection of consumers and allowing for the benefits of ecommerce. As the U.S. hosts APEC next year, we encourage the U.S. government to continue its active leadership within APEC with the goal of ensuring adoption of the cross-border privacy rule system in 2011 during the U.S. host year.

The APEC rules also could be referenced in the ongoing negotiations over the Trans-Pacific Partnership (TPP) Agreement, which may help prevent disruptive international data flows among TPP participants.

2. Information Security and Cybersecurity Best Practices

The interdependent network of information system infrastructures that includes the Internet, telecommunications networks, computer systems, embedded processors and controllers, and digital information is collectively known as "cyberspace." Security enables this global digital infrastructure by creating a trusted, robust, and interoperable environment in which economic transactions and activities can occur. Industry and government have an equal incentive to ensure and increase "cybersecurity." Industry seeks a secure cyber infrastructure that will encourage commercial activities and the continued growth of the global digital infrastructure. Governments want to (1) ensure that cyberspace's benefits

[23] APEC Digital Prosperity Checklist (Nov. 10, 2008), *available at* http://www.apec.org/apec/apec_groups/committee_on_trade/electronic_commerce.html.

[24] Although the KORUS FTA acknowledges the importance of protecting personal information (Art. 15:8), it does not provide any other guidance on how to achieve that objective. In theory, therefore, Korea could take an overly stringent approach to protecting privacy rights that would disadvantage U.S. industry.

continue to accrue to their economies and citizens, and (2) prevent criminals from using cyberspace to undertake fraud, espionage, crime, and terrorist activities - activities that traditionally occurred offline.

Fortunately, governments, infrastructure owners, operators and users, and the information technology industry have a variety of tools to address information security and cybersecurity risks and challenges. These tools include technology standards, training, guidelines and best practices on information sharing, risk management, etc. As government seeks to address risks in cyberspace, it is important that national cybersecurity measures adopted by governments properly reflect the borderless, global, interdependent cyber infrastructure. Internationally harmonized cybersecurity measures will promote interoperability, minimize "weak links" that result in vulnerabilities, lower costs for businesses that can deploy security measures globally, and free up vendors' resources to continue to invest and innovate. As noted in this Administration's Cyberspace Policy Review, "International norms are critical to establishing a secure and thriving digital infrastructure."[25]

Given that joint action from government and industry is necessary to address evolving security challenges in the global environment, industry and governments should work together to develop international standards, policies, and practices that take into account the dynamic, changing, and complex cyber environment; leverage current and emerging industry leadership initiatives and resource commitments; and adapt at cyberspace speed to emerging technologies, business models, and threats. Cybersecurity measures that are adopted by a country without reliance on international standards, policies and practices, or technical assistance derived from a robust private/public partnership create uncertainty and inhibit the growth of e-commerce. For instance, according to various sources, the building of a telecommunications infrastructure in India has recently slowed because that government, without an official consultation process, has attempted to mandate contractual terms between telecommunications equipment vendors and Internet Service Providers for security reasons.

Several WTO trade agreements exempt governments from honoring their commercial obligations to ensure open trade and protection of IP rights if their actions can be justified based on national or essential security reasons. The problem is that those exemptions are not well-defined, especially in the TBT agreement,[26] and that lack of specificity creates a potential for their misuse. This should not occur, especially considering the importance of commercial security to the private sector as an enabler of e-commerce. We thus recommend that the U.S. government:

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[25] *See* http://www.whitehouse.gov/assets/documents/Cyberspace_Policy_Review_final.pdf, at iv.

[26] Pursuant to Article 2.2 of the TBT Agreement, WTO members may enact technical regulations that act as trade barriers if they are no more restrictive than necessary to fulfill legitimate national security requirements, which are not defined in that WTO agreement. A WTO member also may ignore their intellectual property commitments under the TRIPS agreement by either (i) taking any action "which it considers necessary for the protection of its essential security interests" as being related to war, emergencies in international relations, fissionable materials and the traffic in arms, ammunition and implements of war (which interests are more narrowly defined than the TBT agreement exemption); or (ii) honouring their commitments under the United Nations Charter for the maintenance of international peace and security. TRIPS Agreement, Art. 73. The General Agreement on Tariffs and Trade (GATT), which among other commitments prevents WTO members from discriminating against foreign goods in favour of like domestic goods, has a similar essential security exemption as the TRIPS agreement. GATT Art. XXI. *See also* General Agreement on Trade in Services, Art. XIV.

- Require in FTAs that when national or essential security interests are used to justify technical regulations that undermine IP rights and/or impair trade in commercial IT products, including digital goods, the party claiming the relevant WTO exemption(s) must explain the nature of and reasons for the claimed security interests;
- Use FTAs as a legal tool to push for, support, and even reference (1) relevant international standards (e.g., Common Criteria, and efforts to modernize same) and (2) cybersecurity policies and practices that are developed in appropriate fora by private and government stakeholders who value both trade and legitimate security interests (e.g., "Encryption Best Practices" recently adopted by the six governments of the World Semiconductor Council;[27] and emerging APEC work product "to develop options for effective cyber security initiatives against cyber threats,"[28] assuming those initiatives turn out to be feasible and well balanced); and
- Seek an opportunity to initiate a multilateral discussion among key WTO members on how the national and essential security exemptions in various WTO agreements may be more clearly and narrowly defined when applied to widely available commercial IT products.

If implemented, these recommendations will help drive a consensus among all stakeholders on how the aforementioned WTO exemptions should be applied to our digital infrastructure and ensure that any legitimate national or essential security concerns pertaining to that infrastructure are addressed in a manner that is the least trade restrictive possible.

C. The Reduction or Elimination of Tariffs on New Digital Goods

The importance to the growth of the digital economy to reducing or eliminating tariffs cannot be understated. A valuable lesson for the digital sector is the success of the Information Technology Agreement (ITA), which has provided a solid foundation for the dissemination of a wide array of IT products. Negotiated some 15 years ago during the Clinton Administration, with strong bipartisan support, the ITA[29] was intended to promote the development of the emerging global digital economy at the lowest possible cost. When implementation of the ITA began in 1997, the Internet was still relatively new and the productivity-enhancing possibilities of computers and data processing throughout the economy, as well as their potential contributions to economic growth, were only beginning to be recognized.

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[27] Those best practices ensure that any necessary national regulation affecting widely available IT products that typically contain cryptographic capabilities is (1) limited to narrowly specified legitimate concerns (e.g., export controls on munitions to targeted countries); and (2) does not discriminate against foreign IT goods or require the transfer of IP. *See* Joint Statement of the 14th Meeting of the World Semiconductor Council, Free and Open Markets, Soul Korea (May 27, 2010).

[28] Draft Okinawa Declaration, "ICT as an Engine for New Socio-economic Growth," The Eighth APEC Ministerial Meeting on the Telecommunications and Information Industry (TELMIN 8) (Oct. 30-31, 2010, Okinawa, Japan).

[29] Formally known as the "Ministerial Declaration on Trade In Information Technology Products," signed in Singapore on December 13, 1996, WTO ref. WT/MIN(96)/16. It is worth noting that the ITA covers goods, but not services.

Today, there is no longer any question about the significant impact of IT on communication, commerce, and governance. Today's global economy and society could scarcely exist without modern IT and the Internet. The potential glimpsed 15 years ago is being realized. In the new global economy, IT is the major driver of improved quality of life and economic growth. IT is a critically important sector of the economy, but it is, in fact, too limiting to think of IT only as an "economic sector." The real IT revolution of the past 15 years has been the integration of information technology into every other sector of the economy and society, creating a digitally-enabled economy responsible for generating significant economic growth and prosperity, and a digitally-enabled society that is creating interlinked communities across the globe. Throughout the economy, IT has had a remarkable positive impact on productivity, employment, the creation of more efficient markets, higher quality goods and services, and innovation.[30]

Implementation of the ITA has made a substantial contribution to the global diffusion of IT. The ITA eliminated customs tariffs on a wide variety of computers and peripherals, telecommunications and networking equipment, IT analytical instruments, semiconductors and other parts and components, as well as semiconductor manufacturing equipment. From 1996 through 2008, total ITA products trade (imports and exports) expanded more than 10 percent annually, from $1.2 trillion to $4.0 trillion.[31] In 2008, the United States was among the top five global exporters of ITA products, joined by China, Japan, Singapore and Germany.[32]

Although the ITA has been one of the most successful WTO agreements, recently, however, the European Commission (EC) decided to take a narrow view of the ITA by imposing significant tariffs on several listed products. According to the EC, those products (e.g., printers that can scan and fax) had acquired new features that turned them into "new products" that were no longer exempt even though their primary function had not changed. The U.S. government believed that this action violated both the express provisions and the spirit of the ITA,[33] and created a tariff wall in Europe that protected some domestic manufacturers and further distorted trade by attracting other IT manufacturers that wanted to take advantage of the disparity in tariffs. USTR successfully challenged the EC's interpretation at the WTO, and the EC has decided not to appeal.[34] Had the EC's interpretation prevailed, much of the ITA agreement eventually would have been rendered useless, as many IT products evolve over time to acquire new functionalities.

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[30] *See, e.g.,* The Economic Impact of Intel Corporation in the United States and Europe, 2001-2007, HIS Global Insight (2008). In 2007, Intel alone contributed $151.2 Billion of U.S. GDP, equivalent to 1.1% of nominal U.S. GDP.

[31] Michael Anderson and Jacob Mohs, "The Information Technology Agreement: An Assessment of World Trade in Information Technology Products," USITC Journal of International Commerce and Economics, at 9 (Jan. 2010), *available at* http://www.usitc.gov/publications/332/journals/info_tech_agreement.pdf.

[32] *Id*. at 14.

[33] *See* Ministerial Declaration on Trade in Information Technology Products, WT/MIN(96/16), Singapore (Dec. 13, 1996), Preamble Par. 1 & Annex: Modalities and Product Overage, Par. 3.

[34] WTO, European Communities and its Member States – Tariff Treatment of Certain Information Technology Products, *available at* http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds375_e.htm.

The IT industry eventually would like to expand ITA coverage to include products that were not listed in 1997 and new digital products that have developed since then. Although a similar effort has been made in the Doha Development Round, with timing of that agreement remaining uncertain, some are advocating that the U.S. government should examine the process contained in the ITA for adding new products to the Agreement. A new round of tariff elimination would only further enhance global trade and US exports, as IT and the Internet continue to become essential in every sector in the global economy. It also would remove the confusion the EC has created by trying to re-characterize ITA-listed products based on newly acquired secondary features.

For example, one potential area of product expansion involves software and electronic transmissions. The ITA currently covers software transported across borders as a recording on media, such as a DVD Rom or a floppy disk. As the Internet becomes more pervasive, this is happening less and less. Today, software is far more likely to "cross borders" electronically, as a transmission over the Internet. Before the ITA entered into force, software that crossed borders as a recording was not duty free, even in the United States. To forestall the possibility that some WTO member might try to assess customs duties on software transmitted electronically, every WTO Ministerial since Seattle in 1998 has included some form of the following declaration: "Members will continue their current practice of not imposing customs duties on electronic transmissions." This is an issue that should be settled definitively by an expansion of coverage under the ITA followed by adoption by the membership as a whole in any Doha results.

The ITA has made a major contribution to the expansion of world trade in IT products and the development of IT as a major contributor to productivity and economic growth generally in the global economy. The ITA has shown itself to be a flexible and resilient agreement that has product coverage broad enough to operate as its negotiators intended -- to include technological advancement in existing product coverage. Many new members have joined the Agreement, which continues to account for the vast majority of trade in covered products. Once the EC makes sufficient efforts to effectively implement the WTO ruling on the existing ITA, we recommend that the Administration turn its attention to the ITA provisions for adding new products not already covered.

IV. Conclusion

Intel thanks you for proactively addressing the role of international trade in growing the digital economy. It is our hope that the three international trade issues for the digital ecosystem that we have highlighted today -- modernizing trade rules to effectively address emerging non-tariff barriers to e-commerce, greater governmental support for international standards and best practices that encourage e-commerce and resolve barriers not effectively addressed by trade agreements, and the reduction or elimination of tariffs on digital products – provide a framework for the U.S. government that can be useful in addressing specific trade matters involving digital goods and services. Free trade is critical to preserving American innovation and jobs, and we look forward to working with you on these important issues.