SOLUTION BRIEF
2nd Generation Intel® Core™ vPro™ Processor Family
Government Telework

U.S. Government Agencies Lead in Telework

I've been a long-time, vocal supporter of telework in the workplace. No federal agency has done more to take their operations mobile than the USPTO.

— Nigel Ballard
Director of Federal Marketing
Intel

The security and manageability features available with today's mobile computers enable employees to telework wherever they can set up a virtual office—at home, a coffee shop, the airport, or any other remote location. While telework is a growing trend in the public sector, it is an established practice in several U.S. government agencies, including the United States Patent and Trademark Office (USPTO). Initially implemented as a strategy to retain quality employees in an increasingly competitive landscape, telework is now an important part of the agency's strategy to provide employee flexibility and reduce operating costs.

USPTO: A Model for Telework Success

The USPTO is responsible for granting patents and registering trademarks, and advises the President, the Secretary of Commerce, and other federal agencies on intellectual property policy, protection, and enforcement. The agency employs talented scientists, engineers, and attorneys—individuals with many employment options in the private sector. In the mid-1990s, the agency set out to improve recruitment and retention of these valuable employees by offering telework as a flexible workplace alternative. The program started with 18 attorneys in the Trademarks group in 1997, expanded to 89 attorneys in 2001, and today includes 6,400 employees agency-wide.

The success of the program is due in large part to a telework strategy that emphasizes employee and manager training, careful pilot programs, and phased deployment. Danette Campbell, senior telework advisor for the USPTO, oversaw major shifts in the agency as it moved toward an enterprise-wide telework model.

In 2002, the Trademark group began a "hoteling" office pilot. In the pilot, examining attorneys began sharing office space and using an online tool to reserve office space when they did travel to the USPTO campus. As Campbell explained, "By 2003, the Trademark telework program had moved to a complete hoteling model, with 110 employees. Employees work from home four to five days per week and completely relinquish dedicated office space at the USPTO campus. In 2006, the Patents organization began a hoteling program. Today, agency-wide, there are 3,301 employees participating in the hoteling initiative and an additional 3,130 employees teleworking one to three days per week."

"As a direct result of telework programs, the agency has avoided USD 19.8 million in real estate cost to date. If the agency had to bring back all 3,300 hoteling employees, we would have to secure at least USD 19.8 million in real estate to accommodate them on campus."

—Danette R. Campbell
Senior Advisor, Telework
Office of the CAO, United States Patent and Trademark Office

Bottom-line Benefits of Telework

Telework's impact on the agency's bottom line became evident when, in 2006, the success of the hoteling model meant that the Trademarks group no longer needed 46,000 square feet of office space.

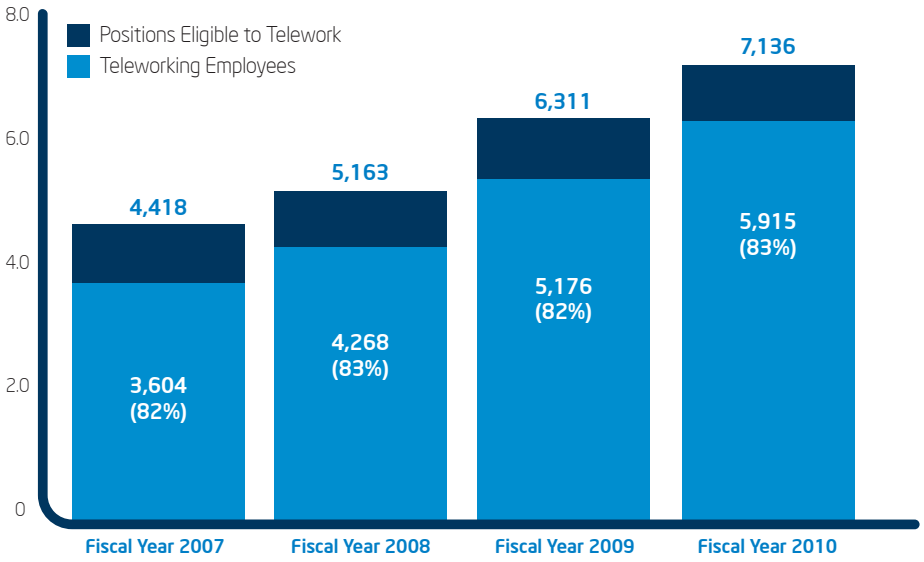
Campbell explained that the success of telework at the USPTO is due, in part, to the fact that employee performance measures are clearly defined. Employees have specific duties, and managers track their progress. Campbell also stressed the strategic value of telework. "Like other initiatives in our organization, the telework program is a business strategy that helps us achieve our mission and meet agency strategic goals."

"Today we have 6,400 employees teleworking one to five days per week," said Campbell. "About 3,300 of those are full-time hoteling and, of those, about 450 work from their homes throughout the United States. As a direct result of telework programs, the agency has avoided USD 19.8 million in real estate cost to date. If the agency had to bring back all 3,300 hoteling employees, we would have to secure at least USD 19.8 million in real estate to accommodate them on campus."

Telework Security at USPTO

Security is a concern for any organization, and the USPTO is no exception. "Part of the training teleworkers and managers receive is about security—not only of the data but of the physical laptop," Campbell said. USPTO teleworkers use a

Telework Growth. Telework in the USPTO has grown in 13 years from 18 to 5,916 teleworking employees.



Source: USPTO 2010 Telework Annual Report. www.uspto.gov/about/offices/cao/2010TeleworkReport_s508Compliant.pdf.

hardware key and multiple passwords to access the virtual private network (VPN).

When determining specifications for the laptops they would provide to workers, the agency wanted users to have the processing power and security features they need to do their work. They chose machines based on the 2nd generation Intel® Core™ i7 vPro™ processor, which enables hard disk encryption and has security features built into the hardware to provide security without degrading performance.

The Telework Enhancement Act of 2010

In December 2010, President Obama signed the Telework Enhancement Act of 2010,[1] providing a framework for U.S. agencies to offer teleworking as a viable option to employees. By increasing the number of employees who telework, the Telework Enhancement Act has three main objectives:[2]

- **Improve continuity of operations.** A workforce already working effectively from home is better able to operate efficiently in the event of inclement weather or other emergencies.
- **Promote management effectiveness.** Telework reduces overhead and transportation costs as well as employee absenteeism.
- **Enhance work-life balance.** Employees who telework can better manage their work and family obligations, improving overall productivity.

The USPTO is one of several agencies that has encouraged employees to telework, and it had goals in place to increase program participation long before the Telework Enhancement Act was in place. However, in an interview for the agency's 2010 Telework Annual Report,[3] David Kappos, Under Secretary of Commerce for Intellectual Property and Director of the USPTO, said that the act would allow his agency to expand its telework program because of a provision "to waive the Office of Personnel Management's (OPM) biweekly reporting requirement for employees who live beyond 50 miles from Alexandria, Virginia." In addition to expanding the program, this provision makes teleworking even easier for USPTO employees.

Telework Around the World

The European Trade Union Confederation established the European Framework Agreement on Telework[4] in 2002 to provide the same level of protections to teleworkers as to other employees, and its provisions have been included in other European labor agreements.

According to a publication by the European Foundation for the Improvement of Living and Working Conditions,[5] the EU definition has been used to implement the agreement in the respective employment guidelines of Belgium, Finland, France, Germany, Greece, Italy, Norway, Spain, and the United Kingdom. A legal definition of telework can be found in the Czech Republic, Hungary, Lithuania, and Slovakia, and there are similar initiatives in Australia, New Zealand, and elsewhere.

Regardless of the governing legislation, adopting and promoting telework policies can

USDA: ANOTHER TELEWORK SUCCESS STORY IN THE U.S. GOVERNMENT

The United States Department of Agriculture (USDA) provides leadership in the areas of food, agriculture, and natural resources. They work to help expand and improve agricultural markets, promote food safety and nutrition, and manage public and private lands.

As the USDA Telework Program policy[6] states, rather than treating teleworking as an employee entitlement, all eligible employees, supervisors, and managers are given the opportunity to participate in the program.

Like many government agencies, the USDA's 80,000 client devices were primarily desktop computers. However, as an early adopter of telework, the USDA now has a mix of about 30 percent laptop to 70 percent desktop systems in its IT infrastructure, with a goal of achieving a 90/10 percent mix in the next year. Laptops based on the newest Intel® processors provide the performance needed for mobile multitasking while remaining energy efficient and extending battery life.

have positive outcomes for most government agencies. The employer, the employee, and the environment benefit from telework:

- **Employer benefits.** Increased employee recruitment and retention, enhanced continuity of operations, and reduced space requirements, power consumption, overhead costs, and employee absenteeism.
- **Employee benefits.** Greater flexibility in work hours, enhanced work-life balance, less time spent commuting, and transportation cost savings.
- **Environment benefits.** Fewer emissions from transportation, reduced energy consumption, and reduced need for physical office space.

Embracing Telework

As governments around the world enact legislation that supports telework, agencies can prepare with mobile client computing devices that are telework-ready, with the processing power, security features, and remote management capabilities that will give users the ability to perform their jobs while protecting data.

LAPTOP MANAGEMENT AND SECURITY IN THE TELEWORK INFRASTRUCTURE

Managing and protecting computers and securing data are among the many challenges facing any IT group. Intel offers technologies that help support and manage remote infrastructure.

Intel processing power and remote manageability features

The 2nd generation Intel® Core™ vPro™ processor family provides a set of built-in security and manageability capabilities, which:

- Allow IT technicians to quickly deploy security patches across laptops and PCs, remotely unlock encrypted drives, and manage data security settings.
- Give IT help desk personnel control over a laptop or PC with features like Keyboard Video Mouse (KVM) Remote Control.
- Enable IT to remotely troubleshoot and repair laptops and desktop PCs.

Intel® technologies for enhanced data security

Intel's hardware-enabled approach to security adds robust security features to certain processors without impacting performance:

- **Intel® Anti-Theft Technology.** Renders a lost or stolen laptop inoperable by blocking the boot process remotely.
- **Intel® Advanced Encryption Standard—New Instructions (Intel® AES-NI).**[7] Encrypts network traffic and personal data using instructions added to the hardware level, which accelerate encryption and decryption.
- **Intel® Trusted Execution Technology (Intel® TXT).** Automatically assesses whether there have been attempts to alter or tamper with the launch time environment.

Learn more about how U.S. agencies are implementing telework:
www.telework.gov/guidance_and_legislation/telework_guide/telework_guide.pdf

Find more Intel resources for federal agencies: **http://premierit.intel.com/fedgov**

[1] Telework Enhancement Act of 2010: www.gpo.gov/fdsys/pkg/BILLS-111hr1722enr/pdf/BILLS-111hr1722enr.pdf

[2] Office of Personnel Management Memorandum Re: Telework Enhancement Act of 2010: www.chcoc.gov/transmittals/TransmittalDetails.aspx?TransmittalID=3246

[3] USPTO 2010 Telework Annual Report, www.uspto.gov/about/offices/cao/2010TeleworkReport_s508Compliant.pdf

[4] European Framework Agreement on Telework: http://europa.eu/legislation_summaries/employment_and_social_policy/employment_rights_and_work_organisation/c10131_en.htm

[5] Telework in the EU: www.eurofound.europa.eu/docs/eiro/tn0910050s/tn0910050s.pdf

[6] USDA Telework Program Policy: www.ocio.usda.gov/directives/doc/Telework%204080-811-002_V10_110114%20-%20FINAL%20%283%29.htm

[7] Intel® AES-NI requires a computer system with an AES-NI-enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. AES-NI is available on select Intel® Core™ processors. For availability, consult your system manufacturer. For more information, see http://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni/.

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

AES-NI is a set of instructions that consolidates mathematical operations used in the Advanced Encryption Standard (AES) algorithm. Enabling AES-NI requires a computer system with an AES-NI-enabled processor as well as non-Intel software to execute the instructions in the correct sequence. For availability of AES-NI enabled processors or systems, check with your reseller or system manufacturer.

Copyright © 2011 Intel Corporation. All rights reserved. Intel, the Intel logo, the Intel Inside logo, Intel Core, and Intel vPro are trademarks of Intel Corporation in the U.S. and other countries.

* Other names and brands may be claimed as the property of others.

Printed in USA 1011/NB/KC/5K ♻ Please Recycle 326184-001US