



Solution Brief  
2007 Microsoft Office\* System  
Intel® vPro™ Technology

# 2007 Microsoft Office\* System on PCs with Intel® vPro™ Technology



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**Company** Microsoft Corporation, founded in 1975, is a worldwide leader in software, services, and solutions that help people and business realize their potential.

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**Business Challenge** The complexity of the “new world of work” demands powerful software and hardware that allow users to multitask in a fast-paced environment and find, use, and share growing mountains of distributed data.

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**Technology Solution** 2007 Microsoft Office\* system

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**Enhanced By** Intel® vPro™ technology<sup>1</sup>

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## **New hardware and software deliver improved performance, faster calculations, and enhanced collaboration**

The business world has changed. Today, enterprise environments are increasingly filled with globally distributed workforces, larger amounts of data, and more complex business processes. To address these growing challenges, Microsoft and Intel have been working to create multithreaded hardware and software solutions that deliver outstanding performance in today's more demanding work environment.

State-of-the-art PCs with Intel® vPro™ technology<sup>1</sup> and the new 2007 Microsoft Office\* system deliver a powerful combination of computing capabilities for all users. Novice users of 2007 Microsoft Office applications have the flexible platform they need for a multitude of tasks, while experts have the outstanding performance they need to run multiple compute-intensive applications at the same time. For all users, Intel vPro technology and the 2007 Microsoft Office release help users find information faster, analyze data more completely, and collaborate more effectively with text, voice or video media. The result is streamlined content management, improved business insight, and simplified collaboration.



## Today's challenge

Corporations face increasingly intense competition, shorter business cycles, and more demanding applications. Organizations must also manage growing mountains of data – which can be located not just on the user's PC but on the network – and an increasingly capable workforce which places new demands on software and hardware. The question is, in this increasingly complex work environment, how do users intelligently manage, find and use all the data available to them? And how can applications and PCs deliver the performance users need for effective multitasking or other complex tasks, such as predictive modeling? The complexity of today's work environment creates a critical need for tools that help corporations reduce information overload and achieve greater company-wide productivity and effectiveness.

## The solution: 2007 Microsoft Office\* system on PCs with Intel® vPro™ technology

The 2007 Microsoft Office system is a family of productivity tools and services. The system is designed to allow users to work more effectively while using spreadsheets, performing searches, and sharing information. Based on the latest 64-bit dual-core architecture, PCs with Intel vPro technology deliver the performance foundation that helps users get the most out of those multithreaded applications, such as Microsoft Office Excel\* 2007, Microsoft Office Communicator\* 2007, and Microsoft Office Groove\* 2007.

The advanced performance of PCs with Intel vPro technology also allows the enhanced indexing and search algorithms delivered in the 2007 Microsoft Office system to run in the background without interrupting users. IT administrators can feel confident that critical business tasks, such as virus scans and security updates, can run in the background, where there is less impact on business. With the combination of the 2007 Microsoft Office applications and PCs with Intel vPro technology, users can see substantial improvements in productivity, data correlation, and collaboration.

## Improved calculations with Microsoft Office Excel\* 2007

One of the primary challenges users face when analyzing large amounts of data in Microsoft Office Excel 2007 is making the data work for them, rather than being overwhelmed by it. As data sets grow increasingly large and complex, it is even more important for users to get meaningful information as efficiently as possible.

Microsoft Office Excel 2007 can perform faster calculations (called multithreaded calculations) by spotting formulas that can be calculated concurrently and then simultaneously running those formulas on multiple processor cores. This allows complex spreadsheet calculations to finish in significantly less time. Multithreaded calculation

is enabled by default in Microsoft Office Excel 2007. In addition, the Microsoft Office Excel 2007 calculation engine has been optimized for multithreaded execution on dual-core architectures, such as PCs with the Intel® Core™2 Duo processor and offers a significant performance improvement over previous-generation systems.

The improved performance is especially important in predictive modeling, such as in Monte Carlo simulations, where the increase in performance will scale based on the number of threads or cores available to Microsoft Office Excel 2007. For example, because Microsoft Office Excel 2007 can use both cores on an Intel vPro system, calculation time for Monte Carlo simulations can be much less. Due to the multithreaded nature of Microsoft Office Excel 2007 and the dual-core design of PCs with Intel vPro technology, the majority of other Microsoft Office Excel 2007 spreadsheets will experience improved performance improvements.

The benefit of this collaboration extends also into IT environments. For example, many financial analysts have two PCs on their desks: one system for predictive analysis, and one PC on which to perform daily work. With the performance delivered by PCs with Intel vPro technology and Microsoft Office Excel 2007, the use of two PCs may no longer be necessary. This could translate into reduced congestion on the network, and less hardware for IT organizations to support through typical PC maintenance, update, security, and repair processes.

## Faster searching for more meaningful data

According to IDC research, knowledge workers successfully find what they seek only one-third of the time or less.<sup>2</sup> The inability of many users to find the documents they need to do their work leads to a loss in productivity and significant costs to the enterprise. As the amount of corporate data grows, users increasingly need tools that allow them to find and share information effectively, and quickly connect to the resources they need to do their jobs.

The 2007 Microsoft Office system offers improved, multithreaded search indexing, making it easier for users to find information and resources more quickly. This includes a common search technology used by Windows Vista;<sup>4</sup> Microsoft Office Outlook\* 2007, Microsoft Office SharePoint\* 2007, Microsoft Office OneNote\* 2007, and the core 2007 Microsoft Office applications. Users can now more easily search for documents and people both locally and across the network, no matter where resources are located. This can be extremely useful where complex information must be shared among many users.

### **Excellent, integrated graphics for exceptional video**

PCs with Intel vPro technology include full graphics support in system hardware. Because high-quality graphics are already built into the PC, there is less need for an IT organization to buy, maintain, and manage discrete graphics cards. This also lessens the need to maintain multiple driver databases for various cards, perform driver validation, or deal with compatibility issues. The result is simpler system management through a PC with integrated graphics. In addition, with fewer discrete cards to generate heat inside the PC, less cooling is required. This can translate into fewer hardware problems, simpler management through an integrated PC, and greater stability of the overall physical platform.

### **Integrated audio for high-quality collaboration**

When Microsoft Office Communicator 2007 is used on PCs with Intel vPro technology, users can also enjoy an exceptional audio experience for collaboration activities. These PCs include fully integrated Intel® High-Definition Audio<sup>3</sup> (Intel® HD Audio) technology to deliver an outstanding multichannel experience that enhances simultaneous playback of multiple audio streams.

For example, Intel HD Audio technology includes Dolby Digital<sup>®</sup> decoding, and other features to deliver a full audio experience. Intel HD Audio also enables enhanced voice capture through the use of larger array microphones. This allows for more accurate speech input through better noise cancellation. In turn, this produces a higher quality input that requires less processing, and thus less bandwidth, resulting in a better audio output.<sup>3</sup>

### **Dual-core architecture for smoother VoIP**

Users often need to multitask with Voice over Internet Protocol (VoIP), not just other office applications. However, in the past, it has been difficult to maintain a clear VoIP connection while performing spreadsheet calculations, email downloads, or other compute-intensive tasks.

The combination of Microsoft Office Communicator 2007 and the dual-core performance of PCs with Intel vPro technology now makes VoIP a more effective technology throughout an organization. As a multithreaded application, Microsoft Office Communicator 2007 improves end-to-end collaboration by taking advantage of parallel processing in these PCs. Since VoIP can require the resources of an entire processor, dual-core performance means users can now use VoIP and other applications at the same time with better performance. While one processor core is handling VoIP technologies, the other processor core can handle OS interrupts, video streams, and background virus scans. Even

## **SOLUTION BENEFITS**

- **Perform spreadsheet calculations faster and on larger data sets while still multitasking with other applications**
- **Find information faster and more effectively through enhanced indexing, cataloging, and search functions**
- **Increase efficiencies for sharing complex information in a variety of media formats**
- **Experience an outstanding multi-tasking collaborative experience with dual-core processing, integrated audio, and next-generation graphics**

when sharing multiple data types, Intel vPro technology helps Microsoft Office Communicator 2007 deliver improved real-time performance that reduces interruptions in tasks and improves user productivity.

### **Summary**

In any software application, PC performance remains one of the most important elements. The 2007 Microsoft Office system and PCs with Intel vPro technology are designed to deliver the performance users need to find, use, and share information more effectively throughout an organization. In particular, when 2007 Microsoft Office applications are used on PCs with Intel vPro technology, multithreaded applications can offer a substantial performance improvement that can translate directly into greater employee productivity, enterprise agility, and process efficiency. Together, PCs with Intel vPro technology and the 2007 Microsoft Office release offer users an ideal platform for the multithreaded work required in today's complex and demanding enterprise environments.

## For more information

PCs with Intel vPro technology deliver high performance in an energy-efficient platform. These PCs give IT administrators critical, hardware-based security and manageability capabilities not available in previous generations of PCs or in software-only solutions. When provisioned with third-party software, these PCs allow for easier management from the IT console, and help provide a more secure environment for the sharing of business information.<sup>1</sup>

**For more information about Intel vPro technology, visit**  
[www.intel.com/vpro](http://www.intel.com/vpro)

**For more information about Microsoft Office, visit**  
[www.microsoft.com/office/preview](http://www.microsoft.com/office/preview)

<sup>1</sup> PCs with Intel® vPro™ technology include Intel® Active Management Technology (Intel® AMT). Intel AMT requires the computer to have an Intel AMT-enabled chipset, network hardware and software, connection with a power source, and a network connection.

<sup>2</sup> Source: IDC, "The Hidden Costs of Information Work," April 2006, Doc #201334.

<sup>3</sup> Intel® High Definition Audio (Intel® HD Audio) requires a system with an appropriate Intel chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers, and speakers. For more information about Intel HD Audio, refer to [www.intel.com](http://www.intel.com).

<sup>4</sup> Virtualization software applications may not be compatible with all operating systems. Please check with your application vendor.

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