Business Innovation Unleashed

Tablet computers provide new ways of working and new forms of value

Use of tablets in the business world is growing

Learn more about the advantages and benefits of corporate use of tablets

More and more companies are adopting smartphones and tablets for business use

Portability makes tablets attractive

The greatest attraction of tablets is that they are so light and portable. Their touchscreens provide an effective way to share viewing of documents during meetings or when presenting a product (Figure 1). They also come equipped with HDMI sockets and other interfaces that let you display documents, videos, and similar content on a large screen when making a presentation. Their touchscreen operation and excellent character recognition functions make tablets easy to use for people who are not comfortable with keyboards. Companies are reporting productivity gains from their use with customers in tasks such as those that would previously have involved filling out forms.

Figure 1. Portable tablets are an effective tool for sales and marketing

Integration with the cloud and providing information in realtime

With a tablet, you can connect to the Internet from anywhere and access the cloud to check your mail or view documents (Figure 2). This not only boosts your productivity, it also opens up new business opportunities, new ways of working such as small office/home office (SOHO) and new services or business models that work with information in realtime.

Figure 2. Making effective use of your commuting time

Providing disaster-resistant infrastructure

With high-availability access to cloud services, tablets can not only use the Internet for communication during a disaster, but they also increase the potential for keeping your business running without service interruption (Figure 3). Even if the disaster keeps you from getting to work, having a tablet you can use anywhere is a valuable part of business continuity planning (BCP) because it allows you to continue communicating and conducting business remotely from your home or an evacuation center.

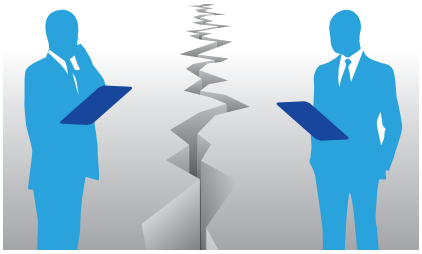


Figure 3. Disaster-resistant communication lines and the cloud keep business working

Making effective use of time, cutting operating costs

Productivity improvements, new ways of working, and other benefits of tablet use let you make effective use of the time you spend on your business (Figure 4). Meanwhile, the cloud is helping companies cut costs in both the maintenance and administration of existing systems and the development, installation, and operation of new ones.

Figure 4. Creating new business ideas

What issues do IT departments need to consider when adopting tablets?

Smartphones and tablets are not just convenient. These highly mobile and functional devices also have the potential to transform how people do business. CIOs and IT departments, which have traditionally wanted to improve stability and security by keeping close watch over all the systems and devices in their companies, are now starting to consider tablets and similar devices that give users more freedom, seeing this as a way to expand their businesses and speedily resolve issues.

Companies can expect improvements in work efficiency and new business opportunities that give users the freedom to come up with their own ideas. A number of companies have been changing their device and system administration practices to take advantage of these benefits.

When introducing tablets, it is important to first consider the benefits and risks and what tablets will make possible. Next, give thought to security and administration policies as well as user rules and work processes to devise the best possible solution. Focus on the balance between business and IT.

Key considerations

- Benefits of adopting tablets
- Potential risks
- Security and device management
- Usage rules and work processes
- How to maximize return on investment (ROI) including affinity with existing systems and effective use of existing applications
- Choosing devices with the flexibility to adapt to future requirements (e.g., adequate performance for content production, extensibility of input devices such as keyboard and mouse)

Use of Windows* tablets is growing

What is the best tablet for corporate use?

Windows, already used by many corporate PCs, is now increasingly being chosen for tablets. The reliability and stability of Windows, the ability to reuse existing applications and other resources, and federation to existing systems become the decisive factors. Other benefits for companies include being able to choose a wide range of devices to suit different uses, the extensive availability of peripheral device drivers, and ease of management. Windows tablets will find uses in an increasing number of business situations in the future.

Advantages of Windows tablets

- Affinity and compatibility with existing Windows applications and systems
- Fully-featured application development environment
- Reduced development and administration workload from supporting a single OS
- Affinity and compatibility with numerous printers, keyboards, and other USB-connected devices
- Ease of security and administration
- Wide range of display sizes, device form factors, additional functions, and other options

Tablets enhanced by the latest Intel® technology

- Low-power devices with long battery life, performance that is easy to use

Tablets powered by Intel® processors combine high performance and graphics capabilities with low power consumption and maximum heat dissipation. The 3rd generation Intel® Core™ processor family features high-speed processing and advanced security functions. The Intel® Atom™ processor provides low power consumption and long battery life for small, lightweight devices.

- Connectivity with existing systems, reuse of existing applications.

Their connectivity with existing systems is one of the key advantages of using Windows tablets. Another advantage of choosing Intel processors is their use of the x86 architecture, which means existing applications can run without further modifications.

- Robust security technology

For a high level of security, technologies such as Intel® Identity Protection Technology (Intel® IPT)[1] provide stronger authentication and Intel® Anti-Theft Technology (Intel® AT)[2] prevent information leaks by disabling a tablet if is lost or stolen.

New convertible Ultrabook™ devices deliver CPU and OS advances

A variety of new Ultrabook devices feature power-efficient Intel processors and the excellent touchscreen capabilities of Windows 8. Unlike conventional notebook PCs with fold-down LCD screens, these Ultrabook devices have convertible configurations that can be used both as notebook PCs and tablets. They include models with detachable keyboard and screen and layered models that let you slide the screen onto the keyboard. This convertibility expands their uses—for instance, as a notebook PC in the office but as a tablet during sales calls or other work outside the office (Figure 5).

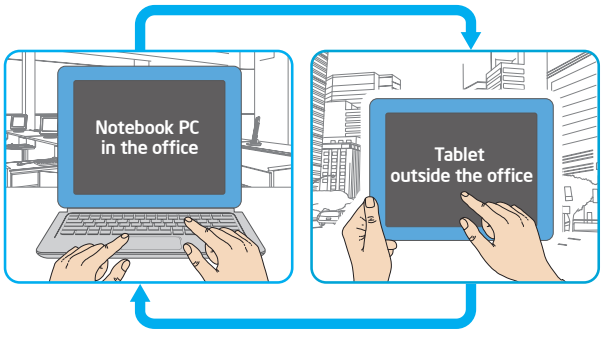
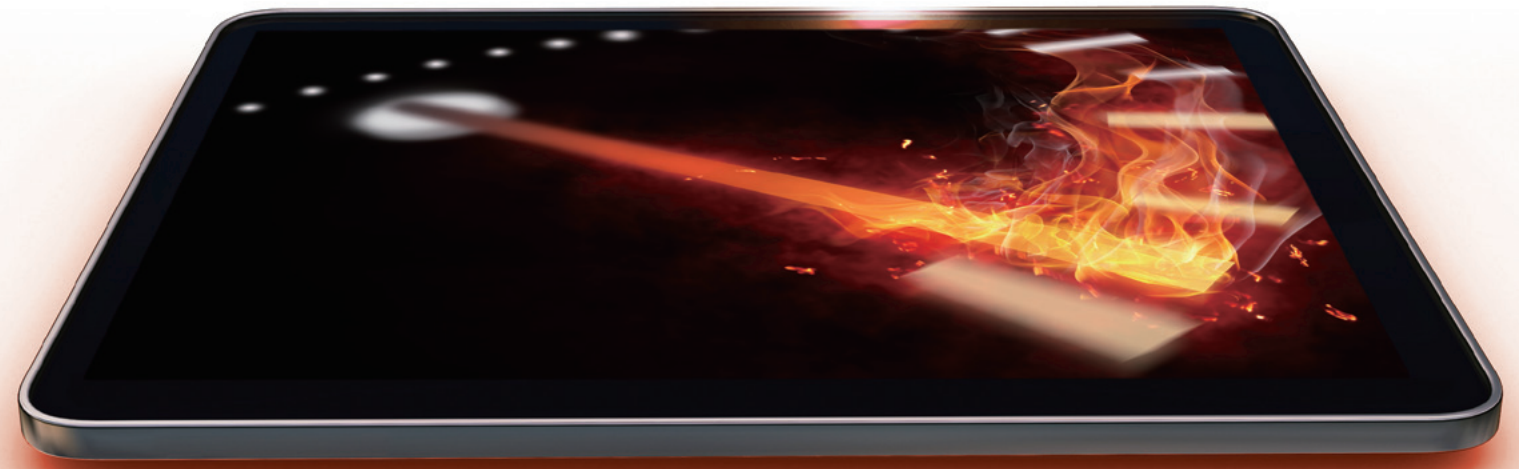


Figure 5. Versatile, convertible Ultrabook devices

Performance to maximize tablet capabilities

Intel processors

Intel processors use the latest technologies to provide strong support for tablet performance, combining enhanced graphics, security, and administration functions with faster speed and lower power consumption.



Features of the 3rd generation Intel Core processor family

- 22nm process technology
- Intel® Turbo Boost Technology 2.0[3]
- Next-generation Intel® HD Graphics
- Dual-channel DDR3 1600MHz (2DPC)
- DirectX*11 support
- Next-generation Intel® Quick Sync Video
- Intel® Advanced Vector Extensions (Intel® AVX)
- Intel® 7 Series Chipset support
- USB 3.0

High performance for more portable tablets 22nm 3D tri-gate transistors

Built using the latest 22nm process technology and featuring a new type of transistor with the world's first 3D structure, 3rd generation Intel Core processors improve switching speed up to 37 percent and reduce power consumption by about 50 percent. By allowing the design of more innovative tablets with even thinner profiles, these processors enhance mobility performance. Meanwhile, Intel Turbo Boost Technology 2.0 can handle heavy processing loads at a high speeds (Figure 6).

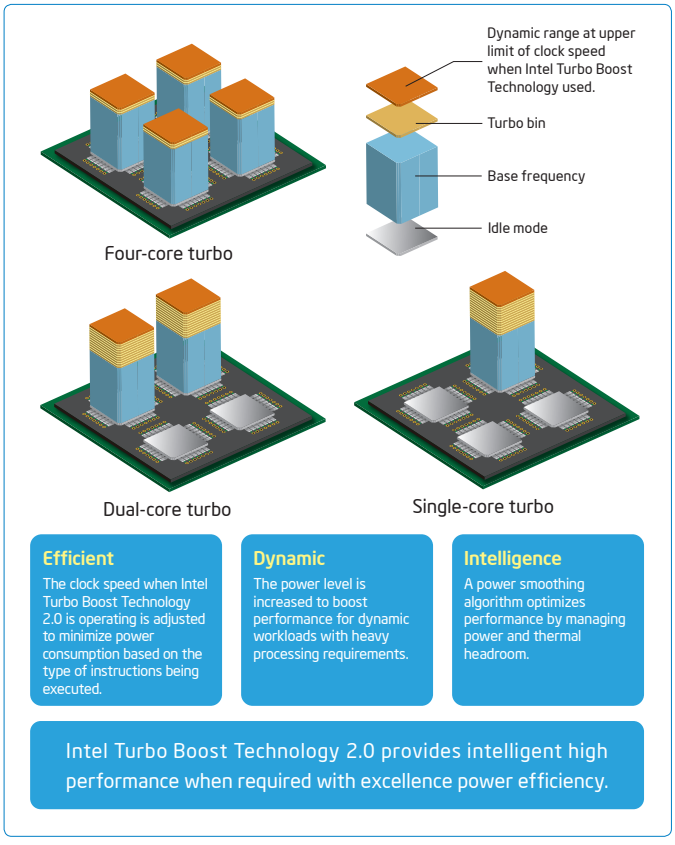


Figure 6. Intel Turbo Boost Technology 2.0

Improved graphics performance for more effective presentations featuring rich content

The growing use of video, 3D images, and other rich content in business presentations is driving demand for higher graphics performance in tablets. The 3rd generation Intel Core processor family features superior graphics performance provided by built-in graphics functions in the processor. The latest Intel® HD Graphics now has up to 30 percent better performance than before. This supports the use of high-definition rich content in a variety of business situations.

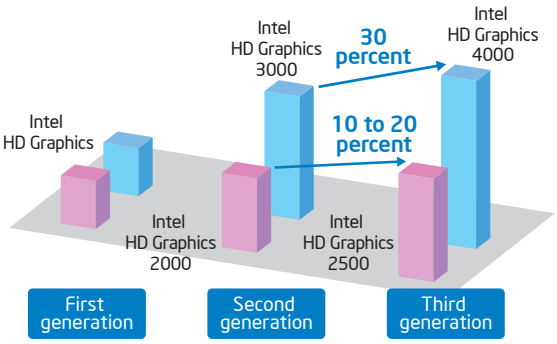


Figure 7. Intel HD Graphics delivers performance improvements of up to 30 percent

Quick access to secure encrypted data: Intel® AES New Instructions (Intel® AES-NI)

Intel® AES-NI[4] is a new specification that provides high-speed encryption and decryption. It can speed up the encryption and decryption of entire disks or other file storage systems by approximately four times compared to previous processors. This delivers smoother access to encrypted data as well as to secure communications such as SSL on the Internet.

Features of the Intel Atom processor

- Significant reduction in both average and standby power consumption
- Highly scalable performance from 800MHz to 2GHz
- Intel® Hyper-Threading Technology
- Enhanced Intel SpeedStep® Technology
- Streaming SIMD Extensions 3 (SSE3) support

Easy to use, with low power consumption: Intel Atom processor

The Intel Atom processor combines high processing speed with low power consumption. The processor's low heat generation makes it suitable for fanless designs, which also means quieter operation.

Choose the Intel Core processor family for devices that need high levels of both performance and security and the Intel Atom processor for devices that require small size, light weight, and long battery life. The result is a range of tablets to suit different budgets and applications (Feature 8).

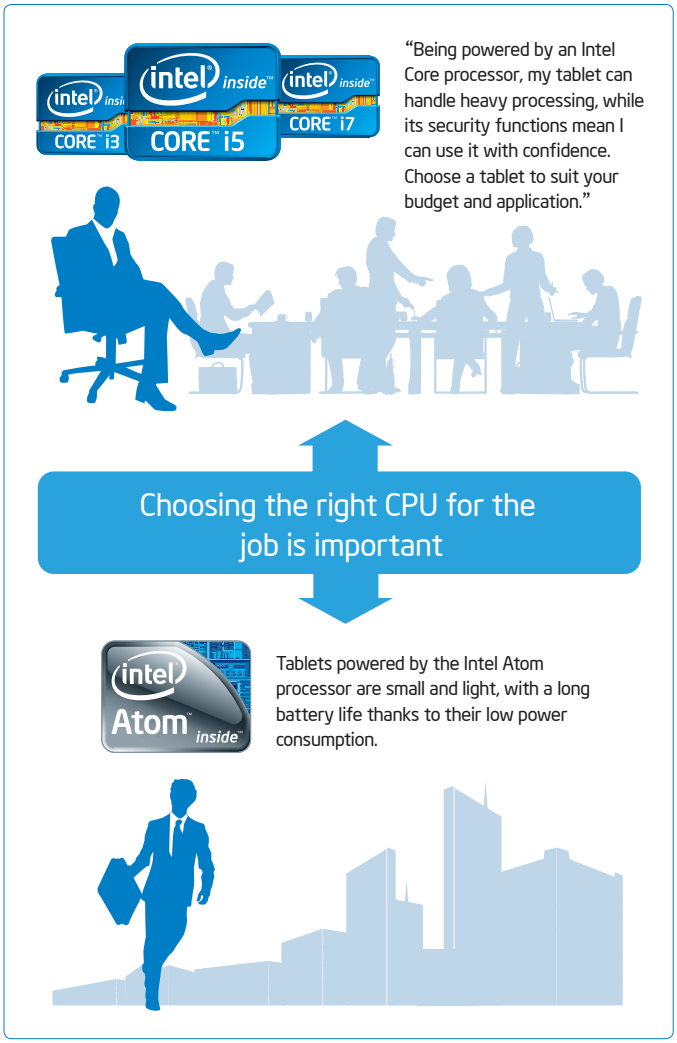


Figure 8: Choose the right CPU for the job

Windows 8 makes tablets even easier to use

The insurance industry has traditionally had a strong demand for mobility. This is one area where use of Windows tablets is growing because of their ability to use the same operation and administration practices as existing Windows clients. Use is also expanding in fields such as healthcare, education, and logistics services.

The upcoming release of Windows 8, optimized for touchscreen operation, is expected to make these devices even easier to use and lead to the introduction of a variety of advanced products.

The numerous cases in which existing authentication and other security systems can be used without modification are also easing the adoption of Windows tablets. The comprehensive development environment and support for a large number of applications also contribute to their advantages. Many tablets are being released that support the Connected Standby function of Windows 8. Connected Standby can reduce power consumption and dramatically improve tablet battery life by turning off the display while the CPU, communications module, and other critical subsystems continue to operate.

Because the tablet can perform tasks such as receiving mail or checking for social network site (SNS) updates automatically, even when the display is powered down, you can still get immediate notification of any new messages. This combination of Intel processors and Windows 8 will make tablets even easier to use in business (Figure 9).

Figure 9: Intel processors enhance Windows 8

Companies adopting Windows tablets powered by Intel processors

Windows tablets are being used in a wide range of different industries and applications, helping to create new value and boost work efficiency. Many companies are choosing the combination of Intel processors, with their superior features for business, and Windows tablets.

Case Studies

Logistics service industry

Oil company

Case Study 1

Using tablets at service stations provides services that improve customer satisfaction

Looking to find ways to improve service at service stations, the company is using tablets for card membership applications and product sales, such as engine oil and batteries. This has cut the time to apply for a card by more than half and enabled all staff to give customers appropriate product explanations.

Tablet used

- Tablet : Fujitsu STYLISTIC* Q550/C
- CPU : Intel Atom processor Z670
- Memory : 2GB
- Display size : 10.1 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- High reliability and security and easy integration with existing resources.
- System-based approach is faster and ensures that information is collected without omissions.
- Using the latest product database, all staff can consistently provide visual explanations to customers.
- Even customers unfamiliar with using a keyboard can enter information quickly using the touch pen.

Cosmetics manufacturer and retailer

Case Study 2

Using tablets in the cloud for customer management and sales promotion means shorter working time

The company set out to reorganize its business and revamp its sales practices to provide customers at salons and beauty parlors with information on new products, present sales promotion plans, and undertake other marketing. They chose to supply their sales staff with tablets that, compared to a laptop PC, make it easier to share a view of the screen with a customer. This makes the tablets suitable for use both in the office and on the road.

Tablet used

- Tablet : ONKYO* TW317A7PH
- CPU : Intel Atom processor N450
- Memory : 2GB
- Display size : 11.6 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- Seamless integration with work processes, since tablets can also be used as employees' main office computers.
- Use of Windows allows large scope for expansion and reuse of existing resources. Development and installation costs are also lower.
- Adoption of cloud-based customer and product database means information can always be kept up to date.
- Enables the use of visual presentations in which the customer shares a view of the screen.

Railway company

Case Study 3

Highly reliable Windows tablets deliver long battery life and reward event participants with points

The company was planning events that involved repeated use of the railways over the course of a year. With the aim of identifying event participants and other information, such as the numbers participating, and to improve service by running their own points program, the company selected Windows tablets with high reliability and long battery life.

Tablet used

- Tablet : Fujitsu STYLISTIC* Q550/C
- CPU : Intel Atom processor Z670
- Memory : 2GB
- Display size : 10.1 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- Large battery capacity and use of Intel Atom processors give the tablets a continuous operating time of about 10 hours.
- Because they use Windows, the tablets support connection to a smartcard reader and the use of Visual Basic* for development.
- Lightweight (approximately 730g) tablets have the portability and ease of deployment for use at outdoor events.

Communications infrastructure company

Case Study 4

Using tablets for inspection of optical fiber connections helps lower development costs and improve work efficiency

In need of an efficient solution that would improve the accuracy of optical fiber maintenance and management work, the company improved employees' work efficiency by adopting tablets. Using Windows made development easy, shortening lead time and cutting costs.

Tablet used

- Tablet : ONKYO* TW117A6PH
- CPU : Intel Atom processor N450
- Memory : 2GB
- Display size : 10.1 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- Use of Windows made integration with existing business systems easy, with a smooth transition and the ability to reuse existing resources.
- The tablets provide a secure environment that is easy to administer.
- Tablets are fitted in a special case that can be worn around the neck, freeing both hands for inspection work.
- Software was simplified to allow operation using touch panel only. Tasks that previously required two people could now be done by a single person.

Eye clinic

Case Study 5

Highly stable Windows tablets with easy development adopted for new medical system based on BPR considerations

Recognizing the essential role of business process reengineering (BPR) in the adoption of medical IT, and looking to improve medical services and reduce unnecessary and impractical tasks, the eye clinic decided to adopt tablets for their ease of input and stability and because their hardware characteristics suited the nature of the work.

Tablet used

- Tablet : ASUS Eee Slate* B121
- CPU : Intel Core i5-470UM processor
- Memory : 4GB
- Display size : 12.1 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- System integration based on patient information achieved by working toward adoption of electronic methods throughout the clinic.
- Text and hand drawings can be entered using a touch pen in much the same way as using paper notes.
- Smooth coordination of work processes through use of timely and accurate information.
- Contributes to lower workloads and stress, better quality of medical care, and more satisfied patients and staff.

Dental equipment manufacturer

Case Study 6

Robust tablets with long battery life selected for applications such as entering examination results and presenting information to patients

A manufacturer of dental equipment that had developed dental examination software for desktop and laptop PCs evaluated its use on highly portable tablets. They succeeded in minimizing human error by medical staff, improving productivity, reducing the complexity associated with managing explanatory material, and cutting development costs.

Tablet used

- Tablet : Fujitsu STYLISTIC* Q550/C
- CPU : Intel Atom processor Z670
- Memory : 2GB
- Display size : 10.1 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- Tablets can be used for everything from entering examination results to presenting information to patients.
- Use of Windows meant no major software changes were required and existing resources could be carried over.
- Highly portable nature of tablets allows examination results to be entered in the dentist's surgery.
- Improved productivity and fewer errors achieved by reducing the recording of information on paper for later entry to a PC.

University hospital

Case Study 7

Successful shift to electronic examination records achieved through use of tablets in conjunction with Continua*-compliant blood pressure meters and scales

The university hospital developed a support system for patient examinations that combined use of tablets with blood pressure meters and scales that complied with Continua Health Alliance standards. The adoption of electronic examination records lightened the workload of doctors and nurses by automatically transferring data on blood pressure, pulse, and body weight to the examination record form, allowing them to collect vital signs and other examination data in electronic medical records during the examination.

Superior features of Windows tablets

- Fewer measurement transcription errors and efficient data management.
- More efficient medical examinations and higher productivity in the transcription of information from examination record forms to electronic medical records.
- Patients feel more comfortable because they can see the tablet screen during note-taking.
- Portability and convenience of tablets means they can be used when sitting next to a patient in a waiting room.

Insurance industry

Life insurance company

Case Study 8

Use of tablets as new sales terminals Supporting paper-like communication

An insurance company embarked on a business reorganization to strengthen its interactions with customers by providing insurance support over a lifetime. Coinciding with the introduction of a new business system, they equipped their sales force with tens of thousands of thin, lightweight tablets featuring simple, pen-based, touchscreen operation.

Superior features of Windows tablets

- High degree of compatibility and affinity with existing Windows-based resources.
- Use of security functions to prevent information leaks in the event of loss or theft.
- Facilitates shift to paperless operation by using advanced character recognition function to allow use of electronic signatures for administrative tasks.
- Built-in camera (to capture procedural documents) and mobile functions (for remote consultations).

Fire insurance company

Case Study 9

Tablets simplify tasks for arranging insurance policies and help in shift to fully paperless operations

This fire insurer's staff needed to take both a laptop PC and a pen-based tablet to sign up a customer for a policy. Outdated paper application forms required time-consuming revisions.

Superior features of Windows tablets

- Tablets can also be used for other work such as Microsoft Office* documents.
- Use of electronic signatures for administrative tasks.
- Successful shift to paperless operations, eliminating inadequacies of application forms.
- Appropriate level of security for handling of personal information, including authentication.

Case Studies

Finance industry

Bank

Case Study 10

Tablets for processing card loan applications speed up results and reduce data entry work

Using tablets for processing card loan applications simplified the tasks for issuing loan cards, sped up card issuing, and reduced the amount of information applicants needed to fill in.

Tablet used

- Tablet : ASUS Eee Slate* B121
- CPU : Intel Core i5-470UM processor
- Memory : 4GB
- Display size : 12.1 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- Can be administered with existing systems.
- Paperless application tasks including switching from handwritten applications to text data and recording handwritten signatures as image data.
- Less manual data entry and checking for errors on application forms. Minimizes time taken to transfer documents from place to place.
- Allows output of duplicates of applications, agreements, and other forms. Personal identification documents can be stored as image data.

Case Studies

Education

School

Case Study 11

Progress toward one tablet per child at junior high schools and other educational institutions

A growing number of junior high schools are allocating Windows tablets to all teachers and pupils. Focused on using information and communications technology to enhance future education, many schools and other educational institutions are using in Windows tablets.

Tablet used

- Tablet : Fujitsu STYLISTIC* Q550/C
- CPU : Intel Atom processor Z670
- Memory : 2GB
- Display size : 10.1 inch
- OS : Windows 7 Professional

Superior features of Windows tablets

- Providing children with teaching materials that are appropriate to their level of progress allows individuals to learn at their own pace.
- Allows cooperative learning with the use of media to prompt children to discuss among themselves and help teach each other.
- Teaching staff can assess progress in detail and provide guidance to suit the individual.
- Offers potential for devices to be used more widely as needed, not just inside the classroom, but also across the school and further afield via a wireless LAN.

Key points for corporate use of tablets

Point 1

Adoption of tablets triggers business innovation

Use of tablets in business can improve productivity and offer new ways of working, new business models, and the implementation of BCP. It is important that the adoption of tablets be accompanied by consideration of the balance between business and IT, including solutions for security and administration.

Point 2

Tablets designed for corporate use

With their strong affinity for existing Windows environments and ability to make use of the huge base of existing applications, Windows tablets fitted with Intel processors protect companies' existing investments. Tablets powered by the Intel Core processor family, for example, go beyond the capabilities of past consumer tablets. Besides high levels of security and ease of administration that make them ideal for corporate use, they also have the high performance to support creative work. Tablets powered by the Intel Atom processor family are highly portable, with small size, light weight, and long battery life. This ability to select the best processor to suit the style of use is another major attraction of tablets powered by Intel processors.

Point 3

Five key points from the case studies

There are several key advantages to companies that adopt Windows tablets. By designing optimal workflows based on factors such as how the devices will be used and the business objectives, numerous businesses are achieving significant benefits from Windows tablets:

- Improved convenience of touchscreen operation
- Paperless operations
- Improvements to work efficiency made possible by mobility
- Use of existing systems and applications
- Support for various peripheral devices

For more information about tablets, visit:
http://www.intel.com/content/www/us/en/tablets/tablets.html (English)

1. No system can provide absolute security under all conditions. Requires an Intel® Identity Protection Technology (Intel® IPT) enabled system, including a 2nd or 3rd generation Intel® Core™ processor, enabled chipset, firmware, and software, and participating website. Available only on participating websites. Consult your system manufacturer. Intel assumes no liability for lost or stolen data and/or systems or any resulting damages. For more information, visit: ipt.intel.com.
2. No system can provide absolute security under all conditions. Requires an enabled chipset, BIOS, firmware and software and a subscription with a capable Service Provider. Consult your system manufacturer and Service Provider for availability and functionality. Intel assumes no liability for lost or stolen data and/or systems or any other damages resulting thereof. For more information, visit http://www.intel.com/go/anti-theft.
3. Requires a system with Intel® Turbo Boost Technology. Intel® Turbo Boost Technology and Intel® Turbo Boost Technology 2.0 are only available on select Intel® processors. Consult your PC manufacturer. Performance varies depending on hardware, software and system configuration. For more information, visit http://www.intel.com/go/turbo.
4. 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 Intel® Core™ i5-600 Desktop Processor Series, Intel® Core™ i7-600 Mobile Processor Series, and Intel® Core™ i5-500 Mobile Processor Series. For availability, consult your reseller or system manufacturer. For more information, see http://software.intel.com/en-us/articles/inteladvanced-encryption-standard-instructions-aes-ni/

Enhanced Intel SpeedStep® Technology: See the Processor Spec Finder at http://ark.intel.com or contact your Intel representative for more information.

Available on select Intel Core processors, Intel Hyper-Threading Technology Requires an Intel HT Technology-enabled system. Consult your PC manufacturer. Performance will vary depending on the specific hardware and software used. For more information including details on which processors support HT Technology, visit http://www.intel.com/info/hyperthreading.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more information go to http://www.intel.com/performance.

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