The Power of the Pen

Fujitsu Computer Systems

The leader in pen computing solutions
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The Journey of the Pen:
The most basic form of communication, expression, and creativity has evolved into one of the most useful and beneficial tools available to today's workforce.

Executive Summary

More than at any other time in the history of personal computing solutions, pen computing today provides performance and flexibility that is opening doors for all types of industries and users. What used to be strictly a vertical technology, used primarily in healthcare and insurance, is becoming horizontal and finding a home in education, sales force automation, and a host of other applications. This transition is no coincidence. As more and more workers become mobile, the ease of use and accuracy provided by the pen is taking the industry by storm.

This white paper will discuss why so many businesses today are deciding to take advantage of pen computing, its advantages over standard notebook computers, the industries that are best suited to pen computing, the types of form-factors and other choices available, and how pen-enabled computers can benefit all types of users and the types of work they do.

“This way, our sales reps can spend their time more effectively. There's no need for them to follow up on yesterday's problems because they have resolved them today.”
- Jay Davis, President and Co-Chief Executive Officer, NDC

Why are businesses taking advantage of pen computing now more than ever?

Today’s workforces can perform more efficiently with pen computing because it:

- Simplifies information entry and reduces errors by providing clear choices.
- Reduces redundancy or re-keying of information and speeds transactions.
- Allows annotation of drawings, photos, and documents.
- Environmentally friendly: reduces the need for paper forms.

The hardware's intuitive form-factors, combined with pen-enabled applications, are automating industries of all sizes and across all disciplines. Its multiple form-factors provide a single mobile platform that meets the needs of all users without impacting those who don’t need pen input.
Originally, pen-enabled applications were written for specific tasks and customers, primarily in healthcare, sales force automation, and service industries. The main reason was the lack of a stable development environment. This situation changed when Microsoft® launched Windows® XP Tablet PC Edition, and, more recently, Windows Vista®. These pen-aware operating systems provided a stable foundation for code development, leading to a host of third-party productivity applications.

Hardware manufacturers then began providing devices designed to utilize this software. Small electronic tablets appeared first, followed by PDAs, and finally slate tablets (without a keyboard) and convertible notebooks (the display can be folded down onto the keyboard). Unlike pen computing platforms of the past, these newer systems are efficient, powerful, and give users all the features and benefits of a standard notebook PC.

But pen computing also has many advantages over standard notebook computers, resulting in a better ROI. Moving some tasks to forms-based operation can speed up day-to-day operations and save paper. Many companies are reducing the time required to complete tasks and transactions without impacting the quality of service they provide. They also have instantly available an electronic record of all transactions, including signatures, that allows them to quickly process orders, update records, move inventory, and adjust pricing.

In addition, by combining traditional notebook tasks with more efficient forms-based computing tasks, and by simplifying data entry, reducing errors, and reducing redundancy, pen-based computing helps conserve human resources. It also provides the IT department with the simplicity and ease of supporting a single basic device running the same operating system, whether it is Windows® XP Tablet PC Edition or Windows Vista®.
Which industries are best suited for pen computing?

Most industries and users can benefit from pen-enabled computing:

**Forms-based computing.** Applications such as insurance, inventory, delivery, and manufacturing can benefit from the accuracy and simplicity that computers make possible. Digitized forms can be completed and stored electronically, and don't need to be transcribed. They can even be signed and sent immediately.

**Repetitive tasks that involve decision-making.** Drop-down menus can eliminate the chance of errors being made by misinterpreting values, such as in prescription writing.

**Service industries.** Entire manuals can be loaded onto a tablet and scrolled through as easily as though they were printouts. Manuals can be updated and edited on the fly, as well as downloaded.

**Students and instructors.** Pen computing is used to annotate and communicate more clearly on shared slides. Students can download an instructor's course materials and take notes directly on the instructor's slides.

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<thead>
<tr>
<th>Industry Segment</th>
<th>Application</th>
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<tbody>
<tr>
<td>Health Care</td>
<td>Computerized Physician Order Entry (CPOE),</td>
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<td>Electronic Medical Records (EMR)</td>
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<td>Sales/Field Force</td>
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<td>Insurance</td>
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<td>Aviation</td>
<td>Engineering, electronic flight bag</td>
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<td>Education (individual and</td>
<td>Engineering and art students, instructors</td>
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<tr>
<td>institutional)</td>
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What choices are available?

Form-factors

Convertibles. These notebook computers can be transformed into a tablet PC to meet the needs of both forms-based tasks and more traditional notebook tasks. Compared to the keyboard-less slates, convertibles have traditionally delivered mainstream processor performance with slightly more weight, but at a lower cost.

However, with the launch of the LifeBook® T2010 Convertible, Fujitsu has delivered a pen-enabled convertible computer that performs like a traditional notebook, weighs as little as a slate, and costs even less. With over 20 years’ experience in pen computing, longer than any other manufacturer, Fujitsu offers the broadest selection of tablet PCs.

Slates. These tablet devices are best for repetitive tasks such as forms-based computing where a keyboard is not needed on the job. Examples include inventory, insurance, reference applications, and electronic order-taking. Slates can also be docked with a keyboard for more traditional office applications. Compared to convertibles, they weigh less and can be carried more easily.

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“The Fujitsu LifeBook® notebooks, in conjunction with our digital patient information system, are enabling nursing staff to gather and track more accurate information about the quality of care being administered and how a patient is responding to that care. The result is more efficient and better patient care.”

- Paul Fabbi, System Manager Information Services, Provena Senior Services & Provena Home Care

“The mobile features of pen tablets enable our appraisers to complete an estimate without leaving a customer.”

-Manitoba Public Insurance
User interfaces

Considerations such as display type, system weight, and balance are key for workforces who conduct day-to-day operations on their feet, which is a common usage scenario for tablet use.

**Display Options.** Screen sizes range from 5.6” to 14”. The larger the screen, the heavier the unit and, most likely, the shorter the battery life. A display may be designed for indoor use only, or indoor/outdoor. Since the latter type looks better outdoors than they do indoors, the display type should be chosen for the primary work environment.

Digitizer technology determines whether a screen is active, passive, or hybrid. The most popular are active screens, which work only with a smart pen. Passive screens, or touchscreens, are the next most popular, using either a dumb pen or a finger. Hybrid screens work with a smart pen or a finger. Digitizer choice may depend on the form-factor.

**Weight.** This is primarily a function of screen size and battery life, and is very important for users who work on their feet. For example, Fujitsu’s pen computers range in weight from 1.5 lbs. to 4.25 lbs.

**Balance.** How the weight of major system components is distributed in the unit is critical. For example, Fujitsu places batteries toward the unit’s front so that, when used in slate mode, the bulk of the unit’s weight rests closer to the body’s center of gravity. This makes it easier to support and causes less fatigue during extended use.

"The Fujitsu LifeBook® enables our sales representatives to walk into doctors’ offices and make effective, professional presentations from anywhere. Mobility is key considering that sales reps often meet with doctors while standing in a hallway between appointments."

--Jeff Cantor, Director of Sales Operations for CollaGenex

Adoption of pen computing is at an all-time high

Application providers continue to adapt applications to exploit the pen’s versatility for multiple uses. Creative and diversified hardware is available that can take advantage of this functionality. Students and consumers now understand the complementary usability benefits that pen computing brings to a notebook. Industries looking to speed transactions, reduce redundancy and increase accuracy continue to turn to pen-enabled systems. For all of these reasons, the use of pen-enabled computing is at an all-time high.
Pen-enabled computers can benefit all types

Pen-enabled computers can benefit nearly all types of users and their work:

- In a warehouse, auditing a customer, accessing damage onsite, providing security and law enforcement, processing patients, reviewing x-rays, whiteboarding, annotating pictures or documents to collaborate with others.
- Editing documents, signing contracts, approving expenses, reading email on a plane and switching to slate mode for writing, listening to music, watching videos.

Whether they work on their feet, in their seats, or on the street, the pen can simplify users’ day-to-day tasks.
Conclusion

Pen-based computing increases accuracy and efficiency, improves communication, saves time, and meets the needs of several diverse types of working groups with a single unit. The simplification of IT support really helps both the bottom line and the environment by conserving several different types of resources. Pen computing products are valuable tools for workforces who conduct day-to-day operations on their feet, where balance and usability are critical. These attributes are especially critical to the success of new deployments when companies are planning to automate, since the new solution must be as easy and convenient as the existing one.