Tame the Paper Tiger with a Tablet PC!

CPA Firms looking to take the next step in the war on paper should consider how the tablet PC can help them meet their goals.

The tablet PC, properly deployed in a firm can reduce or eliminate many of the documents that exist in hard copy form that must be scanned—for example signed contracts, hand written meeting notes, flowcharts and diagrams. Its compact form factor allows it to be easily carried to business meetings, and its slate orientation, as opposed to the traditional laptop clamshell, allows the user to access the computer from many positions and locations that would otherwise be impossible.

What is a tablet PC and how is it different from any other PC? Tablet PCs are a subset of laptops, but with 2 significant differences—touch sensitive screens that can act like a sheet of paper, allowing handwritten items to be directly recorded on the computer screen and special Windows operating system enhancements to facilitate the manipulation of hand written objects, including conversion of hand written objects to text.

Tablet PCs were originally introduced in the 1990's. However, their capabilities were limited by size, weight, battery life, processor speed, and operating system capabilities. Today, engineering advances have shrunk the minimum size, weight and power requirements for computers. This combined with Microsoft's endorsement of tablet PCs by releasing a modified version of Windows XP that includes a rich array of features specifically targeting users of touch screen computers, has allowed tablet PCs to emerge as a viable replacement for desktop computers.

For those who need computing on the go, it's no surprise that tablet PCs are quickly becoming the standard for client site data collection. There is presently a growing body of users in the sales, real estate, construction, property inspection, and medical industries. These users need to connect to the internet or intranet, browse documents, fill out forms, and insert hand written notes, sketches or signatures--activities for which the Tablet is perfectly suited.

The military employs tablets for battlefield data acquisition, and a number of schools are now incorporating tablets in their curriculum, allowing students to share data, take handwritten notes, and complete reports and presentations. Some tablet PCs are also "ruggedized", meaning that they are encased in waterproof, dustproof, and shock resistant case to withstand the abuse encountered at work, school or in transit.

Since a tablet PC uses either a modified version of Windows XP, or Vista (which comes standard with full tablet support), users generally enjoy the full functionality of all their favorite PC software. Many tablets now come with l00+ gig hard drives, and multiple USB and/or fire wire ports, as well as external video connections. While the standard connectors on most Tablets are sufficient to allow it mimic a desktop unit, by plugging in a keyboard, mouse, large screen and Ethernet cable, many tablet manufacturers now offer

convenient docking stations. Place the tablet onto the docking station, and all of your desktop devices, such as CD, hard Drive, scanner, can become instantly accessible to the Tablet, making the transition from portable to desktop even more convenient.

People who use PDAs and Windows desktops will find that the tablet is a natural fit. After all, it combines many of the portability and accessibility features of the PDA, but gives the user a full fledged Windows PC. Use of a tablet eliminates the time and glitches associated with synchronizing the "PDA" to the desktop. It also means you have less software to master, since the tablet and the desktop run the same operating system and programs, such as MS Office.

Types of Tablets: Tablets come in 3 basic varieties, each with their advantages and drawbacks.

Tablet Type	Main Feature	Typical Weight	Principal Benefit	Disadvantages
Slate 	Looks just like a flat screen display. Does not have an integral keyboard (although any USB keyboard can be attached)	2-4 #	Portability	Connecting accessories results in a mass of cables and discrete parts. Docking stations can eliminate the mass of cables, but you still have multiple discrete parts which adds complexity if you need access to the accessories while away from your desk. (i.e. You have to disconnect, bundle and transport more parts).
Convertible 	Looks like a standard clamshell laptop, but the display can be swiveled and folded down on top of the keyboard to create a "slate" form factor.	4-6#	Internal space for extras like DVD drives. Built in keyboard allows for rapid conversion between modes	Excessive weight will result in user fatigue when used in slate mode for extended periods. We have found that anything over 4# is too heavy.
UMPC "ultra mobile personal computer"  "	Very small size—worlds smallest is 4.9" x 3.4" x .9" thick.	1-2#	Extreme portability long battery life—5 hrs or more continuous use	Small screen size may be uncomfortable to the eyes. Hard to visualize scale of ink objects. Tiny hard drives have not always proven durable in extended use—newer units rely on slower, expensive flash memory.

Tablets also come with 2 basic screen types:

Tablet Screen Types	Basic Functionality
Active	Senses the pen by an electromagnetic field before it touches the screen, allowing you to drag the cursor around the screen and "hover" above an item before selecting it. Many active screen stylus' also contain a small switch which simulates a mouse click directly from the pen. Some active screens can also detect the degree of pressure of the pen on the screen, which is ideal for drawing and creating a more realistic style of handwriting
Passive	Recognizes only pressure from screen contact—but can accept input from a finger, a pen, or a stylus. User must learn not to allow any other object-such as finger or hand to touch the screen when writing with the stylus or you will get false results

Avoiding Screen Scratches

Concerns over scratching the screen, or wearing the screen by pen contact can be mitigated by a screen protector, either home made from plastic sheet protectors, or purchased at a cost of $20-$40 from a manufacturer. Screen protectors may use an approved adhesive, or simply be slipped under the edges of the bezel surrounding the screen and be held in place that way. We understand that Toshiba is now shipping its convertible tablets with a built in screen protector. However, you have to send the screen to the manufacturer if the protector ever needs replacing.

Suspend/Resume Mode

Perhaps the single most important feature that makes mobile computing with a tablet practical is the ability to instantly suspend the computer into a very low power consumption state when not needed and almost as rapidly restore the computer to the exact state it was in prior to suspension. Without this feature, users would have to choose between waiting 1-3 minutes for Windows to load each time they needed access, or leaving the computer in a constant run state which would easily drain the battery in several hours.

The suspend/resume feature comes in two formats—Standby and Hibernation. Standby is used to put the computer to sleep for short periods with very rapid recovery. However, standby continues to drain a small amount of battery because the computer processor and memory are not completely turned off. Hibernation takes a snapshot of the entire RAM of the computer and copies it to the hard drive, allowing the power to be completely shut off. Upon wake up from Hibernation, Windows will reload the RAM memory and restore processing at the exact point of hibernation. Hibernation uses no power and can be used to safely suspend processing indefinitely

While these features may not be set up by the vendor when the computer is sold, users can configure these features to be activated through the on/off switch, by the closing of

the display on clamshells, by the passing of a certain amount of idle time, or on the Start, Turn off Computer menu.

Enhanced Security Features

To overcome security issues posed by such highly portable devices, most tablets now support finger print scanning and hardware encrypted hard drives. In fact, some vendors actually encode the hard drive to a specific machine—and if the hard drive is to be replaced, you must purchase the new hard drive from that manufacturer. By locking down a hard drive to a specific machine, thieves cannot simply bypass the password protection by removing the hard drive and installing it in another machine to make it readable.

However, in our experience, tablets are not without some drawbacks.

Tablet Drawbacks

First, for whatever reason, manufacturers have historically underpowered the processors. Although this is now being rectified, potential buyers should be careful to assure that their tablet of choice will in fact have sufficient processor power to perform acceptably. It also appears from our experience that tablets, for a given level of processor seem to perform more sluggishly than non tablets. Perhaps this relates to the additional overhead of the pen recognition software, however this seems to hold true even for convertibles while in laptop mode.

Second, we have not found that every program we would like to have running on a tablet will in fact run. Theoretically, any program that runs under Windows will run on a tablet and users will probably not experience problems with such basic tools as MS Office, but we had to experiment with our backup software, our DVD burning software, as well as our video editing software to find a package that both met our requirements and would run error free on the tablet. Most preferable, of course, is finding a software package specifically designed for the tablet—which in addition to running on the tablet, is actually optimized for the use of pen recognition.

Third, while prices for tablets keep falling as units of production increase, most tablets will cost anywhere from $500-$1000 more than the equivalent laptop.

Fourth, regardless of which tablet type you choose, if you need service, expect to return the unit to the manufacture's repair depot, and be aware that it can get pricey. Their delicate, highly compact, proprietary parts place repair options outside the capabilities of most local repair shops.

Finally, to be practical, the size and weight of the tablet are critical factors. Clearly the lighter the unit, the easier it will be to adapt it to new applications, but generally, the lightness comes at the price of size and features. Screen size is most important, not only for how easy it will be to read the screen, but for what the size of the handwriting will be

on the screen in relation to real world objects—like printed contracts. While you can capture a signature on a contract on a 4.5" screen, most people would have a really hard time writing that small. Of course, the image size can be magnified, but that also means you see less, and may begin to experience degradation in resolution.

Where to Buy Tablets –The best place to buy a tablet is still directly from the vendor or a vendor authorized reseller either over the internet or by 800 number. Within the last year, we have seen convertible tablets, (but not pure tablets) begin to show up at retail stores like Best Buy and Circuit City. However not only is the selection highly limited, the machines we've seen there appear to have less screen resolution, processor power, and features than present state of the art. When buying from a remote vendor, be sure to confirm the vendor's return policy to make sure that you can load and test your desired software configuration and return the machine if it doesn't work right. Most vendors allow 30 days, which is adequate to install and test the software, but really not adequate to work out any kinks you might discover. In that case, just return the product and look at another vendor.

Here is a listing of the most popular tablet PCs based on web site forum hits:

Source: http://www.tabletpcreview.com

How We Successfully Use Tablets

We use the tablet in our construction business, to capture job site status information, to communicate with vendors via e-mail at wifi hotspots while driving between jobs, and to handle documents, including contracts and construction diagrams. For this job, we prefer

the tiny U-50 which is easy to carry around due to its small size. We also like the extended battery life of 4+ hours. And, with I-Tunes loaded, the U-50 makes a handy substitute for an Ipod for on the job music!

Using the Windows briefcase folder feature allows us to synchronize our office computer files with the latest data from the U-50 at the end of each day with a single keystroke over our office wifi.

We also loaded the U-50 with a folder containing our "Most Important Documents". This includes things such as the business cards for all our subs, the city building official directory, under construction home specifications, and elements of the building code.

We have also used a tablet in our tax practice for two years. We started with the U50, running Lacerte Tax Software in a docked, desktop mode, but have since come to prefer the convertible HP TC4400 tablet. The convertible allows us to enter tax return data, and create Excel schedules from a traditional keyboard, but when it's time for the client to approve and sign their return, we swivel the unit into a tablet and hand it to them to review. They can then sign the return directly on the screen, and with a few keystrokes, we instantly e-mail them a copy to their home, file the return with the IRS, and archive a signed copy for our files. One of the great advantages of the tablet is in viewing portrait oriented documents, such as web pages and Adobe Acrobat files. Here the tablet outshines even the desktop. Computer screens are becoming wider and shorter—probably as an accommodation to gamers and the widescreen DVD audience. But this creates a challenge when trying to view standard page size documents—especially multi columnar documents like IRS publications. The tablet's native viewing mode allows a full sheet of paper to be visible on the screen without scrolling—thus speeding up the time it takes to read and review documents.

At this time, all of our computers are tablets. We believe that our use of tablets has helped us tame the paper tiger, and also allowed for faster and more responsive work flows. We encourage our readers to consider this high technology tool as a way to improve their work flows as well.

How to Bring Tablet Computing into your Organization

1. Designate an executive sponsor. This person must not only be committed to making the project successful but must have the authority to engage resources inside and outside the firm as needed to guarantee success.

2. Identify one or two functions in the organization that would most likely benefit from the use of a tablet.

3. Identify and one or two mostly likely users—you are trying not only to find one or two staff who can become passionately committed to the change, but you also want to find someone whose current work style would be complimented by a tablet. A power PDA user who also uses a desktop PC might be an ideal candidate.

4. Evaluate what information will need to be converted to text, and what information can remain in hand written form. The more information you can leave in hand written form without conversion, the simpler the adaptation will be. While handwriting recognition software has come a long way, it is still far from perfect, and the only way to improve it at this time—is for the user to change the way they write. Another option is to combine voice recognition (which is a standard feature of XP) with pen recognition. This is the technique used by Michael Linenberger, tablet proponent, and author of the book "Seize the work day", an excellent primer on the use of Tablet PCs."

5. Identify the software that will be used, and how the software will be used.

6. Select the appropriate hardware and install the software. Perform walk throughs of all features that will be used, and document them. Include the initial users in the process.

7. Distribute the system and train the target user(s)

8. Be prepared to provide ongoing monitoring of progress on project objectives, and adapt as needed.

9. Once the initial users are able to successfully use the tablet, and you have documented that project objectives were met, it is time to extend the process to the next layer of users. Repeat steps 7-8 and include the original users in the process as mentors as the implementation expands across the organization.

References and Resources:

Seize the work day: Using the Tablet PC to take total control of your work and meeting day, Michael Linenbarger, New Academy Publishers, 2004

http://www.tabletpcreview.com
http://www.tabletpcbuzz.com/
http://pencomputing.com/