

BAUER BITS & BYTES

VOL 2, FALL 2006 | VOL 1, SPRING 2006

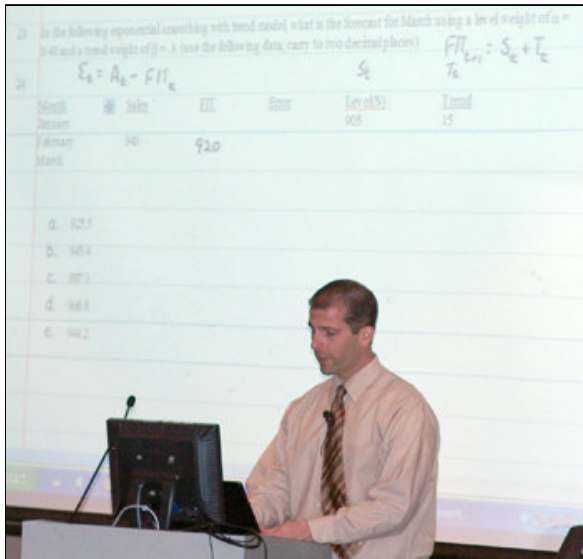
Bauer Spotlight - eMerging, eMobile...eUreka

Tablet computing in the Bauer classroom

If you were to walk into lecture hall 160 between 10am -1pm on a Monday or Wednesday, there is nothing exceptional that catches the eye. About 200 students are in attendance for a lecture in DISC 3301 - Service & Manufacturing Operations, delivered by [Dr. Jamison Day](#), a view very similar to the one in hall 170, on a Tuesday or Thursday 5.30 -7pm, when [Mike Murray](#) teaches another section of the same class. It is not until you look behind the podium that you realize this is not your ordinary classroom. Here you will find a Tablet PC, not a Laptop, and the instructors are using a stylus, not a keyboard.

In fall 2004, under the leadership of [Dr. Basheer Khumawala](#), the instructional team for DISC3301 made the decision to introduce a tablet PC in the classroom. It was purchased to replace the then extant method of course delivery. "Up till that time, the lectures had been a combination of overhead projector slides, and occasionally a power point slide. Overheads were needed to demonstrate the quantitative calculations. We couldn't just post formulas and let it go at that. It got to a point that continually updating and reprinting the overhead slides was costly, both in terms of time and material, and it did not give a very good impression to students if we were using 20th century technology for a 21st century school" says Mike..

A Tablet PC is a portable computing device, a quasi-hybrid of laptop and palmtop PDA's. With all the standard features of a clamshell notebook, Tablet PCs support a full-sized color-screen, which swivels 360 degrees to "convert" to a "slate". At the heart of current tablet technology lies a touch-screen interface and a stylus-like digital pen, enabling users to navigate and interact with the device without the help of a mouse. Most tablets run Microsoft Windows XP Tablet Edition, which lets users "write" on the screen in several different ways.



In the DISC3301 classroom, the Tablet PC has replaced the podium computer. When solving complex problems, instructors switch to the "tablet" mode and demonstrate calculation in real time. "Problems are typed on a WORD document, with a bunch of space at the bottom to work the solution. This is done in power point as well" says Mike.

Understanding fully well the benefits and potential of a Tablet PC, Jamison ensured that he received a tablet as his main machine when he moved to the Business school from the College of Technology. He is what we may call a "total convert". "I am not sure I can ever go back to the days without a tablet PC". His [Fujitsu Lifebook T4010D](#) goes with him everywhere, even to meetings. "Before my Tablet PC I had a laptop. I used PowerPoint extensively, but had to switch to using an overhead projector when going through example problems for my students. In a quantitative course, it's important to walk students through what is expected of them mathematically and that is difficult with PowerPoint. I found myself partitioning my lecture so that all the materials I wanted to teach conceptually would be condensed together before getting out the overhead projector to go through all the problem-solving. Teaching with in-line quantitative examples of the conceptual topic required too much time setting up equipment. That was not an efficient use of classroom time.

"What I find with the Tablet PC is that it opens up the door to integrate conceptual material and quantitative examples so that they flow together more naturally". He prefers MS OneNote over MS Word, for its enhanced capabilities for handwriting recognition and graphic manipulation. OneNote also supports copy/paste features form MS Office tools, to create tables. "Now the switch between delivery modes is more of an Alt-Tab. It's nice and easy." says Jamison. Both Mike and Jamison agree that students' continuity of engagement is much better. "Whenever you can get rid of transition time, you are eliminating gaps when student minds can disengage", says Jamison.

For Mike, the real strength of the technology is perceived during the Q/A session prior to homework assignments and exams. "The ability to go back and forth - from working a problem, referencing lecture notes, to the power point slides - when students refer to a problem on a certain page on lecture notes, I can pull it up, and annotate while offering an explanation. For those students who take the time to come to the Q/A sessions, this is invaluable" says

Mike.

While the Gateway M275E is the Tablet PC of choice for Mike, a number of vendors now play in this market, namely Acer, Toshiba, Compaq, Motion Computing, etc. The technology is in its second and third generation, now packing enough computing power to put them at par with desktop machines. Running Windows XP, the Tablet PC can execute any program that runs on a standard Windows machine, without any translation software as with PDA's. They come in two essential forms, the "slate" and the "convertible". Both utilize the "stylus" as the primary "ink" device, but the "slate" has a detached keyboard, and the "convertible" is a laptop with a swivel screen that lies flat on the keyboard to become a slate.

With so many models, making a decision on the one that will best meet your specific needs may be a tricky one. Many are still heavy and cumbersome. The lighter models lack the integrated DVD drives. Cost is perhaps the paramount challenge. With prices ranging between \$1600 and \$2200, more in line with premium ultra-portable laptops, the "pen input" appears to be more of a luxury. "Every new technology poses two challenges. First, how to use it, and second, how to integrate it with what you do. I was lucky to have some peers at the College of Technology who had already gone through the process. I was able to adopt several of their recommendations." says Jamison.

So far, about 10 Bauer faculty have chosen to go this route. For questions about this technology, and assistance in making a purchase decision, contact Samir Hanif, RICS Coordinator/Purchasing, at 713-743-4867 or samir@uh.edu.

For more information on tablet PCs, visit <http://clc.its.psu.edu/About/Projects/Evaluations/TabletPC/>.

References:

Office XP Pak provides tablet handwriting functionality in Office XP programs. The Office XP Pak is a free download from Microsoft. [Click here to download now.](#)

Windows Journal Viewer allows non-tablet users to view documents created in Windows Journal. The Windows Journal Viewer is a free download from Microsoft. [Click here to download now.](#)

MathJournal and xThink Calculator offer handwriting recognition and calculation for Math problems written on a Tablet PC. The beta version of xThink Calculator and more information about MathJournal is available from the [xThink web site](#).

Tablet PC Links:

- [Microsoft's Tablet PC site](#)
- [HP/Compaq Tablet PC](#)
- [PaceBook Tablet PC](#)
- [StateVision Tablet PC](#)
- [Fujitsu Tablet PCs](#)
- [Toshiba Tablet PC](#)
- [RM Tablet Computers](#)

