

# Engineering firm improves productivity, IT efficiency with HP Workstations



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— Bill Case, manager of Technical Support,  
Peter Basso Associates Inc.

Peter Basso Associates (PBA) is known for producing innovative mechanical and electrical engineering designs with plenty of value-added features. A perennial winner of American Society of Heating, Refrigerating and Air-Conditioning Engineers Technology Awards, PBA has collaborated with prestigious architectural firms to design noteworthy structures in Michigan and elsewhere.

Still, winning new projects is always a challenge. Solid engineering alone won’t suffice, says Bill Case, manager of Technical Support. “More and more, we’re finding that



we have to set ourselves apart by coming up with better, more innovative solutions faster than our competitors can.”

That deadline-driven pursuit of quality and innovation requires that PBA engineers have technically advanced workstations able to run the latest engineering and architectural software without a hitch. It also requires that Bill Case have access to rapid and accurate technical support from workstation specialists, as well as sales support that can help him plan PBA’s technology needs for years to come.

#### **Wanted: Reliable workstations, smart advice**

When HP partner Center for Computing Resources suggested that Case look at HP workstations, the timing was right. Case knew that PBA would soon need to install Autodesk software upgrades, a new Autodesk application and new compute-intensive rendering software to achieve photo-realistic lighting. PBA was going to need faster, more reliable workstations, and Case didn’t want to risk his productivity or his engineers’ in the process.

Following his attendance at an HP workstation road show and subsequent contacts with HP salespeople, two things impressed Case. “I found it remarkable that HP had a dedicated workstation organization and that they were providing me with all this useful information. I wasn’t accustomed to receiving that. Second, nobody was trying





to push me into a higher-level workstation than I needed, which I greatly appreciated." Instead, HP worked with Case to develop a multi-year workstation strategy that matched his performance requirements and his budget.

"It was a wonderful discovery," says Case. "We already knew that HP understood our business. Because of our experience with HP ProLiant servers, HP StorageWorks solutions and HP printers, we also knew they would give us superior customer service."

#### **Better experience with Autodesk**

All that upfront support reassured Case that the HP xw4200 Workstation was the right choice for PBA and that it would run Autodesk products successfully. Case learned that HP performs thousands of tests and certifies each HP Personal Workstation for AutoCAD, Autodesk Inventor, Mechanical Desktop, Autodesk Revit and Autodesk Architectural Studio. He also heard that Autodesk tests its applications exclusively on HP Workstations prior to each software release.

"We had to make sure that we had systems that were certified with Autodesk," Case says. "I was pleasantly surprised to find how HP has engineers who work with Autodesk and key component suppliers and how HP fine-tunes its machines to optimize Autodesk performance. Knowing that HP is there and can say, 'yes, this Autodesk function is going to work on this machine,' is a great relief. I'm not worrying about tying up my senior CAD specialist with putting out hardware fires or dealing with driver incompatibilities."

Autodesk Building Systems enables PBA engineers to quickly deliver high-quality 3-D drawings that are easy for clients to understand, while AGI32 Lighting Software helps engineers and clients see how a specific lighting plan will work under varying conditions.

#### **High productivity, better output**

The new software running on HP xw4200 Workstations is already improving productivity and design detail while helping engineers to meet tight deadlines, Case says. "With the 3-D capabilities of Autodesk Building Systems on HP Workstations, we are absolutely producing better, clearer documents for the architects, for the owners and for contractors to use in construction.

"The HP Workstations are extremely stable and reliable," he adds. "We've had wonderful success with running the Autodesk Building Systems software on them, and we've been very, very pleased with the way the hardware performs with AutoCAD. Our engineers are getting more done.

"It's clear that HP has really looked into opening up the throttle on the Autodesk products. The workstations are performing at their full level. It seems like they take full advantage of Intel's new 925x chip set."

Case credits the HP xw4200 Workstation's Intel® Pentium® 4 processor and its PCI Express-based NVIDIA card with helping PBA to improve productivity to meet tighter-than-ever deadlines. "Refreshes are faster, rendering time has been reduced, and, at the same time, our engineers are presenting drawings with much finer detail."

That performance is even more noticeable on AGI32 software, Case says. "We've substantially cut the time required for calculating and rendering an AGI32 presentation."

HP Workstation interfaces, mice, keyboards and the generous number of conveniently located ports also earn praise. With desk space at a premium, engineers like the small form factor of the HP Workstation xw4200. The company's IT technicians particularly appreciate the tool-less case, making maintenance simpler.

From Case's perspective, the reliability of the HP equipment means less time dealing with hardware issues and more time to act strategically, concentrate on future technology improvements and contribute more to the competitive positioning of PBA. That's important to PBA's ability to grow and to Case's ability to meet the challenge from Chairman Peter Basso to apply technology to improve processes and deliver more value.

**Better IT investments**

Case says HP helps him meet that challenge with more than workstations and strong sales support. "It's the whole system, the reliability and the integration. That's why we've turned to HP for solutions at several levels."

In 2004, PBA brought in HP ProLiant DL360 servers to

support its infrastructure and added an HP StorageWorks MSA1000-based SAN solution and an HP StorageWorks MSL6000 tape library to broaden storage capacity and shorten backup and retrieval times. PBA is currently upgrading to HP ProCurve 2800 series switches, replacing older notebook PCs with HP Compaq nc6000 Notebook PCs and replacing older monitors with HP L1940 Flat Panel Monitors.

On another level, the Center for Computer Resources consults on continually developing and expanding a Windows SharePoint Services site for PBA, providing storage for documents, tasks, contacts, events and other information and allowing team and site managers to easily coordinate site content and user activity.

## Challenge

- Maintain competitiveness through innovative designs that offer unique features
- Improve engineer productivity
- Improve designs by using Autodesk Building Systems software to produce 3-D drawings
- Enhance lighting designs through use of AGI32 Lighting Software, Version 1.7
- Streamline IT support

## Solution

- HP xw4200 Workstations equipped with 1 GB of RAM, 4-channel SATA controllers, NVIDIA Quadro FX 1300 and 1400 PCI-E cards
- HP L1940 Flat Panel Monitor
- HP ProLiant DL360 servers
- HP StorageWorks MSA1000 SAN (16 hard drives, 1 terabyte of storage)
- MSL 6000 Tape Library
- HP Compaq nc6000 Notebook PCs
- ProCurve Networking Switch 2800 series
- HP Color LaserJet 5500 and 2550 printers
- HP LaserJet 9050mfp multifunction device
- HP LaserJet 5100 printers
- Windows SharePoint Portal Server site developed with Center for Computer Resources, an HP Partner

## Results

- Improved engineering productivity due to capabilities of HP xw4200 Workstations
- Enhanced designs with Autodesk Building Systems 3-D drawings
- Faster rendering of enhanced lighting designs through use of AGI32 Lighting Software, Version 1.7
- Improved IT productivity due to hardware consistency and reliability
- Reduction in storage costs from HP StorageWorks MSA 1000 SAN
- Improved workflow; time and dollar savings with HP printers, multifunction device

## Software

- HP Insight Manager
- Autodesk Architectural Desktop 2005 and Building Systems 2005
- Raster Design 2005
- Microsoft Office 2003
- AGI32 Lighting Software, Version 1.7
- In-house engineering-specific software

## Customer at a glance

- **Organization:** Peter Basso Associates Inc.
- **Founded:** 1990
- **Headquarters:** Troy, Michigan
- **Employees:** 110
- **Telephone:** 248.879.5666
- **URL:** www.pbanet.com
- **Primary business:** Consulting engineers skilled in the fields of mechanical engineering, electrical engineering, energy management, commissioning and communications technologies

## Partner at a glance

- **Organization:** Center for Computer Resources
- **Location:** Oak Park, Michigan
- **Telephone:** 248.663.4200
- **URL:** www.ccr1.com
- **Primary business:** Technology consulting, education and IT services

### Superior customer service, technical support

Customer service is a valued commodity at PBA. "Giving our clients lots of personal attention is one of our keys to success," says Case. He sees that same kind of personal attention in the customer service and expert support he gets from HP.

"HP is constantly in touch, asking me what I need and sharing information about new technology. There's an enormous amount of flexibility and an enormous amount of resources at HP. When I ask the question 'if I'm trying to do X, what product do I need?' my HP salesperson comes back with the right information to help me accomplish my goal. That includes getting hardware to try out for 30 days."

HP also helps when PBA wants to improve its own product. "Once, I encountered tuning issues with video and graphics because our systems drawings consist of so many lines and colors and layers," says Case. "HP came up with a solution that directly improved the way our drawings were displayed on the screen, making them more easily understandable and responsive to our engineers."

That technical support even includes helping PBA take full advantage of AutoCAD. "I've never experienced that with another vendor," Case says. "From time to time, we've gone to HP to help us understand how to improve performance with AutoCAD. It's not HP's job, but they're willing to intervene to get questions answered and make AutoCAD even more effective for us. That kind of support is one of the main things that pushed us to make the switch to HP in the first place."

### A range of reliable solutions

Case is not surprised about the reliability and performance of the HP xw4200 Workstations. "We expect HP products to work well," he says. "Our HP ProLiant DL360 servers run brilliantly. We have redundant power supplies and dual processors, but none of the redundancies have ever kicked in because of a failure. They just run."

Another example of reliable performance is the HP StorageWorks MSA1000 SAN, which has 16 hard drives and provides a TB of storage. It has significantly lowered the cost of storage and reduced the time Case spends worrying about storage. "It's the coolest device I've ever seen, and it's so easy to manage," he says. With it, PBA

can archive a large number of projects online, saving employee time that used to be wasted searching CDs for information relevant to current projects.

Case is using the time saved by hardware reliability and automated management provided by HP Insight Manager to explore more ways to improve productivity. Currently, he is expanding SharePoint Portal services, evaluating HP iPAQ Pocket PCs equipped to work with Cingular wireless service and working with the Center for Computer Resources to develop a process workflow for PBA's commissioning team, so that the team can use HP Tablet PCs to evaluate completed systems in the field.

Case also keeps finding more benefits from HP printers, including the HP Color LaserJet 5500 series and HP LaserJet 9050mfp multifunction device. Using the scanning capabilities of the LaserJet 9050mfp, PBA recently refined two processes that are saving the company and clients money. "With the 9050mfp, we scan in the requests for information (RFI) that arrive by e-mail or paper form," he says. "Having electronic copies of the RFI and our responses will be a huge space savings, and engineers can pull up documents right from their desktops."

In responding to shop drawings, engineers mark changes in red ink. Those marks used to be transferred by hand to as many as 10 copies for the architects and different contractors that might need them. "Now the engineer makes the marks and we scan in the document in color, and the document is saved as a PDF file in the electronic job folder," Case states. "Then we print the document in color on the Color LaserJet 5500. We keep discovering other benefits of the multifunction device, and we haven't even touched the workflow or e-mail capabilities."

Case expects lots of demand for color printing with the Color LaserJet, the firm's first color laser printer. "I like the flexibility," he says. "There's a lot you can do with security and handling. I can make the black-and-white printing available to a large workgroup but restrict who can use the color capabilities. That will help me control the costs."

"As incredible as the hardware is, I still want to emphasize the importance of our overall relationship with HP," says Case. "No matter what I need, I get quick, professional assistance and brilliant solutions."

For more information on how working with HP can benefit you, contact your local HP service representative, or visit us through the Internet at our world web address: <http://www.hp.com>.

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