

# IBM Systems

M A G A Z I N E

## PAVING THE WAY

Improvements in  
Top Grade Construction's  
IT department smooth its  
whole business process

BY JIM UTSLER



**M**ichiganders don't wait for the flowers to pop up to signal the return of spring and summer. We wait for the orange cones that line the miles upon miles of freeway reconstruction. Yes, it's a hassle sometimes, when two lanes suddenly turn into one, but it's one of those necessary evils.

That's why I admire the men and women toiling under the hot sun to keep our roads in good repair. It's not an easy job, to be sure, but an essential one. On the other hand, most of us don't think about all of the office workers, who, supporting those roadside laborers, land the contracts, schedule the work, make sure supplies are on-site as needed and collect the bills.

Those working in construction-company IT departments support both sides of the business, making sure the systems are in place for everyone else to do their work as seamlessly as possible—and have those cones taken down as quickly as possible. The four-member IT staff at Top Grade Construction

Inc. is one example. When the company began growing almost exponentially over the past several years, company leaders realized their IT infrastructure had to keep pace. And thanks to some internal insight and external support, they did just that, replacing some aging HP servers with the latest and greatest IBM System p\* servers, as well as an IBM BladeCenter\* server and several IBM System Storage\* devices.

## Peak Seasons

Headquartered in Livermore, Calif., (with additional offices in Foster City and Stockton, Calif.) Top Grade was established in 1990 as what was then envisioned as a “little” grading and paving company. That little company has since grown to have 2007 revenues of \$240 million and, during peak seasons, 500 employees. Not bad for a company dreamt up over a kitchen table by its four founding members, Bob Chance, Bill Gates, Bob Gates and Randy Hahn.

Top Grade is now one of the largest public and private general engineering contractors in its region, which includes California's Greater Bay, Central Valley and Peninsula/South Bay areas.

“By servicing both the public and private markets, Top Grade is far more diversified from a revenue standpoint,” says Brian Gates, Top Grade COO. “On the private side of our business, we work for a majority of the major general building contractors as well as leading home builders and developers.”

The company's public-sector work, according to Gates, includes “all of the local city, county, state and federal contracting agencies in the geographical areas we cover. The work in this area consists of pavement rehabilitation, street reconstruction and heavy highway projects.”

The peak season for this type of work typically starts in March and runs through November, although if the state has a dry winter, Top Grade will continue project work all year. Gates adds, though, that, “We usually get at least a couple months of rain throughout the year, which helps us prepare for the next cycle.”

Before moving to the IBM System p and BladeCenter environment, the company had been using HP and standalone PC servers. These had served the company well to a point, until its meteoric growth began, which Darrell Christoff, Top Grade's director of IT,



## UP CLOSE

**CUSTOMER:** Top Grade Construction

**HEADQUARTERS:** Livermore, Calif.

**BUSINESS:** General engineering and specialty contractor

**HARDWARE:** Two IBM System p 550s, an IBM BladeCenter server, an IBM System Storage DS4700 Express and an IBM System Storage TS3310 Tape Library

**SOFTWARE:** Oracle JD Edwards EnterpriseOne ERP software and Tivoli Storage Manager

**CHALLENGE:** Keeping up with the competition, improving business services and restructuring the way the company conducts business

**SOLUTION:** Moving from an outdated, HP-based IT environment to a scalable System p infrastructure

attributes to “organic growth,” including a couple of large projects. It was work such as this that pushed the company’s revenue from \$100 million in 2005 to about \$240 million in 2007.

Unfortunately, the company’s IT resources weren’t keeping up with this growth. In fact, Top Grade had been using the same systems since its inception in 1990. As Christoff explains, “Our ERP backbone was basically a type of construction-Quicken on steroids. We had a lot of manual and redundant processes and the extensive use of Excel—just as you might expect with any other type of entrepreneurial company. The company really wasn’t standardized in regards to how the business was being managed. It was a meshed quilt, if you will.” Additionally, it had no real continuity systems in place, which meant that if a server were to go down, the business’ back-office processing would halt.

## **A Notch Beyond**

Realizing that it had to do something with its IT department to keep pace with company growth, it began looking for possible replacement solutions, beginning with its ERP application. Due to Top Grade’s extensive understanding of the construction software competitive landscape, it ran a thorough evaluation process on the Oracle JD Edwards ERP suite of applications as well as several other vendors. Because it appeared that Oracle was so entrenched in the construction space, Top Grade decided to go that direction.

JD Edwards EnterpriseOne also fit most of the crucial criteria the company had been developing during the course of its new-solution search. Some of these criteria included dedication to the construction industry, ease of use and configurability, product breadth, scalability and stability, financial viability of the vendor, and implementation certainty.

Now it needed a hardware platform to run the software on. Before Christoff, who has an extensive IBM background, came to the company, HP was one of the hardware solutions the company had been considering. It looked at HP along with IBM, as Christoff explains. “It wasn’t necessarily because of functional or technical differentiators, because our needs aren’t that sophisticated,” he says, “but more a matter of expected services. Our relationship with HP was great, but we felt that IBM might be a notch up beyond just supplying hardware.”

IBM reseller CIBER Inc. was another part of the

company’s decision-making process. Not only did CIBER suggest the IBM System p platform, but also helped size potential systems to meet Top Grade’s needs, which included the ability to run JD Edwards within performance requirements and to find a testing and development box that, at some point, could act as a redundant system for business and disaster-recovery purposes.

## **On the Fast Track**

Once the decision was made to use the System p boxes (two 550s) and the Oracle JD Edwards software, everything began rolling quickly along. “Including sizing, purchasing and installing the hardware—and then installing the software on top of that—it may have taken us 30 to 45 days total. We were on a fast track so we could get operational on the new software as soon as possible,” Christoff remarks.

Part of that fast-track approach involved another business partner, Systems Management Inc. (SMI), which was responsible for installing the Oracle JD Edwards software on the System p hardware procured by CIBER. At the same time, the company brought in an eight-slot BladeCenter server to replace its standalone PC servers, as well as an IBM System Storage DS4700\* Express storage device and an IBM System Storage TS3310 Tape Library. “We actually did a forklift upgrade,” Christoff says. “We pushed our old systems to the periphery.”

With these new IT components were in place, configured and integrated, the company threw the switch, going live in January 2008. It can now run reports directly through the JD Edwards software rather than rely on Excel, with more accurate results. The company has also significantly reduced monthly close times, injected more automation into its workflow and reduced business risk.

Top Grade also no longer worries about business-continuity issues, because the data from its two 550s and its BladeCenter technology-based applications are being fed, using Tivoli\* Storage Manager, directly to the DS4700 Express and then offloaded to tape. It’s also using the testing and development 550 as a backup box, which it expects to relocate off-site in 2009.


Equally important, the company employs a lean IT staff of four full-time employees. Other similar companies have many more IT personnel, including one that Christoff says has “20-plus IT people.” If Top Grade

needs IT assistance, it tends to outsource it, preferring to bring people in from companies such as SMI only when needed, in a just-in-time model of IT services support.

## A Business Overhaul

Although those perennial orange cones can be a nuisance, it's good to know companies such as Top Grade invest in improving how they do business. And Top Grade's COO Gates couldn't be more "ecstatic" with how things have worked out at his company.

As he explains, this change to the company's IT environment represents more than a shift in back-office

computing; it's a transformation in the way the company conducts its business. "This is part of an overall restructuring of the company and culture, as we move from an entrepreneurial model to a more professional model," he explains. "It's really been quite dramatic." 



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