



Job Tracking Goes High-Tech

New software application allows contractors to follow their production schedules automatically. **By Mark L. Johnson**

For 40 years, Tom Jacobson's company has monitored production. "We do it manually," Jacobson says. "We have always done it manually, and we have refined the system over the years." Naturally, the president and CEO of Jacobson & Co., based in Elizabeth, N.J., says his firm is "very good" at job tracking – eliminating most job-cost overruns while meeting production schedules on about 150 jobs each year.

Thanks to something new, however, Jacobson's "very good" may become "great." At the New York Times Building underway at 620 Eighth Avenue, New York City, Jacobson is beta-testing new software. It's a state-of-the-art production control system that provides total visibility across every phase

of labor, enabling Jacobson's timekeepers to manage the project from an electronic tablet – automatically, accurately and in real time.

"Nothing like it has ever been heard of or seen in the industry," Jacobson says.

DIGITAL PRODUCTION CONTROL

"We have come up with a new class of software," says Leonard Buzz, CEO of On Center Software Inc., the company based in The Woodlands, Texas, that created the application Jacobson is using. "It's called Digital Production Control software. We call it DPC."


DPC is estimating software's logical extension – taking all project data and bringing it to the field. In fact, DPC uses the very same data generated when submitting a bid. An esti-

mator loads his original take-off and job-cost budget directly into the DPC program, which converts actual schematics and materials lists into a live document that can be manipulated.

In the field, a project manager, foreman or timekeeper can monitor production on a hand-held computer. If he clicks on a wall assembly, the program provides data relevant to constructing that wall – the framing, hanging and finishing labor allocated to the assembly, whether to apply one sheet of wallboard or two, and so forth. As the wall gets built, the timekeeper walks the job and updates the percentage of completion for each task. Then, the program – loaded with company payroll data – calculates whether or not production is on track with a job's cost projections.

Buzz has been working on construction software for decades. A native Texan, he joined the Carpenter's Local in Austin and became a

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The high-profile New York Times Building is currently underway in New York. Jacobson & Company is trialing DPC on the job.

journeyman walls-and-ceilings contractor. He worked as a foreman and eventually became an estimator. In 1981, Buzz says he was “one of the first guys standing in line at the computer store with \$3,000 for an IBM PC with two floppy drives and a green screen.” He began tinkering with his own estimating applications, eventually hired a software developer and in 1988 launched QuickBid, an estimating program tailored to Divisions 5-10 contractors.

In time, Buzz released On Center’s On-Screen Takeoff, which has the ability to link an estimator’s job-cost data to computers used in the field. The license for this link is DPC, which Buzz has been beta-testing in the industry.

THE NEW YORK TIMES BUILDING

Due to be completed this year, The New York Times Building will be 52 stories and 1,142 feet tall (including antenna). It was designed by Renzo Piano Building Workshop in association with FXFOWLE Architects, and is co-owned by The New York Times Co. and Forest City Ratner Cos., which is leasing the upper floors.

Jacobson has the contract to do the walls and ceilings for the first 24 floors of the project, and the work includes 900,000 square feet of wallboard and 400,000 square feet of ceiling systems. Among the dry-wall partitions and ceiling planes, the detail work includes coves and custom-built reveals, an auditorium with wood-paneled walls and ceilings and special window pockets that house light fixtures. Jacobson has a peak crew of 50 on the job.

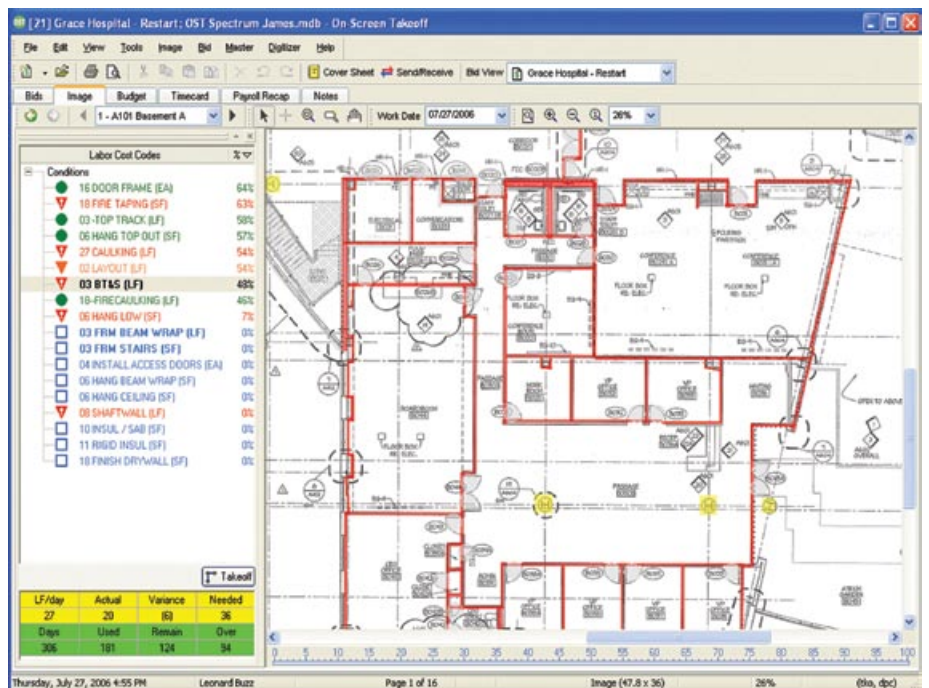
How is DPC helping on this project? “Our timekeeper walks the job and marks up the percentages of what’s been done,” explains Steve Wiese, senior project manager, Jacobson & Co. “That gives us a report right then and there of what’s completed, and it incorporates our time on the job and allocates the hours. We can tell where we’re losing hours and where we’re



ahead. It saves us two weeks of report lag time over our manual system.”

Take the case of one assembly that could have ended up being costly to build. “We had problems with some columns,” says Phil Brynildsen, timekeeper for Jacobson at the New York Times Building project. “We got behind, but right away my tablet highlighted the work in red.”

The work involved installing clear, anodized, custom trim reveals on approximately 700 columns, each of which had to be framed, covered with wallboard and finished. The final step involved applying the metal trim at each column’s base, corners and ceiling intersections. The crews, however, bogged down in the mitering process, and that slowdown went undetected until DPC flagged the assembly early in the production cycle. Responding quickly, crewmembers figured out a better way to install the reveals and as a result regained proper tracking. “We saved an hour to an hour-and-a-



On Center Software’s new Digital Production Control application features live schematics and labor processes organized by cost codes (left). Green means the percentage of completion is tracking positively. Red implies a potential cost overrun, and blue identifies construction not yet begun.



Jason Fields, Carpenter and General Foreman, T.J. Wies Contracting, uses the DPC tablet to track jobs electronically. In one instance, the company recouped \$199,000 in potential cost overruns.

half a column,” Wiese says. “Multiply that by 700 columns, and that’s 1,000 hours we recovered.”

MISSOURI TEST SITES

Tim Wies, president of T.J. Wies Contracting Inc. in Lake St. Louis, Mo., said his firm is also beta-testing On Center’s new DPC software. The system is live on two Wies projects: a \$3 million walls-and-ceilings contract for a new patient wing at the Missouri Baptist Medical Center and a \$2.5 million walls-and-ceilings contract at the SSM Cardinal Glennon Children’s Medical Center, both in the St. Louis area.

One day, Buzz and Wies sat down together to discuss the tracking at the Missouri Baptist project. Buzz asked, “Tim, where do you think you are on this job?” Wies said that his accounting system showed the job was 49 percent complete and that his project manager expected to meet the 12-

percent profit margin built into the job. “Well, right now you’re only 31 percent complete,” Buzz said. “However, the system is projecting 1,889 man-days over budget.”

With man-days running at \$350 per union worker, Wies was looking at a huge overrun. “At least we knew we had a problem,” he says. “Usually, you don’t have a feel for these things until you are 50 or 60 percent into a job, but this system gives a warning early in the ballgame.” Wies’ crews adjusted their work, and the firm prevented \$199,000 in projected overruns.

DPC NOW AVAILABLE

On Center’s DPC software was released earlier this year. While those working in the industry may wonder how easily the software integrates with their existing job-tracking procedures and systems, Buzz says the ramp-up is painless.

“The estimator doesn’t do one thing extra to put DPC into process,” Buzz says. “What he does to bid the job is what it takes to set up a DPC document. He hits send/receive, and the software packs up the digital takeoff, which includes the job-cost budget, and shoots it over the Internet to the field.”

Will having real-time job tracking be helpful to crews? Can software that presumably knows everything get along with union workers? Buzz says DPC will fit in just fine. “Companies have the data now – they just don’t have the software,” he says. “They have to bid projects based on production, and now they won’t have to wait for their job-cost reports. An owner can sit in his office and see what’s going on at any job – any time.” **W&C**

Mark L. Johnson is a freelance writer based in Shenandoah, Iowa. He writes regularly about the walls and ceilings industry.