



September 2005

## **PIA Mountain States Replenishes Graphic Arts Workforce with SHOTS Simulator**

Denver, CO, is a good place to be unemployed these days. The Printing & Imaging Association Mountain States and its Printing Education Foundation are working closely with the city and county of Denver to identify, place, and train future press operators at no charge to qualified candidates or the printing companies that hire them.

In order to make this program possible, the Printing Education Foundation needed a press on which to train future operators. So it used industry supplier donations to purchase a Sheetfed Offset Simulator (SHOTS) from Sinapse Print Simulators. Candidates selected for the program receive six months of training subsidized by a training grant through the city and county of Denver.

Gabriel Trapani, an instructor with the PIA Mountain States Printing Education Foundation and principal in GMT Consulting Ltd., is responsible for running the program. "Employees are very mobile these days, and the pool of skilled press operators is very limited," he says. "We need to have new blood coming into the business. So we thought, why not create a training program that we can use to draw more people into the industry?"

With decades of experience in the printing industry and as a commercial pilot, Trapani understands the benefit of simulation. So when he saw the SHOTS simulator, he immediately embraced the idea. "We can do training, literature-wise, but we need to put that book learning into practice," he says. "The only way to do that is to have a printing press—or a simulator."

### **Bringing in New Blood**

The new training center opened in April, 2005. To identify candidates, the Foundation works through Denver's Mayor's Office of Workforce Development. If candidates are interested in a career as a press operator, the Foundation arranges for them to take a virtual tour of a variety of printing plants. If candidates remain interested in printing, the Foundation arranges an actual plant tour.

Before being entered into the program, candidates go through an interview process, then take an aptitude test. Those who achieve passing scores are sent on job interviews with participating PIA Mountain States members. If the candidate is hired, he or she is entered into the SHOTS simulator training program.

Four days a week, the new employees work as an entry-level helper at the new employer. One day a week, they train at the Printing Education Foundation on both book work and on the simulator.

### **Systematic Training Process**

Currently, the Foundation is doing training three days a week, with its first class set to graduate in September, 2005. "When they enter here, many have never seen a press," notes Trapani. "They've never printed a sheet. They don't know what ink water balance is. When they leave, they'll be qualified to run a press."

#### **SINAPSE Print Simulators**

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Trapani takes one full week — 40 hours of what he calls “boot camp” — to explain the basics, such as the influence of paper and other types of substrates, how a printing press works, and how ink is made. Next, he teaches them about other basic printing issues, including dot gain, trap, contrast, and quality control.

Once trainees have been through the first 80 hours, they are ready for the simulator. Students are trained in pairs. One acts as the helper and the other the press operator. Trapani starts them with a single problem a day, then accelerates the number of problems as they learn.

One feature of the simulator that Trapani particularly likes is the ability to create new problems to challenge the students, as needed. Sometimes, he will create problems on the fly. “For instance, if they are on a 10,000 sheet run, on the trainer module, I might go in and say, after 2,000 sheets, I might create a change in the temperature of the room. And after 5,000 sheets, I might change the temperature on the water circulator,” he explains.



*Mike Villa (left) and David Flanders (right) of Caraustar Custom Packaging working on the simulator as helper and press operator.*

### “Pretty Darn Close”

How close is the training to a real press? “Pretty darn close,” Trapani says. “It even simulates the noise of the press—the change in whine as the press speed increases or decreases. The faster you go, the higher pitch of the noise.”

SHOTS also provides Trapani with a variety of analysis tools so that he and the students can discuss what they learned and how it relates to a real pressroom environment. “The simulator will track the problem, how they corrected it, how long it took, and the presstime cost,” Trapani says. “We print out those reports and analyze them.”

The fact that trainees are simultaneously working in a real-life press environment adds further dimension to the training. They often bring back questions about what they are seeing in the plant.

“They’ll say, ‘I saw the pressman doing this or that,’ so I say, ‘Okay, let’s try it.’ Then we’ll go to the simulator and I’ll ask them, ‘What do you think you should do?’ They’ll say, ‘I don’t know.’ I’ll encourage them to make suggestions about what they might try, and if they can’t figure it out, it’s back to the book work. Then I say, ‘See? Now you can apply that to the problem.’ Then later, we go back to the same exercise and see if they remember what to do.”

At end of six months, trainees take a “final exam” comprised of 20 high-level exercises on SHOTS, and they are graded on a scale of one to five. A passing grade is 85%, which earns them a certificate indicating that they’ve completed the press training program, which they can then present to their employer.

### Was SHOTS a good Choice ?

To Trapani, the program couldn’t have been a success without SHOTS. “The SHOTS simulator is the only way I have seen to do this much training, in this much depth, and in such a short time,” he says. “We could never have afforded to do all this on a real press.”

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