

A surrealist painting of a giant hand holding a wooden beam over a city, with men in suits running below.

Keeping workforce scheduling in line

General Mills plant upgrades its software to handle the task

BY NATE HENDLEY

A General Mills food processing plant in Midland, Ont. is using a unique software program to automate its scheduling. Made by a California company called Tugboat, the program is called Schedule Optimizing Software (S.O.S.). To date, the plant is the only facility in Canada to use this system.

It started using an early version of S.O.S. in the late 1990s and upgraded it in the fall of 2001. By all accounts, the upgrade has been a success.

Colleen Kempster, scheduling payroll administrator at the Midland facility, says S.O.S. has increased the speed, efficiency and accuracy of the plant's scheduling.

"We have a very complex schedule because we're a food plant," says Kempster. "It takes a lot less time to [do scheduling] on a computerized system."

Tugboat, which has eight employees, a head office in Newport Beach, Calif. and a branch office in Portsmouth, NH, counts the food industry as one of its biggest markets. The Midland plant is the company's only Canadian client.

Food plants have "unique requirements that make their workforce scheduling very complicated," says Terry Schilling, marketing manager for Tugboat Software. "They have workers with multiple skills who change job assignments frequently. At some food plants, you'll find workers with between 25 and 50 different skills... but they may not know their job assignment until they show up for work."

Food plants also have highly variable



production lines, he adds, frequently switching from one product to another, and requiring frequent staff rotations. Many food plants – including the Midland facility – are unionized as well, which makes precise scheduling a necessity.

The Midland plant uses S.O.S. to schedule the work of its 197 hourly employees, not salaried staff.

Midland's hourly employees can apply for various positions within the plant. If an employee isn't qualified for the particular job, he/she can request training. Data on employees' job picks and their qualifications used to be kept in a big binder, says Kempster. Information was either written down by hand or typed. Both methods were time consuming and prone to error.

S.O.S. stores job pick and employee qualification information electronically and uses it to form the basis of new schedules. It also stores data on seniority, shift preference, staff absenteeism and holiday preferences. And it can be customized.

"We use a proprietary mathematical algorithm that allows us to take work rules that are unique to your specific company and assign the largest number possible of workers according to these rules," says Schilling.

"The software is actually following your rules," he continues. "The past practice was that you had to verbalize all these rules. The supervisor walked around with them in his head. Now it's done automatically."

INNER WORKINGS

General Mills set up its S.O.S. system to work like this: the program contains a list of the various products produced at the plant. These range from turnovers to cookies, wiener wraps, crescents and garlic loaf dough. The scheduler clicks on a product tab to get data on all the jobs

related to that product. To create a schedule, the user enters a date. The plant makes schedules for two days in advance, which simplifies Kempster's task.

Each date category lists three shifts (the Midland plant runs around the clock, depending on the time of year). The scheduler determines which products are being made on a given date, then clicks 'generate.' The program goes through the various job choices made by available staff and places people accordingly in shift one, two or three.

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Kempster checks the shift schedule, "to make sure I have people in the right jobs," then makes a printout that is posted in the plant. Individual workers cannot access S.O.S. to input data on vacation dates and shift preferences, although such a feature is available.

Kempster says it takes her 60 – 90 minutes to run S.O.S., check the results and make a printout. Doing the same job manually would take four to five hours.

There haven't been any problems with accuracy. "It's very accurate, as long as your data is accurate," says Kempster.

Employees seem happy with the system as well, an important consideration in a union plant.

Jim Fitzpatrick, founder of Tugboat, conducted the S.O.S. upgrade at the Midland plant. He delivered a CD-ROM and worked with IT personnel at General Mills. The plant had to beef up part of its local-area network, but otherwise the installation went off without any "major glitches," says Kempster.

"With this kind of stuff, you can't have major glitches," she adds. "You've got to keep going, because once you turn the

old system off, you're working with the new system."

Schilling says S.O.S. software doesn't have to be adjusted in any way for the Canadian market. Still, Tugboat has to be mindful of regional labor laws.


Under Ontario workplace legislation, for example, employees cannot be forced to toil longer than 13 hours at a stretch (this covers 12 hours of work and two 30-minute meal breaks). In addition, employees have to receive 11 consecutive hours off work each day. All of these considerations were taken into account.

Tugboat's competition includes Workbrain, of Atlanta, and Timepoint. Workbrain produces something it refers to as "attendance solutions" software. Timepoint, which also creates

workforce-scheduling programs, was purchased by a larger, California-based "employee relationship management solutions" software firm called InterPro in 1999. Schilling says none of these solutions have the same breadth as Tugboat's program.

Tugboat hopes to expand beyond the realm of the food processing industry. The company is currently looking at introducing S.O.S. in the gambling, mining and security services sectors, or any other occupations with complex scheduling requirements.

From Kempster's perspective, the best thing about S.O.S. is that it relieves her of a lot of burdensome duties.

"It helps to be able to get the schedule done in less time," says Kempster. "With my workload, being able to do scheduling faster [lets me] utilize my time in other areas." 

Related Websites

Tugboat Software - www.tugwest.com

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