



THOUGHTS FROM THE EXECUTIVE BOARD

Fall has arrived and with the start of fall is the start of a new school year. To TTMA members this signals a chance to work with the local schools to find your company's next employee. The TTMA works very closely with the Great Oaks school system to help recruit kids for the machining and welding programs.

One of the ways the TTMA and Great Oaks have been working together is through the Bots program. This year is very exciting for TTMA and Great Oaks, the 2011 Spring Bots competition is going to be held at Scarlet Oaks. The exact details of all the help needed is still being developed; however, there is one area that member companies can help right now. Live Oaks has six teams that are going to compete in the Spring competition and they are in need of Bot designers. This entails someone from your company, working closely with a group of kids to help them design the Bot. Once the design and individual blue prints have been made, the kids actually machine all the components and assemble the Bot themselves. If you or someone from your company is interested in helping Live Oaks please contact Joy at the TTMA office. Live Oaks is only one of the schools competing. If working with Live Oaks does not work for your company, contact the school closest to your company, to see if they are competing and if they are competing, get involved--it really does make a difference!

Jeff Smith, an instructor at Live Oaks, said that this year **most of the kids in his class came there so they could design, make and compete in the Bots competition.** This competition is a great recruiting tool for all of us in the manufacturing area – please consider getting involved in some way.

Sincerely,

Al "Aj" Schaeper Jr.
Tomak Precision

Business Matters...

Atlas Sends Pumps for Flood Emergency

Sever thunderstorms hit southern Kentucky in early May, quickly dumping eight to ten inches of rain in the area. It wasn't long before the flooding shut down the water treatment facility for the City of Lebanon, a community of 6,000 people in Marion County, about 65 miles southeast of Louisville, Kentucky. An emergency call was placed to TTMA/NTMA member Atlas Machine & Supply, Inc. in Louisville to help get the city's water pumping stations operating again.

And even though it was late Sunday evening when the call was received, a plan was developed during the nighttime hours, and as Atlas' pump specialist Garry Crabtree described it, "the ball started rolling."

By morning, Garry and Atlas' Shawn Mullenex, Eric King and Scott Romano were in Lebanon, working to get the city's fresh water and wastewater pumps operating again. Dave Sullivan, from Atlas' Cincinnati, Ohio, facility also helped by arranging to truck in two heavy-duty pumps, which were able to pump a total of 3,200 gallons/minute.

During the next few hours, the Atlas team pumped about 10 feet of flood water out of the treatment facility's basements. Once the basements were cleared, the team assisted in evaluating the equipment that had been submerged. By mid-afternoon the plant was pumping clean water to city residents and the wastewater treatment system was operational again.

"Atlas provided the technical expertise and resources that were needed for the emergency", said Scott Romano, who heads the Atlas Pump Division. "It's a great feeling knowing that Atlas played an important role in helping a lot of families."

When it comes to pumping large volumes of water, Atlas tackled an even bigger job recently at a rock quarry also located in central Kentucky. Atlas used two large-capacity pumps capable of pumping a combined 3,500 gallons/minute, plus 2,300' of discharge hose. When the job was complete, the Atlas pumps had cleared hundreds of thousands of gallons of water from the quarry.

"Handling big pumping jobs for water treatment plants, quarries or anything similar is a specialty at Atlas," Romano said.

For more information about Atlas pumps, pump products or pump service, e-mail Scott Romano at saromano@atlasmachine.com.

Overcoming Resistance to Change – Isn't It Obvious? *This is another article in a series about a process of ongoing improvement using OTC, Lean and Six Sigma.*

In Theory of Constraints we follow a process to improve. First we decide "what to change." To do this, of course, we need to agree on the problem(s). Once we have consensus on the problem, we work on the solution or "what to change to." And after that, we decide "how to cause the change."

It all sounds very straightforward and logical, and it is. This process does work, but at times it can prove to be challenging—especially when we don't take enough time to agree on the problem. So Brad and I are especially vigilant about that. Because there is really no point in discussing the possible solutions until we agree on the problem. Every time we've pushed ahead too fast, we always have to go back and get agreement on the problem.

This is particularly true when we are talking about problems that the Theory of Constraints (TOC) logistical solutions will solve. So Brad coined the expression "we are going to go slow so that we can go fast." That approach has helped us to get better, faster results with clients. Then we reach our clients to do this each time a challenge, problem or opportunity presents itself. And, with a little coaching and guidance, they also get very good at this.

Then we move to agreeing on "what to change to." Now, you would think this should be pretty straightforward once we've agreed on the problem, but we have found it's not that easy. Why?

- There can be multiple solutions that would work, or we think there are multiple solutions that could work
- People are only comfortable with solutions they are familiar with and have intuition around
- We don't know what we don't know
- The Theory of Constraints solutions are often counterintuitive, the opposite of what most people do now, and most people have no familiarity or intuition around them.

So you can see, if the solution is to implement our Velocity Scheduling System for scheduling job shops (based on Goldratt's Theory of Constraints) we might get some push back (aka You want me to do WHAT?) even AFTER we have successfully agreed on the problem.

In fact, we've had some job shops suggest that we must have been hiding out I their shop when we wrote "The 9 Challenges to Scheduling Jobs Shops and Why Your Schedule is Dead on Arrival."

That is the highest compliment someone can pay, and we have clearly agreed on the problem. Then those some companies argue and resist every step of the way during implementation. This was very frustrating, until we learned how to get them to agree on "what to change to."

So how do we get the key people in a highly custom job shop to do the totally counterintuitive steps of the Velocity Scheduling System? Well instead of pushing the steps of a system they don't understand, don't agree with and have no intuition around—we build on a previous success.

What success? Ask any custom job shop if they have ever pulled out all the stops for a customer and turned a job really quickly. Most (probably all) will say yes. Ask them to tell you the story. You will find that they were able to do a job in a fraction of their typical quoted lead time. For example, one client did a job in three days that they would normally quote a six week lead time for.

When they are telling the story, ask about what they had to do to get that job done. And what did they have to stop doing or what jobs did they have to stop working on to make it happen. Listen very closely, take notes and ask questions to draw out the story.

Typically, they will explain how they had to stop working on several jobs that were already started. Then they will talk about how they crashed" the job. "Crashing a job" is our terminology for bringing multiple resources to bear on a job. They might have used two lathes to run Operation1. And as soon as one piece was done, it immediately went to Operation 2 on a mill instead of waiting for all its sister parts to complete Operation 1. In this way, the job just zipped through the shop.

They were about to complete t his job so quickly because they 1) reduced work in process by stopping work on other jobs; 2) by focusing on finishing this

one job and 3) by "crashing the job" and bringing multiple resources to work on it.

These three actions are some of the key components of the Velocity Scheduling System (VSS). The problem you would discover is that they think that they cannot continue to take these actions on an ongoing basis. And if they did, they would be inefficient and the company would lose money.

So what we now explain, is that the VSS is a system that will help them find the balance between what t hey did on that rush job and efficiency. Then we simply ask—would you be willing to try it and to help customize VSS for their plant. We will explain everything, but knowledge does not change behavior; what we need from you is a commitment to try what we ask.

Who would say no to that? Particularly in the group environment we have for our VSS Coaching Program.

If we can get the biggest detractor for each company to agree to try it, to really do the program, they are unlikely to go back on t heir word (Law of Consistency). Then, the crystal clear step-by-step instructions, of VSS, in combination with their story and experiences, will help the new process (VSS) to stick.

This process of building on a success can be used in any number of circumstances. We've also used it to help companies with their sales and marketing, project completion and distribution solutions. How can you use it? Drop us a line and let us know your thoughts. And let me know your experience with buy-in. (Really, I want to know).

Want more? Go to YouTube and check out our video on overcoming resistance to change by searching on "TOCExpert." Here's to maximizing YOUR profits! If you're ready to think differently, www.VelocitySchedulingSystem.com (for job shops) and www.ProjectVelocitySystem.com (for your engineering department) help you increase the velocity of work through your company so that you reduce the chances of not getting enough done to cover operating expenses and make a profit. Then our www.MafiaOfferBootCamp.com will help you capitalize on the competitive advantage you've created in operations and by thinking differently.

“Dr. Lisa” Lang is president of the Science of Business. She recently served as Dr. Goldratt’s Global Marketing director, and is a member of the Board of TOCICO. She can be reached at DrLisa@ScienceofBusiness.com and 303/909-3343.

Brad Stillahn is a former business owner that successfully implemented TOC in his own business, exited his business on his terms, and is now helping other business owners do the same. Brad can be reached at Brad@ScienceofBusiness.com and 30-3/886-9939

The preceding articles were copied from the September 2010 issue of The NTMA Record



THE FUTURE OF MANUFACTURING TAKES SHAPE HERE

If this is your business, you need to exhibit!

- Robotics
- CNC Machine Tools
- Laser & Waterjet Cutting
- Welding
- Metrology
- EDM
- Supply Chain Management
- Stereolithography
- CAD/CAM Software
- Presses

and so much more.

Produced By:



FIND IT ALL AT THE 2010 AMTS.

Here’s your chance to reach over 3,000 prospects directly connected to your industry. The Advanced Manufacturing & Technology Show (AMTS) is the region’s largest and ONLY annual show of its kind in Ohio, Indiana, and Kentucky. Don’t miss your chance to exhibit!



Attendees come from manufacturing companies serving the aerospace, energy, medical, defense, communication, transportation, and other markets. Who are **YOUR** customers?

Call Kim Aiple, Exhibit Sales, at 937.478.9878 or visit daytonamts.com for more info.

October 20
10am–8pm
October 21
9am–5pm

www.daytonamts.com

LOOKING FOR...
customers
prospects
sales
visibility
networking
information



The TTMA Welcomes New Members

Neill-Lavielle – Represented by Fred Riess
Industrial Tube and Steel – Represented by Damon Gaynor

DTMA Bots For the Win!

At first glance, it's easy to assume the DTMA Bots program is all about the battle. After all, that is absolutely the flashiest part of the program--and [the part most likely to star in its own video](#).

While the robot carnage is exciting, and (really, really) fun, it's not the main event. At its core, DTMA Bots is actually a STEM education program and an advanced manufacturing (and engineering) career awareness tool.

By providing students an opportunity experience the world of advanced manufacturing first hand, this program builds a bridge between school and work by answering the age old question: "When am I ever going to use this stuff?" At the same time, students see for themselves just how rewarding (and lucrative) a manufacturing career can be.



Therefore, taking home a trophy is not the only way to "win" at Bots. In fact, by following these tips, your team will be a big winner--no matter what your robot looks like at the end of the day.

1. **Work closely with your company mentor**--even if your team is perfectly capable of building the bot on your own. No matter how comfortable students are with the manufacturing processes required to build robots, company mentors can provide the professional advice you need to take your bot to the next level. For company mentors, working closely with your team gives you a chance to see what they have to offer--and when they are ready, to recruit them to come work for your company.
2. **Pay attention to your documentation.** In the "real" world, building a great machine isn't enough. You also need to be able to explain how you did it, what choices you made and why you made them. The documentation competition is a great opportunity to practice this essential engineering skill.
3. **Take chances**--sure you might win more matches by building a stronger version of the bot you built last year, but what might you learn by trying something totally new?

More Ways to Win With Bots

Bots works best with strong relationships between schools and their industry mentors. Over the next year, DTMA will be putting even more emphasis on making the most of these relationships. **Here's how you can help:**

- Tell us your **mentor stories!** If you've had especially good (or especially bad) mentor-student experiences, let us know. We want to help fix problems and pass on best practices throughout the program.
- If your **school** has a bots team without a mentor, click reply and let us know. We are building a list now of schools that need mentors and we don't want to leave you out.
- If your **company** has been on the fence about mentoring--or if you mentor a team now and have the resources to add additional teams, click reply and ask to be added to the prospective mentor list.
- If you have **contacts** at other local companies that aren't involved in Bots, forward them this e-mail, invite them to the Fall competition*, and encourage them to get involved!

*Thursday, October 21 at the Dayton Airport Expo Center--part of [AMTS](#).

Bots Calendar

The goal of the Bots program may be to connect students with industry mentors and to highlight career opportunities in engineering and manufacturing--but that doesn't mean we don't have a great time doing it. There are lots of opportunities for you to show off your Bots this year, so mark your calendars now--we don't want you to miss anything!

DTMA Bots 2010-2011 Season Calendar

Register for 2010-2011 Bots Season	September 2
Fall Safety Inspections and Documentation Judging	October 20
Fall Competition—Dayton Airport Expo Center (part of AMTS)	October 21
TechFest	February 12-13
Spring Safety Inspections and Documentation Judging	April 15
Spring Competition—Scarlet Oaks, Cincinnati OH	April 16
NRL National Competition	TBA

Can't wait to see you and your robotic creations at this year's events!



F E D E R A T E D I N S U R A N C E

NATIONAL COVERAGE...
LOCAL SERVICE

It's our business to protect yours.® **FEDERATED INSURANCE**

The FEDERATED Insurance Companies
Home Office: 121 East Park Square • Owatonna, Minnesota 55060
Phone: (507) 455-5200 • www.federatedinsurance.com

A Bad Combination: Drugs and Alcohol in the Workplace

Where do substance abusers work? **Anywhere they can!**

Seventy-two percent of drug users are employed—but you won't find them working at businesses with effective drug and alcohol-free workplace programs.

Statistics on substance abusers are frightening. According to the American Council for Drug Education*, abusers are:

- 10 times more likely to miss work
- 3.6 times more likely to be involved in on-the-job accidents
- 5 times more likely to injure themselves or another in the process
- 5 times more likely to file work-comp claims
- 33 percent less productive

A drug and alcohol-free workplace program not only helps businesses **avoid problems**, it **provides value**:

- Demonstrates to employees that their well-being is important
- Attracts employees who are drug and alcohol-free
- Encourages a clear-thinking, professional workforce
- Helps prevent bad publicity being associated with your business
- Fewer injuries can lead to improved workers compensation modifiers and lower insurance premiums

Federated feels so strongly that an effective drug and alcohol-free workplace program can have a profound impact on your business that we decided to place a major emphasis on this issue beginning in 2010. Federated's Shield Network™ dedicates an entire section to helpful drug and alcohol-free workplace tools and materials to make implementation of a program simple and cost-effective.

We can help you with everything you need for either workplace or Department of Transportation programs, including policy statements, employee communications, training materials for both employees and supervisors, instant testing devices, laboratory network, and even legal consultation.

*"Facts for Employers." American Council for Drug Education, www.acde.org/employer/DAwork.htm.

Why Bother With Office Safety, Aren't All Offices Safe?

The risk of injury to office workers is much lower than to industrial workers. Because of this, office risks often go unrecognized, yet they could lead to serious personal injury or an office disaster. The attitude that office accidents do not amount to much is one of the prime causes of office accidents. The average office worker gives little thought to safety because office work is not perceived as hazardous, and no accidents have occurred in years. But, office accidents do happen. According to the Ohio BWC in the manual classification 8810 (Clerical Office Employees) the lost time average medical paid is \$17,701 and the lost-time average indemnity paid is \$13,277.

Offices can be safe! But only if you make safety your business. Every worker must be willing to adopt safe work procedures. Office supervisors must understand the nature of office hazards and unsafe practices and take measures to reduce or eliminate these hazards.

TYPES OF ACCIDENTS COMMON TO OFFICE WORKERS

Falls are by far the most common and account for 34% of office accidents. Strains follow, making up approximately 22% of office accidents. Struck by or striking against make up 18%, while caught in or between objects make up 10%.

Accidents that commonly occur in an office setting can be reduced or eliminated by paying attention to:

FLOOR SURFACES - Watch out for recently waxed floors, also loose carpeting, floorboards and tiles.

WET FLOORS

- Wipe up spills immediately.
- Wear appropriate shoes.
- Pickup pencils, paper clips and other objects that may cause a slip.

CHAIRS

- Keep all four legs of your chair on the floor. Tilting back in a chair often results in over balancing and a fall.
- Routinely inspect chairs that tilt for broken springs, loose screws and defective welds.
- Be sure-footed when climbing – do not use chairs for climbing, use a stepladder and climb cautiously.

CORDS

- Beware of telephone and electrical cords lying across the floor. Catching your shoes on a cord frequently results in a fall.
- Offer suggestions for different furniture layouts that might resolve the problems where cords are potential hazards.

STAIRWAYS AND WALKWAYS

- On stairways, use handrails and report worn treads and broken or loose stairs to the supervisor.
- Avoid obstructing your vision with large loads.
- Don't store boxes, supplies, etc., where people might trip.

LIGHTING

- Use as much light as you need to get the job done safely and correctly.
- Report dusty or out-of-order lights promptly.



Register for the October Dinner Meeting

...and meet Scott Cloutier, our area Federated Insurance Manager, who will introduce Federated's new Drug Free Workplace Program tools.

We hope you'll join us for an evening of business, friendship, and ideas on Monday, October 18, 2010.

The meeting will be preceded by a special Workforce Development Roundtable at which our new Student Reimbursement Program will be introduced.

Look for your dinner registration—coming soon via your e-mail!

2010 TTMA Calendar of Scheduled Events

October 18, 2010	Monthly Meeting – Federated Insurance Tools to Ensuring a Drug-and Alcohol-Free Workplace
November 15, 2010	Monthly Meeting – Bill Neyer, American Testing Services – Non-Destructive Testing
December 13, 2010	Monthly Meeting – Christmas Program & Special Tribute to John Cozad – Recently Retired Board and TTMA member

Except where otherwise noted, meetings will be held in the Redwood Room at the Embassy Suites Hotel in Blue Ash:

4554 Lake Forest Drive
Cincinnati, OH
513/981-3763

Monthly Meetings are suspended from June through August and will resume in September, 2010

Tri-State Tooling & Manufacturing Executive Board

Robert Hale
Auto-Valve Inc.
937/854-3037
haleb@autovalve.com

Joy Cariaga
Administrative Director
859/431-8862
ttma@fuse.net

A. J. Schaeper
Tomak Precision
513/421-1853
aj@tomak.com

Ken Seilkop
A-G Tool & Die
513/353-3090
kensei@epcorfdy.com

Greg Davis
RB Tool & Mfg.
513/521-8292
gregdavis@fuse.net

Sonny Welker
Atlas Machine & Supply
513/874-9337
dlwelker@atlasmachine.com

Russ Crosthwaite
Great Oaks Institute
513/254-8650
crosthwaite@greatoaks.com

Scott Speight
Earle M. Jorgensen Co.
513/771-3223
sspeight@enjmetals.com

The TTMA mission is to be the best metalworking and manufacturing trade association with comprehensive information resources for its members and interfacing with community partners.