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Newman

Cold  
Heading

Mill/Turn  
Machines

# Today's Machining World

THE MAGAZINE FOR THE PRECISION PARTS INDUSTRY



January 2008 Volume 4 Issue 01

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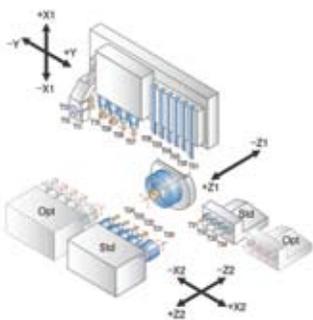
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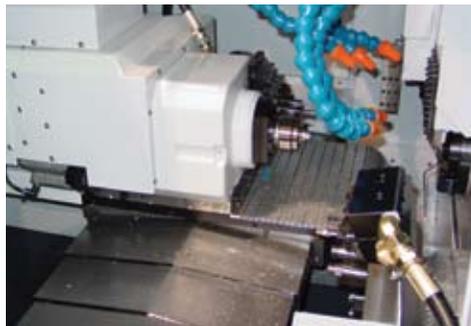
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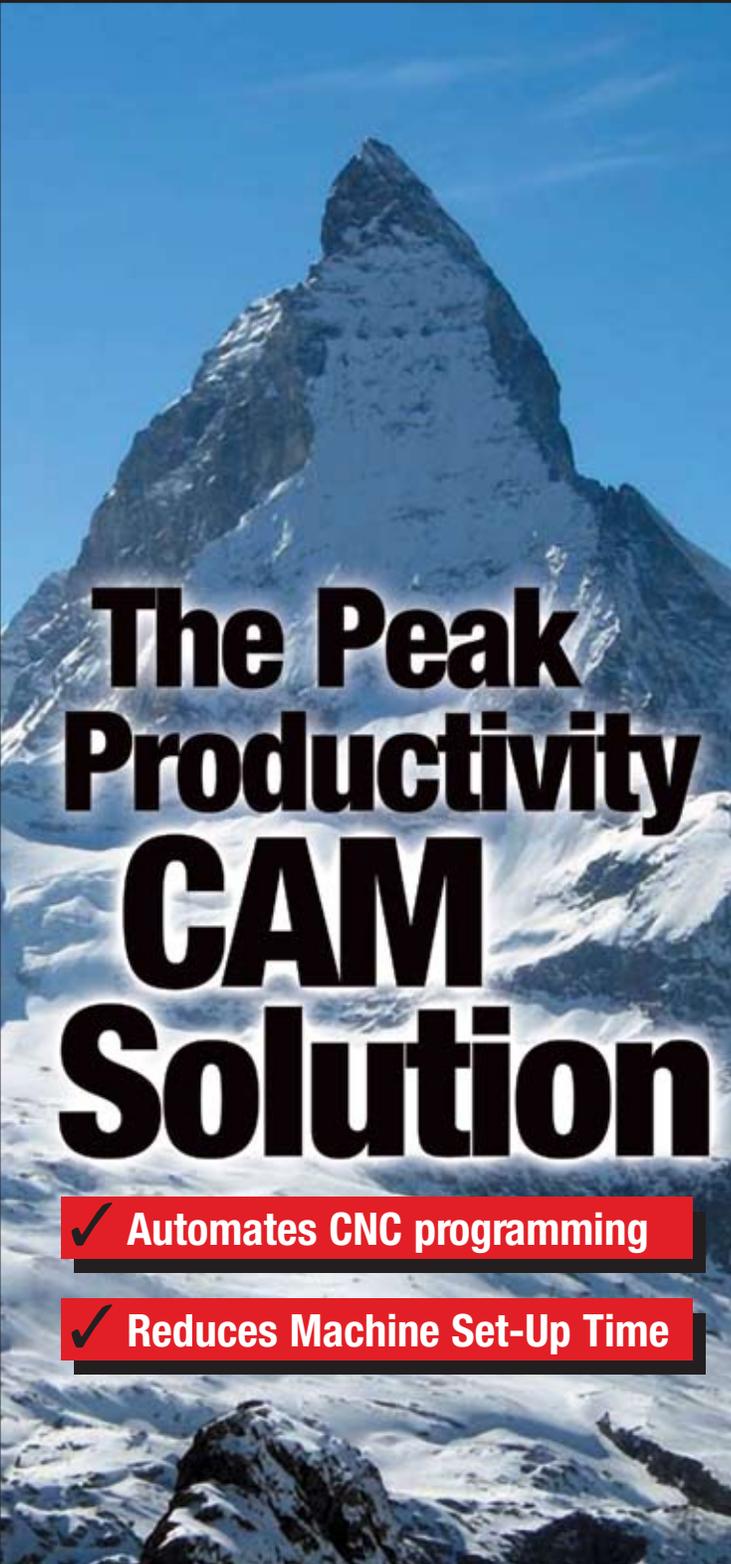
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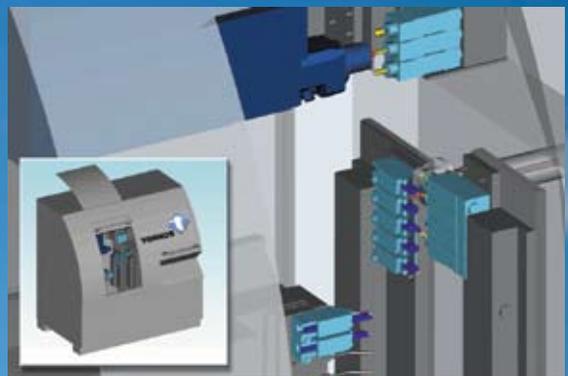
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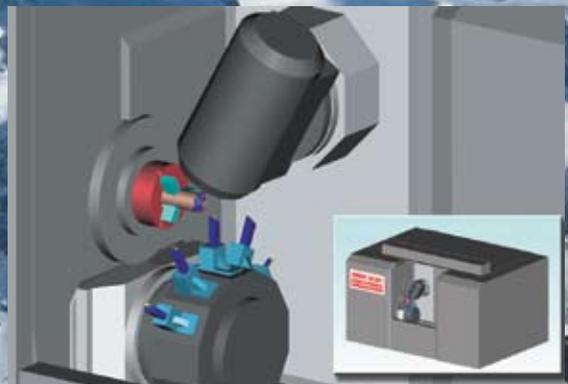
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# editor's note

## Do the YouTube

We are entering an amazing time for small businesses to brand and advertise themselves and their products. Streaming video on the web is changing our world. Get on the bandwagon soon, because your competitors will whether you take the plunge or not.

The vehicle that makes web videos so accessible is YouTube. I used to think the site was for kids or filmmakers or kooks, but it is now for everybody and every company with something to show.

My wife has a video on YouTube promoting a book she co-authored about Attention Deficit Disorder and Bipolar Disorder, and Noah Graff has a reality show of eight episodes called "Jew Complete Me," about his quest for a Jewish soul mate. Rex Magagnotti and I recently did a short video discussing Timken's long delivery time for spindle bearings. We have over a thousand views in less than a month, many coming from outside of the U.S.

A small company, Blendtec of Orem, Utah, has built enormous visibility with a simple series of videos entitled "Will it Blend?" in which they stick unexpected items in their blender (you see their product at Starbucks making Frappuccinos) like an Apple iPhone, to see what happens in their high-powered blender. Blendtec's sales have doubled to \$40 million since they started their YouTube campaign.

Today's Machining World will be incorporating video in most of our new swarfblog.com entries. I invite you, our readers, to send TMW your videos which connect with the machining world, to put on our website, www.todaysmachiningworld.com.

You don't need to be a pro to do this. An idea and a camera will suffice to get you into this video world. Then you need a plan to get the word out. Lights, camera, action.

Lloyd Graff  
Editor/Owner

editor's note



**Mary Ethridge** spent 18 years with the former Knight Ridder newspapers. She recently covered business news for the *Akron Beacon Journal* in Ohio where she won several awards, including her enterprise reporting by the United Nations and the Associated Press. Her work has appeared in the *Philadelphia Inquirer*, *Cleveland* magazine and the *Miami Herald*. She graduated from Princeton with a degree in English literature. Ethridge is known for getting sources to spill all: Cindy Crawford once confessed to her an addiction to blueberry Pop-Tarts. Currently, her biggest challenge is coming to terms with her teenager's nose piercing.



**Lloyd Graff** has an M.A. in journalism from the University of Michigan. Lloyd splits his time between buying and selling machinery, writing Swarf and swarfblog and playing Fantasy Baseball on Yahoo. He is married to Risa, a world champion in Tae Kwan Doe. He has three children and a granddaughter who are all above average. One of his life goals is to make 65 consecutive free throws on his 65th birthday.



**Barbara Donohue** received her mechanical engineering degree from MIT. She worked in design, heat transfer and manufacturing for several years before changing careers to become a journalist. Now she writes about technology and business from her home office in Acton, Massachusetts. When not writing, she sings in a choir, volunteers as a literacy tutor, and is weekend "foster mom" to a yellow Lab puppy named Tikva that is training to become a wheelchair assistance dog.



**Robert Strauss** was formerly a reporter for *Sports Illustrated* and the *Philadelphia Daily News*, and a news producer at KYW-TV in Philadelphia. Now a freelance writer based in Haddonfield, N.J., where he revels in his two daughters' basketball prowess and their eye-rolling at his bad puns, his work appears most often in the *New York Times*, the *Washington Post*, the *Los Angeles Times* and *Today's Machining World*.



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### Turkey Talk

Being an avid reader of *TMW*, I am finally compelled to write a letter to your excellent magazine. Receiving your Nov. 07 edition, on the day before Thanksgiving coincidentally, made me compare it to just that – a turkey. Page after page.

The interview with General Batiste was the start. First of all, I would like to thank the general for his and all U.S. military personnel for their service to America. Their job is difficult and necessary. His assessment of the Iraq theater is disturbing. Anyone with family there would be heart sick after reading it. I feel his opinion of the difference between the army and civilian business is part of the reason the conflict in Iraq is so mismanaged. He states “once a decision is made, people proceed in that direction whether they agree with it or not.” If the general would have been allowed to give input to his superiors some of the mistakes may not have occurred, a serious consideration when human lives are at stake. “Find out who the resisters are and get rid of them” is definitely a flawed concept in the business world. Hopefully he reconsiders and allows input from the boots on the ground!

Turn the page: Outsourcing Revealed? A great primer on how companies can profit and not employ U.S. citizens. Outsourcing highly specialized work doesn't make sense on any level. Why not? With the world wide web, CNC machines, and the afore mentioned bargain wage costs, it's only a matter of time. China's business leaders are not blind to the U.S. opinion of them being at the bottom of “the smiley curve.” As Bruce Springsteen sang about the U.S. steel industry, “Those jobs are going, son, and they ain't never coming back.”

Turn the page: David Collison's information that since the Canadian dollar is worth more than the U.S. dollar it is more economical for him to buy a \$170K Porsche here is precious. Maybe I'll take out a second mortgage on my house and go buy one.

Turn the page: Afterthought. Lloyd, I love your writings, from Swarf (a term a precision surface grinder operator like myself is quite familiar with) to Afterthought, but the fact that you are no longer coloring your hair does not seem too noteworthy to me.

In closing, I would like to congratulate you and your entire staff for putting together a magazine that is informative and entertaining to read. Not typical of a manufacturing magazine. God Bless America and all the people working to keep this country the world leader that it is and should always be.

Mike Mosilah  
EFC  
Binghamton, NY

### No Company Killer

I would like to take this brief moment to respond to your magazine's pieces concerning the situation surrounding Gene Haas, “Crime and Punishment” (Oct. 2007) and “Tragedy of Character,” (Sept. 2007). Other than pleading guilty on the same date, I find it hard to compare what Mr. Haas did to what amounts to the antisocial behavior of Michael Vick, who tortured and killed defenseless animals. Furthermore, you compare Mr. Haas' transgressions to those of Dennis Kozlowski and Jeffrey Skilling, not to mention the late Ken Lay. Mr. Haas is the sole owner of a privately held company, which he started from scratch. Haas Automation, Inc. is the machine tooling success because of Mr. Haas' ingenuity and his acumen for surrounding himself with dedicated and talented designers. Mr. Haas employs Americans who design and build American-made products (what a concept in our service driven, outsourced ridden economy). Furthermore, Mr. Haas at no time ever jeopardized the retirement savings of his employees (see Enron). Mr. Haas made a mistake, he has now admitted as much, and he is taking responsibility for that. By all means criticize him for what the facts have shown. But please don't compare him to an animal or a company killer.

Sylvana L. Guidotti, M.D.  
Ventura, CA

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# A Wrinkle in Time

One of the best early indicators of the American economy may be breast implants, tummy tucks and LASIK procedures. According to the December 8th Wall Street Journal, cosmetic surgery is a dead-on indicator of consumer confidence. Confidence is not a perfect match for consumer behavior, but uninsured cosmetic procedures are expensive, put off-able acts like car buying and condo shopping.

The Journal tells us that breast building is soft, and the fat has been sucked out of the liposuction racket for the moment, so we can expect the stock market to droop.

Cutera, the Brisbane, California laser maker, says that their earnings picture has darkened like liver spots, which may translate into weaker house remodeling sales and affect our world adversely.

Never underestimate the importance of Botox. It's one more wrinkle in understanding the path of the machining world.

(Swarf continued on next page)



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## **For 30 years, Tim Rashleger has**

built Milltronics Manufacturing company quill by quill into a \$40 million a year builder of machining centers, CNC lathes and controls. The business has never been more solid or recognized. His son Benji, at 32, is Chief Operating Officer, his wife Louise works half-time and is the power behind the throne, and Tim, at 61, breathes the business for daily sustenance.

Yet he sold Milltronics to Liberty Diversified Industries, a Minnesota industrial firm six months ago.

In a long expansive interview with Noah and me in early December (which will appear in next month's issue; check out the video on our website) Tim discussed his decision to sell the business.

He really wanted to pass it on to his children, but his lawyers could not figure out a way to meet the needs of the family and his desire to get out of perpetual hock. Trying to run a machine tool manufacturer that competes head on with Haas and Mazak and Hurco and Hardinge in Costa Mesa and Costa Rica takes a mountain of money. Tim has \$10 million in inventory with spare parts, castings and machines in process. With a 30 to 40 percent gross margin on his machines, he clears a solid return on investment but not enough to both expand and clear debt the way he would like.

To say that Tim loves the business would be an understatement. I think he lives for it, yet he sold Milltronics because he knows he can't beat either death or taxes in the long run.

The irony of the sale is that one of the selling points to LDI was that his son Benji knew the business cold and was ready to step up. But he wasn't prepared to take on a mountain of debt to assure the financial security of this parents. Benji also has a brother who works for the business but is not in management, and a sister who lives in the area but is not in the business.

So Tim and Louise Rashleger looked the succession, estate and debt issues in the eye and concluded that selling Milltronics was the best choice.

For LDI the acquisition made perfect business sense. They understand capital intensive businesses because they own a paper mill, they inherit successful management that wants to grow, and they are local. They are doubling the Waconia, Minnesota manufacturing facility as the first step in scaling the business. They are investing in marketing and international sales to tap into the excellent reputation the firm already has.

Tim is in that netherworld of being the founder and former owner as LDI sorts things out. His passion for Milltronics seems undiminished as he walks through the plant, know-

# swarf

ing every order. But in a year or two the company will be different. Businesses are organic. They always change and a new owner, no matter how benign, means Milltronics will become a different, perhaps better company, even if Tim continues to run it. The drama of business always unfolds – like it or not. (Go to [www.todaysmachiningworld.com](http://www.todaysmachiningworld.com) to see a video excerpt of the Rashleger interview).

## Drew Devitt has built a machine

tool bearing and machinery repair business near Philadelphia named New Way Air Bearings with sales near \$10 million.

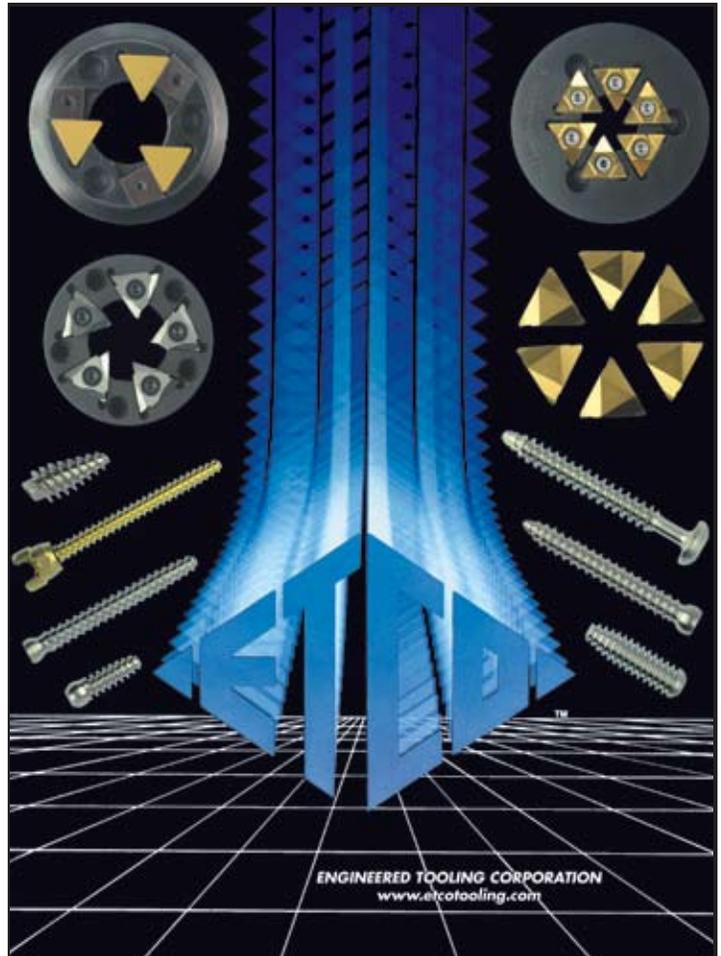
He is an entrepreneur with his fingers in several esoteric ventures related to porous media and precision machining. He also is dyslexic and likely deals with Attention Deficit Disorder (see Afterthought).

To make his life easier, he uses new Dragon voice recognition software, which enables him to dictate letters, articles and presentations into a computer and end up with a viable written document. He may give the copy to an associate for cleaning up the punctuation, but he says the Dragon is working for him with a little bit of voice training for the computer.

Devitt is probably one of millions of entrepreneurs with dyslexia or Attention Deficit Disorder. Charles Schwab of brokerage fame and David Neeleman, the founder of Jet Blue, have been upfront in talking about their dyslexia, but a recent study by the Cass Business School in London says the evidence points to a link between entrepreneurial acumen and what is called dyslexia and ADD in schools.

From my observation, the connection is part of a mindset which enables one to look at the world in a non-linear way. What may look to a teacher or a parent as impulsiveness and lack of focus can be translated into the business or machining world as an ability to look at problems in a unique way, and a lack of patience with conventional problem solving.

Impulsiveness may play out as curiosity about a path never taken. Lack of focus may unveil itself in



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the business setting as kinetic energy directed toward intuitive solutions to problems.

This is the flip side of ADD, which is in dire need of re-labeling. ADD is the label of a learning problem which could also be labeled "hyper-curiosity" or "intuitive approaches to problems," especially when the right medication and psychological connections are in place.

The Drew Devitts of New Way Air Bearings abound in business. Drew struggled with a "D" average in high school. He did not fit the conventional learning package his conventional teachers appreciated. He was already working in the family business of selling exotic porous media for repair solutions in industry and working as an insulation installer while in high school, but his parents urged him to find a college that would appreciate him. He attended Elizabethtown College in Pennsylvania, where he started a real estate information business.

Now at 45, Drew Devitt will be running a seminar at IMTS and promoting New Way. His company recently repaired a giant \$10 million Ingersoll machine at a Siemens plant, and his business is prospering in the windmill energy business by fitting the huge gears.

For Drew, a dyslexic who probably never read Don Quixote, the fun is in chasing the wind farm business, not tilting at other folks' windmills.

## Jim Graff and Rex Magagnotti

attended the TURNTEC show in Frankfurt, Germany, prospecting for machinery buyers from the Rest of the World. The attendees were mostly from large European machining firms and they were bullish about business. Like the U.S., the contract machining business is consolidating. If you drive around the Haute-Savoie, nestled in the Jura Mountains in France, a lot of the small shops in Vougy and Bonneville and Cluses are closed. But a lot of bigger shops with access to capital and managerial talent beyond the family are thriving.

One trend they found is that big shops have opened or partnered with operations in lower cost regions like China, Vietnam, India or Brazil. This enables them to meet the needs of global customers who seek shorter supply lines and provides lower cost labor for jobs which require people power.

The Germans, French, Swiss, Spanish and Italians are fighting their talent deficit by moving into Eastern Europe to tap the skills of the Czech Republic, Hungary, Poland, Slovenia and other former Communist states.

Some are looking to form alliances with North American machining firms to take advantage of the weakness of the U.S. dollar versus the euro.

In talking with American firms I've noticed they are using

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dollar softness, not by going to Europe or Japan to bid jobs, but waiting for the global sourcing companies to come to them for competitive quotes, which now look better in dollars.

## Private equity firms buying

metalworking companies is a trend which is continuing. Despite the turmoil at the money center banks over sub-prime mortgage paper, there still is a demand for money to do deals. Harsco Corporation recently sold four divisions including the Sherwood operation, which we discussed in the October issue.

Wind Point Partners, a Chicago private equity group, closed the deal in early December, showing that financing can still be obtained. The big banks want to do these deals

because there are juicy fees and reliable income streams with high visibility. We may see a slowdown in deals because bankers are laying off people and trying to cumulatively clear their heads after being bludgeoned by writedowns forced by corporate disclosure laws like Sarbanes-Oxley. The irony is that the post-Enron legislation may force banks to book losses which may never happen because they are terrified of legal muggings later for covering up shortfalls.

The Milltronics sale to Liberty Diversified Industries of New Hope, Minnesota closed seven months ago when the sub-prime hurricane was a small tropical depression. I talked to Larry Fiterman, the head of LDI, and he was forthcoming about how private equity deals happen. He says they were not looking for a company in machine tools but when they were approached about Milltronics they liked the financials and especially the people and the culture. Fiterman said that because Milltronics had trained committed leadership for the longer term in Tim Rashleger's son Benji, the deal made sense for them.

Another recent private equity deal – the sale of Ryerson Steel – to a California deal company, Platinum Partners, showed another side of private equity sales. Ryerson was spun off long ago from Inland Steel. Based in Chicago, they were publicly held and cautiously run. As steel distribution firms prospered in the last few years, Ryerson stammered

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and stuttered. Reliance Steel gobbled up the market's low hanging fruit while Ryerson's sales and profits languished. The stock community punished the value of the company and Ryerson bungled its marketing. Hedge funds started buying big chunks of stock and forced a beleaguered CEO into putting the company up for sale. Platinum won the bid and took Ryerson private – at least for the moment.

It appears that private equity groups are going to be offering the cash for corporate shifts for quite a while.

## I know sub-prime is in the toilet,

you may be underwater on your house, and your credit card just pumped up your interest rate 10 points just for the thrill of making you sweat, but the hints of a rebound are already peaking out.

In Phoenix where the home market always jumps around like a kid's blood sugar, big builders like D.R. Horton and Lennar are selling developed lots at flea market prices to smaller, privately-held players. It is a good sign that there are bargain hunters sniffing for land deals from the battered publicly-held residential builders who had been living off the folly of Merrill Lynch and Citibank for the last few years.

My thesis on the housing slump is that it will resolve itself a lot faster than the Princes of Doom have predicted. Whether the money comes from Dubai or Dubuque, there will be plenty of dough for bargains. Homes will sell even in hapless Stockton and overbuilt Miami if the buyers can smell blood.

The desert may be bone dry around Phoenix, but smart money is already seeing the green.

## We recently saw the musical

chairs game of job switching legal counsel in high-tech land. Apple lost its legal top gun to Qualcomm in San Diego. So Steve Jobs went out and hired away Oracle's top law dude. Oracle's Larry Ellison then raided Silicon Valley's most prestigious legal firm for its next legal fixer. These billion dollar firms run by billionaire founders or sons of founders wanted only the best legal talent they could buy, and were perfectly willing to steal it

from a competitor if they could make their firms better.

This high stakes talent grab struck me where I live. As a small business owner, I cannot afford to call a head hunter and tell him that I want the best person available – price be damned. I sometimes feel like I am the Kansas City Royal's general manager vying with the New York Yankees for pitchers.

But as I've thought about my situation, I've developed a different view. To me the question is, do you want to be the best magazine or machinery business you can be, or do you want to settle for doing what you've always done?

As I go into the new year I find this an unnerving and difficult question to answer clearly and truthfully to myself.

To ask continuous improvement from yourself and your staff is a fine cliché to affirm, but to live by it and accept its corollary, which is to replace those who do not embrace professional growth, is a harder proposition.

Do you replace the machine operator who shows up every day, does his job, but is oblivious to stretching his performance? The reality is that the person you replace him with may talk a good game, but perform less reliably.

Big companies like General Electric ask their managers to identify the poorest 10 percent of workers and replace them. It is a way to refresh the organization. Does it work? I don't know, but I am sure it sends a bolt of stress through the company, which may be a good thing at G.E. but not necessarily for a small machine shop which is supplying them.

I find the issue of settling more unsettling every year. As I get older I value personal relationships with colleagues highly, but the sense of my glass half empty makes me more impatient with imperfect performance or nonchalant attitude. If my mantra today is, "if not now, when," it is hard to accept the nice guy who is counting the days to retirement.

I think most bosses navigate their professional lives in the murky channel between bastard and mensch. An Ellison and Jobs, who became Kings of the Valley, have a clear idea of who they are and don't worry about it, I suspect.

I applaud their clarity and decisiveness, and wish I could be a little bit more like them.





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BY JERRY LEVINE

## You Were a Great Man, Charlie Brown

Everybody loved “Peanuts.” But why? What did Charles Schulz and friends Charlie Brown, Lucy, Linus and Snoopy touch within us that made us identify with them? David Michaelis and his dual biography *Schulz and Peanuts* gives us some remarkable insight. Schulz said, “If you want to know who I am, read my strip.” Schulz was one part philosopher and one part artist, but also a depressed, lonely person who never got over his mother’s death.

Schulz came from a family that never expressed feelings, leaving him with self-doubt and a need to be loved. He did not need to be happy — just loved. He hoped through his work he could get that love, but it always seemed to elude him.

The book opens with the story of Schulz being drafted into the Army in 1942 and shipping out to boot camp. He was an only child who had been away from home for just two nights in his life and was already suffering from homesickness. His mother was dying from cervical cancer — a fact hidden from her (and from Schulz) — by her husband and her doctor. She had just learned her diagnosis when Schulz went in to see her lying ill in her bed. She turned to him and said, “Well, I guess it’s time to say goodbye,” and then rolled over to face the wall. Schulz boarded the troop train and arrived at camp to learn his mother had died.

Schulz’s life plays out in his cartoon characters. He sees himself as Charlie Brown — an Every-man who gains strength by admitting in his confrontations with life that the best he can do is persevere. When embarrassed or humiliated, Charlie rarely expresses rage or even self-pity — just stoic endurance.

Snoopy is his alter-ego who can laugh and dance and imagine himself a great hero. He is also Linus, insecure and ponderous, but also represents Schulz’s spiritual side. Lucy is modeled after his first wife — a redhead, but not the cartoon’s well-known red-haired girl who broke his heart as a teenager. She was always his first true love, and years later after his divorce Schulz tried to reconcile with her.

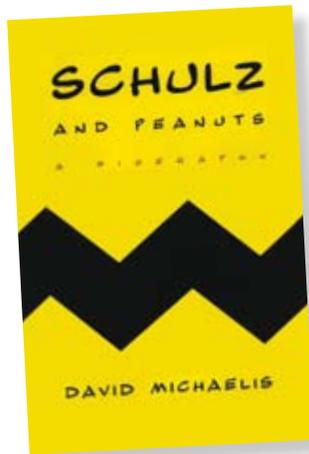
Since this is a dual biography, Michaelis intersperses cartoon strips with the prose to show how Schulz’s real life played out in the daily paper. Even when suffering from

depression or a collapsing marriage, Schulz refused to go to a counselor, fearing it would ruin his strip. He said, “I draw comic strips because I have feelings way back in my mind that come out in little pictures and funny little sayings.” Thus, Schulz was both owner and possession of the strip.

In spite of the fact that for most of his life Schulz saw himself as a cipher, he was extraordinarily successful and had a major impact on American culture. The Apollo 10 command module was named Charlie Brown and the lunar module was called Snoopy. The astronauts beamed an image of Snoopy to a billion people worldwide. It is a tribute to Schulz that so many of today’s popular cartoon strips have followed Peanuts lead.

Schulz’s books, which are collections of the strip, made him the fourth best selling author in American history. During his heyday Schulz’s income was about \$40 million per year. The musical “You’re a Good Man, Charlie Brown” is the most produced musical in American theater, and “A Charlie Brown Christmas,” for which he insisted there be no laugh track, that children do the voice work, and that Linus recite from the Bible to demonstrate the true meaning of Christmas (all against the producer’s wishes), is the longest running animated Christmas special on TV.

Charles Schulz’s life exemplifies how so many artists inform us as they play out their own demons in their creations. It’s possible it is not only poets who are the “unacknowledged legislators of the world” as Shelley suggested; perhaps in our age it is also the cartoonists. Comic strips are often modern day parables which yield eternal truths about the human predicament.



Comments? You can email Jerry Levine at [jerroldlevine@yahoo.com](mailto:jerroldlevine@yahoo.com).



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For more information, please contact Doosan at 973-618-2500 or visit [www.doosan.com](http://www.doosan.com).

## New Kid on the Block

Hardinge's new collet blocks can be used horizontally or vertically on mill tables, flat or angled fixture plates, tombstones or rotary trunnions. Sizes are available from the 1C micro medical machining industry up to the 35J mid-range automotive and aerospace industries. Modular collets blocks are compact with a low profile for increased axis travel and for maximum layout of the workspace.

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# fresh stuff

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For more information, please contact Methods Machine Tools at 978-443-5388 or visit [www.methodsmachine.com](http://www.methodsmachine.com).

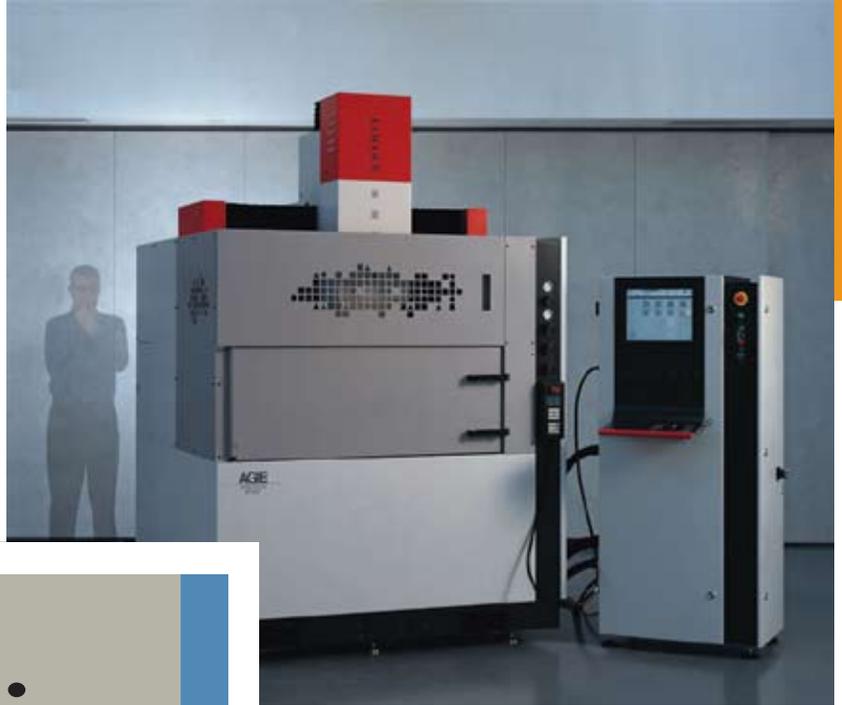


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BY MARY ETHRIDGE

# Bathroom Bling

bathroom bling

# Behold the faucet.

It's a common fixture, certainly, but please don't call it by its pedestrian name. The up-to-date among us consider it jewelry for the kitchen and bath.

And like jewelry, faucets vary from the equivalent of Harry Winston down to Winn-Dixie in quality and caché. Most consumers have some idea of how to tell a high-quality piece of jewelry from a fake. But the methods for determining high quality in a faucet aren't so broadly known. That poses particular challenges for leading manufacturers that trade on a reputation for innovation and reliability, such as Moen Inc., a division of Chicago-based Fortune Brands (NYSE:FO).

"They all carry water, but it's how well they do it," said Mike Malek, director of product development for Moen.

Competition from good-looking, no-name low cost imports – the cubic zirconium of fixtures – is a serious issue in the \$10 billion-plus plumbing parts business. U.S. manufacturers have had to find ways to maintain both healthy margins and high quality. Doing so at Moen has meant major changes in everything from design and machining to sales and service.

Moen must be doing something right. Last year, it was the first one of Fortune Brands' companies to reach the \$1 billion sales mark.

It seems like a simple enough device, but a faucet is a complex melding of market analysis, art, chemistry and engineering. One thing it's not: new. Archaeologists discovered terracotta pipes and gold faucets on Crete, dating to about 1,700 B.C.

Nearly 4,000 years later, a creative group at Moen's headquarters in suburban Cleveland is at work improving the beauty, economy, function, reliability and marketability of faucets.

Judy Riley, vice president of industrial design for Moen, is a woman obsessed by faucets.

"I used to work for Timex and I was always studying watches. Now, it's faucets. I study them in hotels, airports, everywhere," she said. "I get some strange looks, but I'm always looking for inspiration."

## A Central Spigot

It was just this sort of passion that led a college student named Al Moen to come up with a radical concept for a faucet. In 1937, according to corporate lore, he was working part-time in a Seattle garage to earn tuition money. One night, as he cleaned up, a sudden burst of hot water scalded his hand. In those days, all sinks had two spigots – one for cold and one for hot. People ferried their hands back and forth in an attempt to find a comfortable temperature.

**"A faucet is a complex melding of market analysis, art, chemistry and engineering."**

When Moen began to draw up designs for a single-handed mixing faucet, the initial response was, well, lukewarm. Moen's first design was for a double-valve faucet with a cam to control the two valves. It was rejected by a major fixture manufacturer for a simple reason: it didn't work. Moen then went to a cylindrical design. From that experience, he resolved to create a faucet that would give the user water at the desired temperature with a piston action. Between 1940 and 1945, he designed several faucets, finally selling the first single-spout faucet to Ravenna Products of Seattle. In 1947, Ravenna sold 250 units to a San Francisco plumbing supply house.

The timing for Moen couldn't have been better.

As the post-war building boom took off, the demand for state-of-the-art home fixtures and appliances soared.

In 1959, *Fortune* magazine listed the Moen faucet as one of the top 100 best designed mass-produced products of modern times, and in 1991 listed Moen faucets as one of “100 of America’s best” inventions.

(Moen headed his company’s R & D until his retirement in 1982. He held more than 75 patents including a replaceable cartridge that eliminated washers in faucets, the screen aerator and swivel spray. He died in 2001.)

## The Faucet Evolution

The creation of a Moen faucet today involves many people but starts with one: Todd Loschelder. His title is director of platform innovation and his motto is “I don’t know what I don’t know – yet.”

“My world is the unknown,” he said.

He cites an example from recent years. The big thinkers at the company were wondering if there was something Moen, known as an indoor faucet company, could do to crack the outdoor spigot market. Loschelder’s team went about studying how people use their outside faucets. As the Moen team assessed the ways, it became clear that people wanted something they didn’t have: the option of hot water. Since Moen was a pioneer in controlling water temperature with a single handle, the team knew it could create and manufacture an affordable hot-cold faucet with one opening that could be installed without major alterations to an existing outlet.

“We knew we had hit on something, and we were able to leverage our talents and core competencies to create a product for a demand we didn’t know existed,” Loschelder said. “It’s all about finding out what we don’t know, and it’s all business driven.”

Once a market is determined, Loschelder’s crew, along with designers, manufacturing specialists and company liaisons to suppliers and retailers all gather at a meeting they call “Tollgate.” Similar in spirit to the well-known product innovation program called Stage Gate, Tollgate is designed to ensure that any potential problems are unearthed and handled at the outset of the project. Follow-up Tollgate meetings throughout the project are aimed at dealing with issues that have arisen and reassessing the potential for upcoming problems.

“There are 18 things happening at a time and you’re trying to vet all the possibilities at once,” said Loschelder.



“We don’t want to have any ‘ah-has’. This sort of rigor has become part of our culture.”

## The Art of the Sketchfest

It’s up to Riley’s design team to give the product its literal shape. She gathers a subset of the main Tollgate group, including designers, engineers and marketers, for an off-site meeting called a “sketchfest.” During a recent gathering, the group pondered the simplistic beauty in the way water pours from a pitcher: Just tip it down and the water comes out. The idea was translated into a faucet with a pivoting spout now sold in the Asian market.

Like all valuable brainstorming sessions, sketchfests sometimes border on hilarity.

“We have a plenty of ideas that don’t make it, and some that provide a good deal of entertainment,” Riley said.

Those that make it off Riley’s drawing board find their inspiration in the global fashion and, yes, jewelry industries. When noted clothing designers such as Ralph Lauren and Calvin Klein branched out into home accessories, the line between what we wear and what we use began to blur. As silver jewelry dominated runways in recent years, Moen increased its offerings of brushed nickel and stainless steel finishes, Riley said.

One of Moen’s more recent series of palettes and designs – with Renaissance’s reds in ornate designs – was fueled in part by the popularity of the movies *The DaVinci Code* and *Marie Antoinette*. Pure white became a popular statement in recent years thanks in part to

movies such as *Chronicles of Narnia*, *The White Countess* and *The Woman in White*, the company reported. This past year, eclectic blends of unique, elaborate styles and textures with colors such as purples, silvery blues and deep bronzed tones were big sellers. On the other hand, designers have turned to nature for inspiration as can be seen in the Bamboo offerings in its ShowHouse collection.

Whether a product can actually be engineered and manufactured cost efficiently tends to weed out the outlandish.

“This is a business. We don’t just want to make things that are cool, we want to make cool things that sell,” said product development director Malek. We ask, “what are the market trends? What markets are we serving? What markets could we be serving but aren’t?”

### Picking the Process

Once a sketchfest idea is accepted, it is made into a detailed scale drawing where it is analyzed by the team once again. If it meets expectations, a prototype is made, often using simply hand-sculpted foam.

“In an age of high technology, there is still a lot of art in this,” said Riley.

“We don’t just want to make things that are cool, we want to make cool things that sell.”

The prototype foam model is submitted to scanners to begin creating a detailed 3-D design. The engineers and production leaders analyze what processes should be used to manufacture the faucet. Injection molding, CNC machining, screw machining, die casting and forging are all considered, said Malek. The final manufacturing methods depend on the product’s designs and the function of each individual component. (Moen owns and operates factories in the United States and China, and products are usually manufactured near the markets they will serve.)

The valve bodies (the guts of the faucet) make up the majority of the machine hours, according to Jim Bluhm, vice president of manufacturing, global operations, for Moen. Various threads and nuts are also machined.

The company is capable of and does most machining

processes, but the majority of hours are racked up on screw machines.

“The type of machining is both material and volume dependent. The majority of our machining is brass. The equipment selected is volume based. Lower volumes are typically CNC, while higher volumes are achieved with dedicated equipment,” said Bluhm.

Bluhm said he routinely applies Six Sigma, the efficiency program developed in the 1980s at Motorola, as well as Statistical Process Control (SPC) to improve manufacturing efficiency. That could and has involved reorganizing the steps of production, switching suppliers and reconfiguring shop floors, among other adjustments. Such ongoing attention to the details of production has allowed the company to compete against foreign and domestic competition to become the number one faucet in North America.

Brass is the most commonly used material for faucets because it is resistant to corrosion and calcification. It usually contains some alloying elements such as bismuth to make it easier to process. The majority of the other components that make up a faucet are made of other metals or ceramics and are received as finished parts from other manufacturers.

With most machined faucets, the process starts with brass bars that are fed into a CNC machining center. The machine performs turning, milling, and drilling operations. Larger and more complex faucets may require as many as 30 separate machining operations.

### Chemistry in Motion

After machining, parts are ready for the finishing process. Components that came in contact with water are required to be cleared of lead. This involves a leaching process that eliminates lead molecules from the brass surface.

The time-honored finish of faucets has for years been chrome, since it is highly resistant to corrosion. First, a base coating of electroplated nickel is applied, followed by a thin coating of electroplated chromium. The chrome layer is deposited from a plating bath containing additives that improve corrosion resistance. Moen uses a vacuum vapor process that attaches the metal or color at a molecular level. The faucets are then assembled, inspected and shipped. The entire process from idea to installation can take from six months to two years, depending on market variables and complexities of design.

When Asian imports began to reach the U.S. fixture market in the 1990s, American companies such as Moen felt intense competitive pressure and were left with no option. They needed to learn to make pioneering faucets at prices that would hold their appeal on the shelves next to the imports. They knew one thing, said Ginny Long, director of corporate communications for Moen. They couldn't and wouldn't sacrifice quality for lower cost.

"There's a lot of equity already in the Moen brand," said Long. The last thing they wanted to do was squander it.

For Bluhm that means daily attention to machining to maintain high quality and margins.

"Quality and cost efficiency is designed into both our component design and our machining processes. Manufacturability is one of the key design parameters," Bluhm said. "By designing our components to the machining capability we are able to achieve the twin goals of high quality at competitive costs."

### To Market, To Market

Faucets are marketed and sold a bit differently than a lot of consumer products. About 40 percent of sales are to wholesale plumbing suppliers whose customers generally know the difference between first-rate and schlock.

"Plumbers and contractors understand the value of a product that won't lead to call backs for them," said Ann Beriault, director of account services for Young & Laramore, an advertising agency in Indianapolis with ties to the faucet industry.

The other 60 percent are sold through retailers such as big box hardware leaders Home Depot and Lowe's. Moen teaches those retail employees about the value of their products with the hope the message gets passed on to the average consumer. But sometimes consumers don't even seek guidance.

"Most people believe if a product is being sold at a reputable retailer then quality is a given," said Beriault, who has handled print, online and event advertising for Moen's top competitor, Delta. "Those of us inside the business know quality varies a great deal on those shelves. Most people don't have any idea how much."

Beriault said sales of faucets in new construction and remodels are driven first by design and finish, then quality and brand. In the replacement market, cost-conscious consumers who find themselves having to make a surprise expenditure look to price first. It's up to companies such as Moen to make the importance of high

quality known to consumers.

"One way to do that is the pervasiveness of the brand. When your brand is seen everywhere people go, they begin to associate it with reliability. It builds on itself," she said.

### High-End Demand

Although a slowdown in housing construction has dampened the overall housewares market, luxury and overseas sales – such as those to China – provide a brighter picture than one would imagine. Demand for plumbing products in the U.S. alone reached \$10 billion in 2006 and is expected to grow two to three percent a year through 2010, no matter the downturn in housing, according to researchers at the Freedonia Group in Cleveland.

Gains will be driven by applications in repair and improvement markets and continuing trends toward larger bathrooms and kitchens in new residential construction. Bathtub and shower fixtures and lavatory, kitchen and sink fittings offer the best prospects for the entire indus-

**"It's up to companies such as Moen to make the importance of high quality known to consumers."**

try, according to Freedonia. Industry insiders said sales to China and other Asian markets are booming, although hard numbers for foreign sales are difficult to attain.

Plumbing industry consultant Bradley T. Farnsworth of Indianapolis said the bath and kitchen have become more centers of the home over the past decade. Home remodelers report people are forgoing formal dining rooms to create a more upscale kitchen as a gathering place and the bathroom as a spa or sanctuary.

Singer Alicia Keys, whose newest CD is a chart topper, said she frequently seeks her muse in the lavatory.

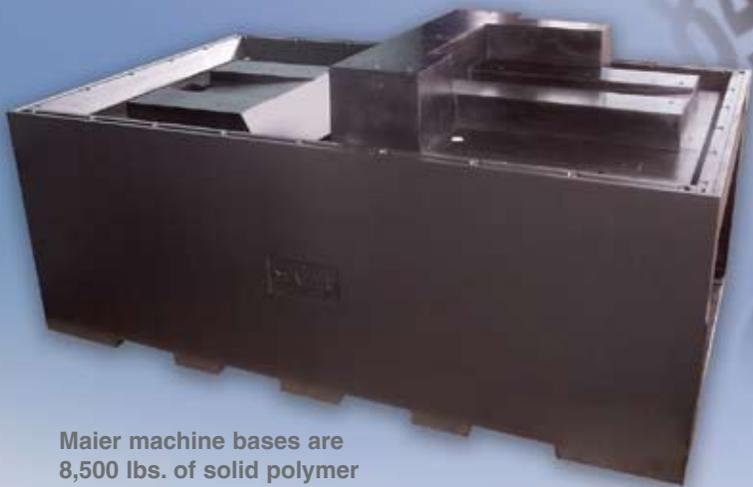
"If I want to be alone, some place I can write, I can read, I can pray, I can cry, I can do whatever I want – I go to the bathroom," she told a music magazine.

"The faucets have become the focal points of these rooms. They are show pieces that reflect your taste and style," Farnsworth said. "Any manufacturer that acts on these trends – and maintains quality and price – will be successful."



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BY ROBERT STRAUSS

# Playing



# Paul Newman

Speed for the avid amateur

motor sports

**H**arvey Siegel loves nothing more than calling himself a Motorhead. Siegel may be well past middle age and loves his vintage wines and ultra-swank upscale restaurants. He lives and works in New York and is a millionaire several times over.

Yet when he straps on his safety gear and gets behind the wheel of his vintage Lola Mark I sports car, he is a teenager dragging the strip, cheered on by girls in bouffants and knee socks, sprinting to cross the line and get ting the flag waved for him ahead of the Fonzies and Ralphie Malphs.

“It is wrong to think that people who like motor sports are rednecks who want to make noise and drink bad beer,” said Siegel. “They can also be sophisticated and smart and drink fine wine. They are all over the map.”

The point on the map Siegel is looking at these days is in Southern New Jersey, seemingly as far from NASCAR country as anyone

could ponder. He is a principal in Thunderbolt Raceway at New Jersey Motorsports Park, a country club for Motorheads opening this summer. It is cutting a wide swath through previously vacant acreage adjacent to the municipal airport in Millville, a town of about 26,000 between Philadelphia and Atlantic City that was once a center of glassmaking, an industry that has primarily left the United States in the last several decades.

When finished, the New Jersey Motorsports Park will have two road courses – the primary one being the 2.25-mile Thunderbolt Raceway, which will have 14 turns and a half-mile straightaway. There will also be a 1.1-mile

karting track with eight different configurations, an all-terrain vehicle area, 60 acres of paddock space, garages, a school and driver area.

What will make it unique, though, is that Siegel and his partners will not be looking for big-time races to fill up the schedule. New Jersey Motorsports Park will be a do-it-yourself place. There will be a clubhouse, tennis courts, eating places and an area with repair, maintenance, and car and motorsports retail facilities, like tire shops and car-tsochke vendors. They are planning hotels and a conference center and selling memberships in the low four-figure range.

## Courting Members

The Shelby American Automobile Club has reserved a weekend for its members in early summer and Siegel expects groups from his Mark I types to guys in their souped-up Toyotas to come by as the word filters out.

“You take all those people who golf and play tennis. They have lots of places to do that, from local courses and courts to fancy clubs,” said Siegel. “There are a lot of people who want to race cars. NASCAR may have excited them, or they may have had cars for years. They shouldn’t be left to just watching. They should have places where they can drive, and drive safely.”

NASCAR indeed has had a lot of up-market press of late. In the 1996 election, Bill Clinton and Bob Dole were allegedly seeking the Soccer Mom as the swing vote; by 2004, John Kerry and George W. Bush were courting the NASCAR Dad. NASCAR, though, unlike many other sports, had not seemed to inspire participants. The couple hundred thousand spectators at Talledega or Daytona or Dover Downs may have been aficionados or novices or just plain partiers, but they did not appear to be potential participants.





Siegel and some others, though, have started to think otherwise. Lime Rock Park in northwestern Connecticut has started selling long-term, high-end “memberships” for \$100,000 that would allow 20 days’ access to the track each year for 50 years. According to a *New York Times* story, Skip Barber, the owner of Lime Rock, still wants to preserve the track for big time races, but feels this sort of thing will help finance its upkeep. He expects 300 people will take him up on the deal.

Siegel has his own prototype for the New Jersey track. His proposal for Millville is similar to what he has done at Virginia International Speedway. He bought the track in Danville, Va., near the North Carolina border, in 1998, after it lay dormant for 24 years. In its day, from 1957 to 1974, it was one of the main sites on the Southern stock car circuit, but the track fell victim to the oil crisis of the early 1970s. Mr. Siegel has rehabbed the 3.27-mile track and is turning the 1,200-acre property into what he says is the first motor-sport resort.

### Building to Ground Speed

Virginia International offers all kinds of racing, from sports cars to motorcycles to all-terrain vehicles. It also conducts safety training, motor-sport school, and has opportunities for visitors to ride at breakneck speeds around the track. There is a vintage car museum and Mr. Siegel has plans for a lodge and an upscale restaurant in a restored 160-year-old tavern on the property.

“When I got there, the buildings had either fallen down or were rotted,” said Siegel. “There was no electric, no telephone, no sewer. It was very difficult to even get to the place. The area had fallen on hard times. It was a

textile center and the textile industry had gone abroad.

“I originally thought I would make it an equestrian center, with more than 1,000 acres at my disposal,” he said. “But then I thought that this was the track that Carroll Shelby, Roger Penske and Dan Gurney gloried on. Shelby once said that it was so beautiful, one lap there was better than 100 at Watkins Glen. Motorsports seemed to need to be reinvented for the consumer for the 21st Century, so this was to be the poster boy for that.”

Still, Virginia International was rather remote. Siegel said that only ten to 12 percent of its members and racers come from nearby. Millville, he said, is a two and a half hour drive for 35 million people.

“With the exception of Lime Rock, and then only for the northern part of the market there, this would be it,” he said.

Millville itself had long been aggressive about getting motorsports to the site. The Millville Airport was one of those that prospered during World War II and immediately after, when enthusiasts saw smaller

**“Shelby once said that it was so beautiful, one lap there was better than 100 at Watkins Glen.”**

airplanes as the next commercial means of travel for short hops to the tiniest of towns. Millville was thriving then, too.

Wheaton Glass was one of the big manufacturers in the business and it employed as many as 15,000 workers in those post-war industrial glory days. Millville, just a smidgen below the Mason-Dixon line in otherwise rural southwestern New Jersey, didn’t need to be a commuter town to Philadelphia or Atlantic City because it had its own commercial base. As the glass trade moved offshore in the 1970s and 1980s, though, the town drained.

Still, Millville had its partisans, and they brought in many ideas for a revival. Just seven years ago, 60 percent of the downtown commercial buildings were vacant, according to Donald Ayres, the city’s director of economic development. Despite tough economic times, the residents passed a \$2.3 million bond issue to convert three of the vacant storefronts into an arts center and got Urban Enterprise Zone funds for façade improvements and landscaping.

“Now we have at least 15 fulltime artists here and

shows on the third Friday of every month,” he said. The vacancy rate is down to five percent. “No one says this is the do-all and end-all. We still have a 10 percent unemployment rate, but unlike other places, we aren’t ready to die.”

## Merging Motor and Art

Though on the surface of it, motorsports and art galleries don’t seem to be all that compatible, Don Fauerbach, whom most claim to be the driving force behind the motorsports idea at least a dozen years ago, says it is all a post-industrial kind of thing for former industry-heavy remote places like Millville.

“We are located in a sportsman’s paradise,” said Fauerbach, who in his working life is the executive director of the New Jersey Conference of Mayors. “We are on the doorstep of four wild and scenic rivers and have a 14,000 acre wildlife preserve. We are only 15 miles from the Delaware Bay. Frankly, where else was a developer going to find 700 acres of land ready for development this close to Philadelphia?”

“You have to find something to keep your town going, after what has kept it going stops,” he said. “For a place like this, it meant capitalizing on new types of recreation, something other places didn’t have or didn’t want to support. With the arts, the wildlife and the motorsports, I think we can move into a new era, with things for a whole range of people.”

The hook-up with Siegel and his people was fortuitous. Ayres was in New York City for a shopping center development convention in 2003 when he met Joe Savaro and Lee Brahin, who had built centers in New Jersey and Pennsylvania. There had been some interest a few years before by a couple of developers in making the airport tract into a big-deal NASCAR track, but the administration of Gov. Christine Todd Whitman pushed all interest in that up near New York and the adjacent New Jersey Meadowlands, a more populated area the state controlled.

In chatting with Savaro and Brahin, trying to get them to build even a minor shopping center in the city, Ayres happened to mention the former interest in motorsports. It turned out that Brahin was another middle-aged Motorhead, whose friendly competitor in the shopping center development business was Siegel.

Instead of a strip mall, the offhand remark to Brahin by Ayres has gotten Millville a new kind of racing resort.

“It did take us 22 different economic and environmental impact studies and permits,” said Savaro, who with Brahin partnered with Siegel on the project. “But you can look at it as sort of a mall, too. There are several anchors. There is the motorsports venue, then the ancillary facilities like the tire shops that we envision on one side, and the hotels and conference center when the place gets fully built out a few years from now.”

Siegel contends that New Jersey, despite being the most urban state in the country, with the most people per square mile, has long had race tracks of various sorts, from drag strips to mini-cars to conventional stock cars— just no NASCAR buzz.

“It only makes sense, though, that an area with so many people within a half-day’s drive, that we will be successful. If there are Motorheads like me, then I think we are on to a trend,” he said.

## Economic Run

James Hughes, Dean Edward J. Bloustein School of Planning and Public Policy at Rutgers University, said it is a shot worth taking.

“All things being equal, it would be better to have a big pharmaceutical headquarters there,” said Hughes. “But the best economic development is when you generate new dollars, not just recycle the old ones, so this may be a good thing for that kind of area. If you have a big attraction that brings people from Delaware and Pennsylvania and some from far away, then you have something.

“I can’t say that I think this would work everywhere, that there are enough race car enthusiasts to have dozens of them, but it will be worth watching,” he said.

Siegel, who admits to being a few years younger than his sports-car hero, actor Paul Newman, thinks there are lots of secret Motorheads to be tapped.

“Look, it’s something you can do at some level your whole life,” he said. “Newman is 81 and picked it up at 50. He has money. Other people who do it have money, whether they wear jeans or fancy suits. I will bet a lot of people will see us and want to try it – make a trip to Millville just to have the thrill they only watch on TV now.”



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1-3/4" 8-spindle, 1970  
2-1/4" 6-spindle, 1962, 1973-79 (3)  
3-1/4" 6-spindle, 1982  
5-5/8" 6-spindle, 1979  
6-5/8" 6-spindle, 1979

## ACMES

1-1/4" RA6, 1973, thdg., pickoff  
1-1/4" RB8, 1981  
1-5/8" RBN8, thdg  
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2" RB6, 1979  
2" RB6 collet chucker, 1980  
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## SCHUTTE

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SF 26, DNT, 1989  
SF 26 DNT, 1997  
SE 26, 1975

## SWISS-CNC SLIDING HEADSTOCK

Citizen L-20, 1998  
Citizen L-25, 1996  
Tornos DECO 10mm, 2001

## NEW BRITAIN

Model 52, 1987, thdg., pickoff  
Model 62 2-1/4" 6sp., 1975, heavy thdg.

## DAVENPORT

3/4 Davenport, 1989  
3/4" thdg., pickoff, longbed (4)  
3/4" 1981 (4) Tamer  
3/4" with Tamer & Logan clutches  
3/4" thdg., pickup, 1977-66 (8)

## MISCELLANEOUS

Davenport slotting  
Hydromat flanges for HW25-12  
Reed B-18 thread roll attachment (3)  
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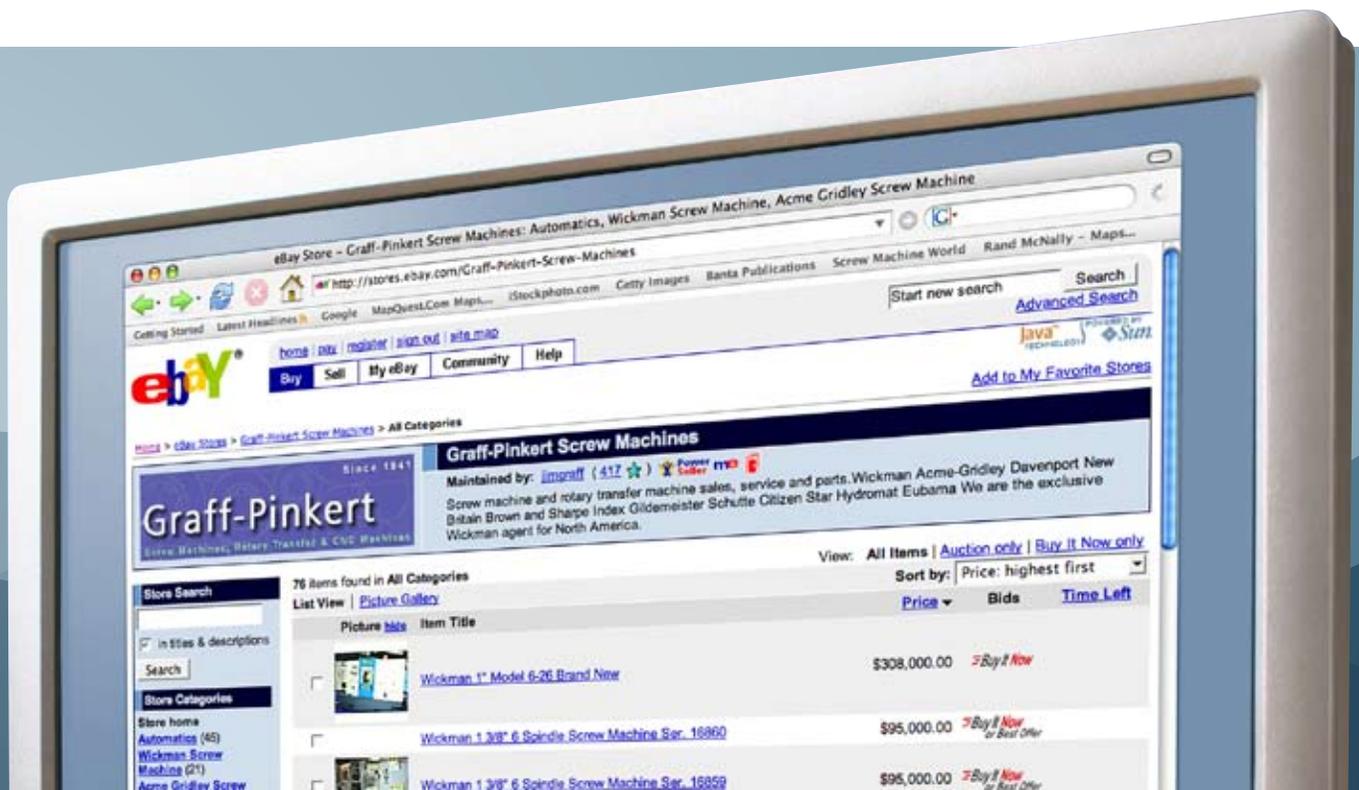
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Dear Shop Doc,

I'm having an issue with a job we run on a CNC Swiss. If I adjust the bushing tight enough to eliminate out of roundness and chatter on the turned diameters, the guide bushing will scratch the bar diameter. The finished part has a long section which we would prefer not to turn, but the scratches are unacceptable

Mark S. Begone

Dear Mark,

There are two solutions to the problem; I'll start with the better one. A guide bushing can only be ground to one diameter; if your bar is smaller or larger the fit won't be as good. If you add in variations in the guide bushing adapter taper and fit, the bushing may not fit the bar well at all. Start by taking a die grinder or Dremel type motorized tool, and using a diamond coated bit, grind a chamfer on the front and back edges of the carbide pads inside the bushing. Then take a cylindrical shaped bit and lay it into the slots between the carbide pads to break those edges as well.

Next you need to hone or lap the bushing using diamond lapping compound. Diamond compound is sold in different grades. It is color coded with the color relating to the micron size or mesh size. You should keep three grades on hand: red 22-36 micron or 600 mesh, blue 12-22 micron or 1,200 mesh, and orange 4-9 micron or 3,000 mesh. Use the red compound to repair a worn or damaged bushing or to dimension an oversized or undersized bushing. Follow with blue and then orange to finish.

Use a chamfered bar end (remnant) for lapping. Begin by adjusting the bushing to the remnant so that it fits tightly but can still be removed by hand. Chuck the remnant in the sub spindle and get it to run true. Put a small, pea size dollop of compound on the end of the

remnant and smear it around. Add a few drops of cutting oil to the smear and you are ready to begin honing the bushing. Counter rotate the main and sub spindles around 100 rpm each. Then, using the MPG, jog the bar end in and out of the guide bushing rapidly. If the bar squeaks or squeals, or if you see a wisp of smoke, stop and add more oil to the bar end and/or loosen the bushing.

Work the bar end in and out of the bushing until it fits loosely. The compound should turn black from the carbide if all is working properly. Next, stop the spindles. Adjust the bushing ever so slightly tighter and repeat the honing process. Repeat the entire process until you see the carbide pads have a uniform finish over at least 80 percent of the surface with the front end completely honed. Switch to a fresh bar end and repeat the process with the finer compound. Take it slowly the first couple of times you hone the bushing. Once you get the hang of the process, it only takes a couple of minutes. Clean the bushing and adapter thoroughly when finished.

The second alternative is to buy a Meehanite guide bushing which uses Meehanite (cast iron) in the place of the carbide. Meehanite has less tendency to "pick up" or have the bar material weld to it. While Meehanite is a cure for problem materials, it never completely eliminates the need for breaking the edges and lapping the bushing.

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A continuing column in which we ask smart people to discuss their views on topics related to the future of business

next

BY NOAH GRAFF

## In five years will outcry auctions be obsolete?



*The popularity of online auctions has grown dramatically in recent years as buyers have realized their advantages of anonymity and convenience.*

Yes, I do feel that in five years the outcry/live auction will be obsolete. Five years is an eternity in the world of communication technology. I would expect buyers and sellers to become much more comfortable and secure buying through the Webcast/Online auction process. As the comfort level increases more buyers will result in higher selling prices which the sellers are constantly asking the auction community to produce. In addition, it is much easier to reach the world market via the Internet than through the traditional live auction sale. Buyers' time and the cost of travel will only serve to diminish the overall attendance at live sales and increase participation in Webcast auction sales.

Dennis Hoff  
President of Hoff-Hilk Auction Services

Doubtful. As time progresses, online auctions will continue to proliferate and since they require only a software package, the barrier to entry has been reduced and we will see more entrants into the marketplace. Sustainability of an auction company will be determined by factors that include product knowledge, marketing capabilities and full service capacity.

The effectiveness of online sales is proportionate to how commoditizable the asset is. Minimums can be established but nothing cools bidding like seeing "reserve not met" every time a bidder bids below the minimum. The auction companies that don't list their minimums and manipulate bidding are setting themselves up for real legal problems. Minimums do not have to be published however in outcry auctions. Unlike online sales, the auctioneer can make adjustments on the fly and adjust those minimums based on criteria that only a human can analyze.

A recent study indicated that buyers are leaning back towards outcry auctions because they feel that they are more likely to obtain a bargain, a fundamental reason why people go to auctions in the first place.

For those who like the anonymity of the online sale but like the heat of the battle, the WebCast is the perfect combination. For some, an auction is a social event that provides an opportunity to make money and enhance relationships. I believe that a good auctioneer will sell more and get more than a computer. While online sales are here to stay, I don't think they will ever eliminate outcry auctions.

Robert Levy, Auctioneer  
President of Hilco Industrial, LLC

Yes. Traditional auctions are comparatively inefficient vs. "eBay-style" Internet-based alternatives. From the seller's perspective, the success of an auction is highly correlated to the number of bidders participating in the auction – the more bidders competing, the higher the price. Internet auctions create a more efficient market, allowing easy, no-cost (in travel expenses or time) participation by buyers from all over the world. Many successful eBay sellers buy equipment at traditional auctions to resell it on eBay for a profit – it is only a matter of time before traditional auction sellers catch on and go directly to online venues. Changing traditions of entire industries may take more than five more years, but do I hear seven years, 10 years, I have 10 years, 10 years...

Josh Scott

Former manager of eBay B2B, founder of lathesandmills.com

## the facts:

According to ancient Greek scribes, auctions occurred first in Babylon in 500 B.C. Women were sold on the condition of marriage. Those with "beauty" engendered higher bidding, women without "beauty" had to pay a dowry to be accepted into the auction, and thus the price would be negative. [www.wikipedia.org](http://www.wikipedia.org)

Consumers will travel 1.3 hours to attend a live auction.

92 percent of auction attendees have a favorable impression of Auctioneers (at live auctions).

The National Association of Auctioneers projects live auction revenues (in all categories of goods) to grow 3 percent from \$257.2 billion in 2006 to \$264.8 billion in 2007.

[www.auctioneers.org](http://www.auctioneers.org)

The number of confirmed registered users of eBay auctions has grown from 10 million in 1999 to 233 million in the first quarter of 2006. eBay investor relations

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one on one

Hoff-Hilk Auction Services Dennis Hoff

**Dennis Hoff** is president of Hoff-Hilk Auction Services, an online auction company which sells commercial and industrial machinery exclusively. Before starting Hoff-Hilk, Dennis was a used machinery dealer and machine tool appraiser for over 35 years.

**NG:** Do you think outcry auctions are becoming obsolete?

**DH:** I think they're becoming less of a player. I don't think they'll ever go away. We've had some instances where we've been asked to do that type of sale and in some cases it's appropriate.

**NG:** How are online auctions superior to traditional auctions?

**DH:** You're in Minneapolis; we had a snowstorm last night, it's 17 degrees and most of the streets are plowed. I would say that if you had a live sale, you would've had 50 percent less people than you would on a regular day. I think selling to the world as opposed to people standing on the floor makes a big difference.

**NG:** What's your opinion of eBay?

**DG:** I'm not a big eBay fan from the seller standpoint because I don't think that they do a good job describing the machines. We try to work harder; to clean the machines better; to take more videos and take more pictures. Recently at the Bystrom Bros. sale, we took 48,000 photographs for about 3,500-3,600 lots.

**NG:** Do you think most buyers and sellers feel that auctions are "fair"?

**DH:** Probably not. I think it's very hard to be transparent in the auction business, which we try very hard to do. But no, I would think that most of them are not as comfortable as they'd like to be.

**NG:** What type of auctions do you prefer to do?

**DH:** We don't have a preference. We're very frank with the

sellers, and we'll tell them that the worst thing they can do is have us buy it. We'll make the most money that way. The best thing for them is to have us work on a commission basis on their behalf.

**NG:** Are sellers sometimes bitter and depressed that they're liquidating? Do you have to play psychologist?

**DH:** Absolutely, it's a huge part of the business. Especially for what we call "site" coordinators that set up the sale. They have to be dealing with that person on a day-to-day basis. They see them every single day moping in, and they see their attitude get worse the closer we get to the day of the sale.

**NG:** Did you say "Psych" coordinator?

**DH:** "Site" coordinator. It could be "psych" though. (laugh)

**NG:** What's your favorite part of your job?

**DH:** I think looking at the deal and trying to figure [out] the deal. There's always that excitement; the hunt is a lot better than the kill.

**NG:** What's the thing you hate most about your job?

**DH:** Probably dealing with the psychology of the owner, that his life is kind of ending. For small business people, myself included, this is a big part of our lives. You can be a golf nut; you can like to boat; you can like to fish; but I think anybody who owns a small business, you get up and you go to work everyday. That's your life. Even those people who are coming out on top, they still have issues. They want to go and smell that oil on Monday morning and there's no place to go and smell it.

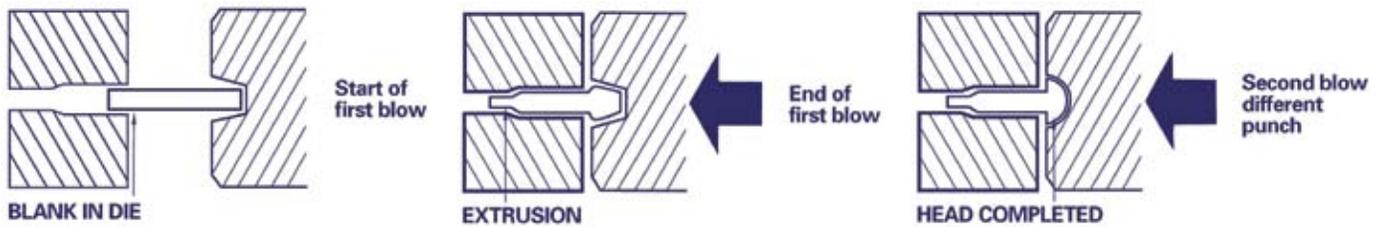
how it works

By BARBARA DONOHUE

# Precision

Cold forming  
makes fasteners  
and a lot more

how it works



Above Photo: The typical one-die, two-punch method is common in producing headed parts, especially fasteners. The first blow combines partial head upset (coning) with shank extrusion. Then the second blow finishes the head shape. (Illustrations courtesy of Carpenter Technology Corporation.)

# parts without chips

“Cold heading is basically putting material in a die and hammering on it,” according to one industry expert. Unlike hot forging, where the metal is heated before forming, or casting, where the metal is melted and solidified, cold heading and other methods of cold forming cause the metal to deform at room temperature.

Though there was a U.S. patent issued in 1794 for a “cold header” (really a rivet machine), cold forming became a practical fabrication technology after World War II.

## Die and Punch

Modern cold-forming machines, also called headers or parts formers, provide from one to seven die stations, opposite a number of punches mounted on a slide, which usually moves horizontally. A common type used for making bolts or screws is the one-die, two-blow header, similar to the example shown. This has one die, which is the diameter of the shank of the bolt or screw being formed.

The material in the die is struck with two different punches, one after the other. There is a limit to how much you can deform the material with a single blow, so two hits are often necessary to

create the correct geometry of the head, said Steve Copeland, vice president of sales and marketing, Reed Machinery, Inc., Worcester, Mass.

The first blow makes a shape like a tulip. Then a shifting mechanism moves the first punch over and places the second one in position. The second punch comes in to produce the finished shape of the head. After the second blow, a knockout pin pushes the piece out of the die.

On a multiple-die header, there is a transfer rack with fingers that grab the part and move it from one die station to the next. If needed, the transfer mechanism can turn the part around 180 degrees so the next punch hits the other end of the part.

## Die and Punch

The form of metal stock most often used in cold forming is “wire,” which may be a half-inch or more in diameter. It comes in large coils, convenient for feeding into machines making many parts per minute.

When metal is compressed within a die, it is important to introduce just the right amount of material into the die, often within plus or minus one percent, or even less. Too little material won’t fill



Wire from a coil is pulled through a carbide draw die that sizes it to a precise diameter. From there, the wire feeds into a 4-die header. This machine was producing parts that would later be finish machined at the customer’s shop. It was running at the rate of 70 parts per minute. Other machines in the plant make different parts at up to 200 or more parts per minute.

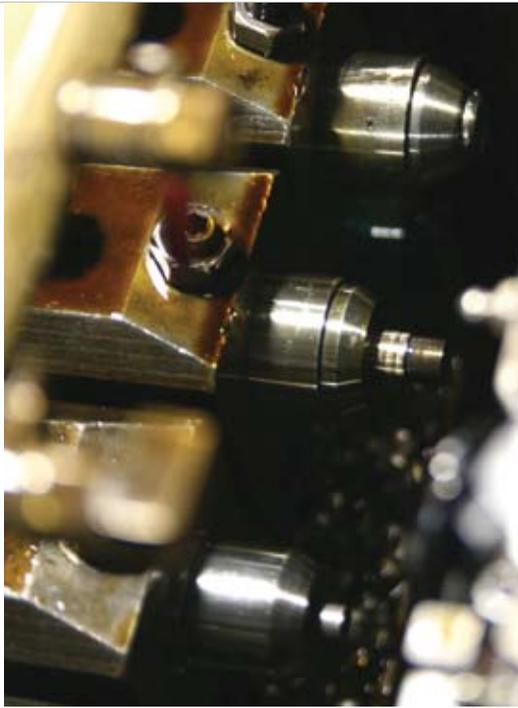
(Reed & Prince Manufacturing Corporation. Photo by Jean Butler.)



Inside a 4-die header. The punches, visible at center, move horizontally, left to right. The four slotted bars to the right of the punches are part of the transfer mechanism. The dies lie below.

(Reed & Prince Manufacturing Corporation. Photo by Jean Butler.)

how it works

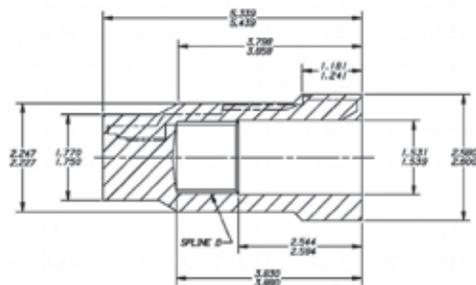


Closeup of punches in a multi-die header. (Reed & Prince Manufacturing Corporation. Photo by Jean Butler.)



Example of a part converted from screw machining to cold forming. Originally, the flat on the right side of the shank was machined and the hole was drilled. On the cold-formed part, the flat is formed and the hole is created by backward extrusion. A multi-die parts former produces these at 140 pieces per minute.

(Photo courtesy of Reed & Prince Manufacturing Corporation.)



For parts more than 1/2" in diameter, a vertical press is required to provide the larger forces necessary to get the metal moving within a die. Drawing of a proposed cold-formed part for later machining. Final machined surface is indicated by the broken line. Note the internal splines in the blind hole. (Photo courtesy of Buchanan Metal Forming, Inc.)

the die, making a bad part. Too much material can result in a malformed part, or produce flash that needs to be removed. The excess material can cause the die to split when the punch hits.

Cold-forming machines are designed to cut off a precise length of wire, but the diameter of the wire must also be precise. To provide this, many shops will do a final draw of three to 10 percent on the wire before it is cut and formed to get a nice, tight diameter tolerance, said Kevin Hughes, specialist in wire products, Carpenter Technology Corporation, Reading, Pa.

## Not Just Fasteners Anymore

Originally, cold heading was used to create heads for fasteners. A piece of wire was held in place and an impact to one end of it caused some of the material to spread or "mushroom," creating a head for the fastener without having to machine away a lot of material to form the shaft. Once the head was formed, then the threads could be either cut or rolled. This process not only formed the fastener quickly, but it made efficient use of the material, producing little or no scrap.

In addition to fasteners, many kinds of parts with complex shapes can be made by cold forming. The machines may be called "headers," but they do much more than heading.

Tooling can be designed to extrude the material. When the punch hits at each station, it presses the material forward into the die to create a narrowed section, taper or shank. Or the punch can press on the material within the confines of the die so the material extrudes backward over the punch, creating the walls of a hole. In addition, shapes and contours can be built into the tooling to create splines, gear teeth and other features.

Upsetting, another term for heading, includes forming a bulge in a cylindrical part, as well as forming a head on one end.

Using sophisticated tooling producing combinations of upsetting and extrusion when the punch hits each station, a cold forming machine can produce complex parts. Dimensional tolerances and surface finishes can rival those achieved with machining, depending on the shop and precision of the tooling.

So cold forming can produce parts at near-net-shape, using the minimum of material, to close tolerances, and at the rate of dozens or hundreds per minute. In addition, cold-formed parts exhibit excellent strength, as the material flows into its final form, rather than being cut, as in machining.

All this goodness does not come for free, however. Tooling costs for cold forming can be significant, perhaps \$5,000 to \$25,000 for a tool set, depending on how complex the part's geometry is. Lead time for design and setup to run cold-formed parts is often measured in weeks, much longer than it would

# how it works

take to program and set up the same part on a CNC lathe or machining center. For small quantities, cold forming may not be cost effective.

What kinds of quantities are economical? It depends on the cold forming shop. Reed & Prince has recurring orders of around 1,000 for special large wood screws used in Atlantic City to repair the boardwalk, and ongoing production of many millions per year of small pins with precision grooves and knurling. Other sources recommend quantities in the hundreds of thousands or millions.

Buchanan Metal Forming, Inc., Buchanan, Mich., is a cold-forming house that makes larger parts, mostly in the one- to 20-lb. range. For his process, cost effective production quantities might range from a minimum of a couple thousand to a maximum of 250,000 parts, said Chris Tapper, the company's president and CEO.

## Cold Forming vs. Machining

A machined part starts out with a chunk of material large enough to contain the desired part. Then you cut away everything that isn't the part. This produces chips, which are wasted material. Cutting can also disturb the grain structure of the metal.

Cold forming, however, makes very efficient use of material. It also tends to produce very strong parts, as the material flows into the desired shapes, maintaining its grain structure. And cold forming produces parts rapidly – tens or hundreds of parts per minute.

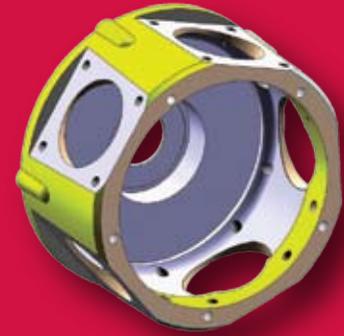
Some machined parts produced in volume, especially small round work like that made on screw machines, can be made more economically by cold forming. The savings can be greater than or equal to 50 percent, said James Richardson, president of Reed & Prince Manufacturing Corporation. If a cold-formed part can replace a multiple-part assembly, the savings can be even more substantial.

So cold forming is often thought of as a direct competitor to machining. However, a machine shop can sometimes make use of cold forming's advantages by having the blank for a part cold formed to near net shape and then doing the finish machining. This can save on material cost and processing time. Both Richardson of Reed & Prince and Tapper of Buchanan Metal Forming reported having machine shop customers who order cold-formed blanks.

At Buchanan Metal Forming, Tapper, finds that sometimes machine shops come to him with parts that are particularly challenging to machine, with an internal gear or spline, in a blind hole, for example. "One customer who had the most high-tech of shaper equipment – used to take five mins to cut an internal spline," said Tapper. "This customer was able to cut that down to two and a half minutes. We did it in six seconds." Buchanan cold forms the blank for the customer, who then machines it. The drawing shows a cold-forged blank with an internal spline. The broken line indicates the final machined surface.

Most cold forming companies will work with their machine shop customers to determine the correct material and geometry for blanks that will be finish machined.

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# how it works

## Materials for cold forming

The best material for cold forming a part may not be the same material you would use to machine it. The cold-forming company or your material supplier can work with you to determine the correct alloy for your part when it is cold formed. "Material flow and ductility are very key issues," said Hughes. Knowledge of the behavior of materials can make the difference between a successful transition to cold forming and a frustrating experiment. Your cold-forming house will advise you, and you should be open to their recommendations. Any sulfur content in the metal would be detrimental to the heading process, for example. The qualities sulfur gives to a free-machining alloy make the material more likely to fracture during the cold forming process. So a material such as Type 303 free-machining stainless would not work. However, 302 HQ (heading quality) would be ideal. The material should be as soft as possible, ordered annealed at finish.

The other thing to look for in material for cold forming is a large yield-to-tensile strength ratio. This would allow you to put in more cold work before the part fractures, Hughes said.

## Same Old Principle, New Products

Today's cold-forming technology has come a long way from the simple cold-heading process used in the fastener industry for over a hundred years. While cold forming is still "taking a piece of metal and hammering on it," the process can now produce complex, precision parts economically in large quantities.



Cold-forged parts. (Photo courtesy of Buchanan Metal Forming, Inc.)

## For more information:

**Buchanan Metal Forming, Inc.**, [www.bmfcorp.com](http://www.bmfcorp.com);  
manufacturer of specialty cold-formed parts.

**Carpenter Technology Corporation, Reading, Pa.**,  
[www.carttech.com](http://www.carttech.com); supplier of speciality alloys.

**Reed & Prince Manufacturing Corporation,  
Leominster, Mass.**, [www.reedandprincemfg.com](http://www.reedandprincemfg.com);  
manufacturer of precision cold-formed parts.

**Reed Machinery, Inc., Worcester, Mass.**,  
[www.reed-machinery.com](http://www.reed-machinery.com); mfg. of cold-forming  
equipment.

**Scientific Forming Technologies Corporation,  
Columbus, Ohio** [www.deform.com](http://www.deform.com); software for  
modeling the cold-forming process.

## Heading Hints Booklet from Carpenter

**Technology:** [www.carttech.com](http://www.carttech.com), click on "Product  
Information." Under "Stainless Steel," check the box  
next to "Heading Hints Booklet." Complete the form to  
download a PDF file, or order a print copy.

**Forming Workshop, April 29-30, 2008,  
Independence, Ohio (Industrial Fasteners Institute  
Headquarters)**, [www.fasteneritch.com/workshops.  
asp](http://www.fasteneritch.com/workshops.asp), <http://www.industrail-fasteners.org>; the basics of  
cold-heading and other cold forming processes.



# SUMO TEC

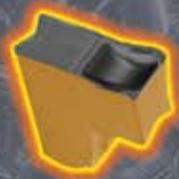
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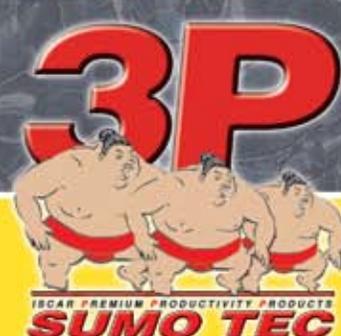
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Each month, *Today's Machining World* works to help you understand how the precision parts marketplace works, what's available in the industry, and how you can use available resources, as well as knowledge, to run a more efficient and effective shop. In every issue, we'll feature a product category and focus on equipment key to remaining competitive in our marketplace.

A mill/turn machine is, by definition, the epitome of a great multi-tasker. A machine tools with mill, turn and drill capability can perform simultaneous milling and turning operations on the front and back of a part in a single set-up. Combined with the right CAM system for your machine, a mill/turn allows for complex multi-tasking, meaning potential for both increasing profitability and producing complex, multi-faceted parts. And in today's market, that redefines "multi-tasking to the max."

## DOOSAN (right)

Doosan's Puma MX series adds milling capabilities to a Doosan turning center. Its dual-spindle, multi-tasking configuration tackles heavy and interrupted cuts. For turning applications, the MX combines either a 25 Hp or 35 Hp spindle motor with a 12-station tool turret and a 7.5 Hp live-tooling motor. The spindle motor is built into the headstock casting with the armature on the spindle O.D.

For milling, a combined B- and Y-axis spindle enables complex geometries to be machined without custom rotary tool holders. The Puma MX can cut, drill, or tap above or below the centerline, and machine flats and angular features. The 20 Hp milling spindle motor generates up to 10,000 rpm.

The bed and wrap-around, rectangular guideways are of fine-grain Meehanite. Guideways are induction hardened, precision ground, coated with a fluorochemical resin, and hand-scraped. The bed's torque tube construction prevents twisting and distortion, and provides a machine-long conduit for fresh air.

For more information, please contact Doosan Infracore at 973-618-2500 or visit [www.doosan.com](http://www.doosan.com).





## Gildemeister (above)

The new CTX Series from GILDEMEISTER is available on three platforms with ten different models in 24 different equipment variations. As the size and the respective requirements increase, so too does performance, with available torque ranging from 127 Nm on the CTX alpha 300 to the large 2,400 Nm on the large CTX gamma 2000.

The model drafts “alpha,” “beta” and “gamma” define the diverse construction sizes, with feed diameters between 160 mm and a maximum of 630 mm. The length of the Z-axis sizes range between 300 (e.g. CTX alpha 300) and 2,000 mm (CTX gamma 2000). High-tech Milling/Turning Centers have the abbreviation TC added - they are offered in the sizes CTX beta TC, CTX gamma 1250 TC and CTX 2000 gamma TC.

The core of the three CTX beta 1250 TC, CTX gamma 1250 TC and the CTX 2000 gamma TC machines is the integrated driving column with the milling/turning spindle and the interpolating B-axis for comprehensive chipping technology without limits. Applications of the milling/turning spindle with a Y and B-axis can be easily converted with the Siemens ShopTurn or Heidenhain TurnPlus internal programming systems with 3D-simulation.

For more information, please contact DMG America Inc. at 847-781-0277 or visit [www.dmgamerica.com](http://www.dmgamerica.com).





## Maier (left)

Methods Machine Tools has introduced the new Maier MLK 125 Linear Automatic Series of Swiss-type turning centers. The Linear Series feature 1,600 ipm rapids in all axes, reducing production lead times, part costs and cycle times. Maier Linear machines can accelerate up to 2g. Spindles (main and opposed) are driven by built-in 3HP (2.2 kW) integral motors that can reach a speed rate of 15,000 RPM.

The MLK Linear Series offers ultimate flexibility with a "two machines in one" design function that allows removal of the guide bushing, which enables the machine to operate as a standard lathe, eliminating the need to centerless grind stock. They are capable of machining up to 12.5mm bar stock. The cornerstone of the Linear Series is a unique, 4,600 lb (2,087 kg) solid polymer concrete base which eliminates vibration and ensures accuracy of 0.0001" (0.001mm).

For more information, please contact Methods Machine at 978-440-9405 or visit [www.maier-swiss.com](http://www.maier-swiss.com).

# product focus

## Hurco (left)

The new TMM Series of mill-turn machines, also called lathes with live tooling, from Hurco include C-axis standard and program to .001 of a degree. The 8-inch three-jaw chuck TMM8 and the 10-inch three-jaw chuck TMM10 provide easy entry to multi-tasking. Any station can be a live tool and Hurco uses a fast servo turret instead of hydraulic to increase productivity. Save time with one setup and eliminate inaccuracy due to refixturing. The TMM8 and TMM10 are the only CNC slant-bed lathes with the integrated Hurco control featuring WinMax® software that offers both NC programming and conversational programming. WinMax® provides the highest level of shop floor flexibility and software productivity tools.

For more information, please contact Hurco at 800-634-2416 or visit [www.hurco.com](http://www.hurco.com).



## Hardinge (Top)

The Hardinge Group is introducing their new line of Hardinge GS 150, GS 200, GS 200/66 and GS 250 turning centers (also available in long bed versions). Positioned in the center of Hardinge's turning center portfolio (above the SV-Series and below the SR-Series), the all-new GS-Series offers users performance-focused features for speed, power, accuracy and durability in a compact design.

The Hardinge Group is also expanding its spectrum of machining centers by introducing the Bridgeport GX 600, GX 800 and GX 1000 VMCs. Positioned in the center of Bridgeport's machining center portfolio (above the XV-Series and below the XR-Series), these performance-focused machines offer mold and die manufacturers, as well as precision engineers in the automotive, aerospace, medical and general engineering sectors optimum capability and functionality in a compact design.

For more information, please contact Hardinge Inc. at 800-843-8801 or visit [www.hardinge.com](http://www.hardinge.com).

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## **INDEX (above)**

Index Corporation offers the modular-design Ratioline turning and turn-mill centers. Cycle times are minimized by simultaneous machining at identical main- and counter spindles and up to 3 tool carriers. The machines also offer a Y/B-axis option for inclined, off-center drilling and milling.

The Ratioline Model G200 turning center is a machine for bar chuck and shaft work up to 60mm (2.37 in.), chuck size to 200mm, and 400mm (16 in.) part length. The G250 model is available with a heavy motor spindle as a tool carrier in conjunction with an 80-position tool changer, permitting complex parts to be produced from bar stock utilizing the “lost-end” process.

For more information please contact INDEX Corporation at 317-770-6300 or visit [www.index-usa.com](http://www.index-usa.com).



# product focus



## Okuma (below)

Okuma's LB3000EX SPACE TURN CNC Lathe is able to achieve machining dimensional change over time of less than  $\text{\O}5\mu\text{m}$ .

Users can achieve a maximum machining diameter of 16.14" and max machining length of 19.69". Up to 10 pairs of NC tailstock positions can be set, enabling continuous machining of workpieces with 10 different lengths without setup along with X and Z rapid traverse rates of 984 and 1,181. The LB3000EX can be equipped with Milling (M) capability, a sub-spindle (W), (Y)-axis, two bed sizes (500 and 1,000 mm) and two spindle sizes, making the machine capable of fitting your diverse application requirements.

For more information, or to contact your local distributor, please visit [www.okuma.com](http://www.okuma.com).



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**Mori Seiki (above)**

Mori Seiki's NT Series of integrated mill-turn centers fully combines a lathe with a machining center. The NT5400 DCG/1800S employs both DCG™ (Driven at the Center of Gravity) technology and the box-in-box construction of the NH Series horizontal machining centers, along with the turret with a built-in milling motor from the NL Series CNC lathes.

The NT5400 DCG/1800S maximum turning length is 70.8". The mill-turn center is in the 15" chuck size class and commands a maximum bar work diameter of 4.1". The NT5400 DCG/1800S contains a B-axis that uses a DD (Direct Drive) motor. The NT5400 DCG/1800S's maximum tool spindle speed is 8,000 min<sup>-1</sup> with a maximum spindle speed of 2,400 min<sup>-1</sup>. Additionally, the machine's ATC (Automatic Tool Changer) features a tool-to-tool change time of just 1 second. This model features a tool magazine that stores a standard number of 20 tools, in addition to a 40-tool and 60-tool option, for a total of up to 100 tools.

For more information, please contact Mori Seiki at 847-593-5400 or visit [www.moriseiki.com](http://www.moriseiki.com).

# product focus

## Mazak (below)

Mazak's Integrex e-500HS "e-machine combines the Integrex's CNC machining center/CNC turning center integration with the latest in information technology via Mazak's e-Tower. The e-Tower brings state-of-the-art communications tools, including a CCD camera, machine monitoring, and remote notification capabilities to the Integrex's "Done in One" multi-tasking productivity.

The Integrex e-500HS increases milling horsepower more than two and a half times (50 HP versus 20 HP), Y-axis stroke by more than two times (19.6 in. versus 9.05 in.), and maximum milling spindle speed by 2.5 times (10,000 rpm versus 4,000 rpm). Rapid traverse rates are between two and four times higher 1575 ipm in all axes compared to 300/250/380 ipm in X, Y, and Z. The Integrex e-500HS features a powerful 40 HP, 3300-rpm turning spindle for the first and second headstocks, and a 40-tool magazine is standard.

High precision as well as high productivity is also a hallmark of the e-500HS. A programmable NC tailstock is available for shaft processing, and a programmable steady rest moves with the tailstock to support long workpieces. Grease lubrication instead of way lube in X, Y, and Z axes results in a 90% decrease in oil consumption, making the new model environmentally friendly.

For more information, visit the Mazak website at [www.mazakusa.com](http://www.mazakusa.com).



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# think tank

## Pattern 30

$$\square + \square + \square + 1 + 8 = 30$$

$$\square \times \square \times \square \times 1 \times 8 = 2,520$$

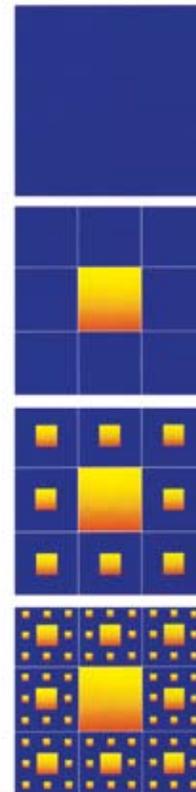
Five different single digit whole numbers add up to 30. Two of them are given as 1 and 8. Multiply those same five numbers together, and the result is 2,520. Can you determine what the other two numbers are?

### Squares in Squares

A blue square is divided into nine smaller squares, and the middle one is painted gold. The eight remaining blue squares are divided into nine, and the middle square of those is painted gold. If this process continues, indefinitely, can you work out the eventual area of the gold areas in relation to the original blue square?

The area of the one gold square of the first generation is simply  $\frac{1}{9}$  the area of the original blue. The area of the eight gold squares of the second generation is  $\frac{1}{9}$  the area of the smaller blue squares, which themselves are  $\frac{1}{9}$  the area of the original. The third generation finds sixty-four gold squares, each of which is  $(\frac{1}{9})^3$  the area of the original blue square. The pattern emerges:  $1 \times \frac{1}{9} + 8 \times (\frac{1}{9})^2 + 8^2 \times (\frac{1}{9})^3 + 8^3 \times (\frac{1}{9})^4 + \dots$

If you carry out the calculation to the 25th generation, you will find that gold covers an area equal to almost 95 percent of the original blue square. The area of the gold will come increasingly close to 100 percent of the original square, but will never reach total coverage



### Who's too hip to be square?

**R.C. Stewart** of ACG Equipment Finance in Mentor, OH; **John Mandell** of Point Technologies in Austin, TX and **Greg Roan** of BLP Products in Orlando, FL.

# postings



Noteable and newsworthy information and events for the month of February.

## American

Contract  
Manufacturers  
Show  
Austin TX  
Feb. 12 - 13  
[www.amconshows.com](http://www.amconshows.com)

## Vibration Institute:

Basic  
Machinery  
Vibrations  
Course

Tempe, Arizona

Feb. 26 - Feb. 29

[www.vibinst.org/vcal.htm](http://www.vibinst.org/vcal.htm)

## Machine Building: Drives & Automation Birmingham UK

[www.device-link.com/expo/macbuild08/](http://www.device-link.com/expo/macbuild08/)

Feb. 13th  
thru  
Feb. 14th

## Grapevine Design 2 Part Show

Grapevine  
(Dallas), TX

Feb. 27 - 28

[www.boothinfo.com/schedule](http://www.boothinfo.com/schedule)

## American Contract Manufacturers Show

Seattle WA

Feb. 19-20

[www.amconshows.com](http://www.amconshows.com)

## National Farm Machinery Show With Championship Tractor Pull

Feb. 13 - 16

Louisville, KY

[www.farmmachinery-show.org](http://www.farmmachinery-show.org)

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Brown patents  
universal  
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Seltzer  
introduced

Feb. 21, 1931

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## Mardi Gras

Feb. 5th

[www.mardigras.com](http://www.mardigras.com)

## Super Bowl Sunday

Feb. 3rd

[www.nfl.com](http://www.nfl.com)



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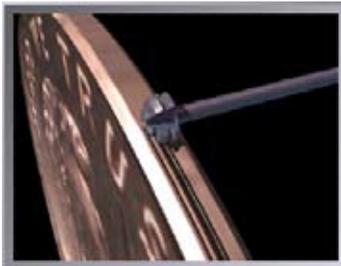
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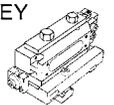
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## Unwrapping the Gift

I recently spent a day listening to Dr. Edward Hallowell, a psychiatrist who has written extensively about Attention Deficit Disorder, ADD, and its frequent partner, dyslexia. His seminal work, *Driven to Distraction*, is a must read for people who have children who live with ADD or adults who want to understand their own ADD clients. I had the pleasure of listening to Dr. Hallowell at the National Conference of the Association of Educational Therapists.

My wife Risa has worked with clients with ADD for 32 years. Noah Graff, who writes a lot of this magazine, is a classic ADDer, and I exhibit some of the traits, according to Risa, so listening to Hallowell talk about “unwrapping the gift of ADD” resonated.

Hallowell, a Harvard graduate and M.D. has ADD and dyslexia and is still a slow reader. But he’s written a dozen books, and can lecture for hours without notes. Albert

“Almost every person I know is touched closely or indirectly by a child or adult with ADD.”

Einstein probably had ADD and dyslexia. He was famous for his request to “please repeat very slowly.”

Hallowell has two children who have been diagnosed with ADD, so he is a native, not a tourist, in this world. All the data indicates a strong genetic strand with studies on identical twins, separated at birth, showing a 60 percent likelihood of them having similar ADD behavior.

Hallowell’s gift is his ability to demystify ADD and re-label it as a set of positive attributes, particularly for those who understand it, and harness it to work for them. His metaphor for the child with ADD is “it’s like having a Ferrari engine with Chevy brakes.”

This is particularly apt for boys, who are more commonly diagnosed. Girls probably have comparable numbers of ADDers, but are often misdiagnosed as being bi-polar or depressed. Their metaphor is “my brain is like a butterfly darting up and down in need of a net,” according to Hallowell.

What Hallowell has found in his practice is that the person with ADD, properly diagnosed and treated, usually in the form of an amphetamine like Ritalin, can tap into an energy and creativity that have been overwhelmed by a lack of focus and distractedness. He sees the drugs working like eyeglasses.

They work well in 80 percent of cases.

Stimulants like Ritalin and its various pharmaceutical variations, have enabled huge numbers of people to get a hold of their symptoms and turn around their lives. In the bad old days before ADD was readily diagnosable, millions of kids were termed incorrigible fidgeters, daydreamers or fools. Because they couldn’t concentrate long enough to do homework or take tests, impulsivity led kids with ADD to be called troublemakers. But with medication, good channeling and understanding at home and in school, the gifts of curiosity and energy can emerge from the guise of ADD.

David Neeleman, CEO of JetBlue, diagnosed with ADD at the age of 42, believes his hyperactive nature is responsible for his creativity and energy leading to the company’s huge growth. Billionaire Charles Schwab, CEO of the successful online trading company, has also been diagnosed with ADD and dyslexia.

According to Hallowell, many people with undiagnosed ADD end up depressed because they feel out of sync with the mainstream and feel dumb because they lack focus to do school work. When their ADD is diagnosed, treated and re-labeled as a “gift that is hard to unwrap” and more like an itch that wants to be scratched than an intellectual deficit, it becomes manageable.

So why write about ADD in an Afterthought column? Almost every person I know is touched closely or indirectly by a child or adult with ADD. The shame and fear still persists today, and ADD is still hugely unaddressed. Untold pain and anguish could be relieved by treatment and understanding. I know the machining world is a microcosm of the wider world, so it is loaded with folks with ADD and dyslexia. May all our “gifts” be realized.

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