



# The Gear

Nov 2003

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Article deadline for "The Gear" is the fifteenth of the preceding month. Trial subscriptions are available to persons interested in membership. Send articles to: Andrea Cole Fyhrlund, Editor, 126 W. Chestnut St., Port Washington, WI, afyhrlund@ameritech.net. Trial subscriptions & address changes to Gina Janke, 1801 Newberry La., Racine, WI 53402, [gina.janke@swe.org](mailto:gina.janke@swe.org)

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*Serving the 86 Members of the Wisconsin Section, and Its Supporters*

## **"President's" Corner – By Andrea Cole Fyhrlund, Wisconsin Section Newsletter Editor**

I hope this November's newsletter finds everyone doing well. This tends to be the beginning of a very hectic but fun time of year for my family and me, with 3 birthdays to celebrate in addition to the holidays. Even though I try to be better prepared each year going into this season, I find myself in the same situation: Wishing I had more time. I hope that you and yours have an enjoyable Fall and holiday season!

**Region H Conference is coming!** It is geared toward students and professionals, and will be held from Feb. 6 – 8 at UW-Madison. Here are a few of the events that are planned:

### Events:

- Interviewing, Financial Planning sessions
- Alternative Careers for Engineers
- Yoga, Self-defense
- Project Management
- Campus & industry tours
- Career fair

### Entertainment:

Madhatters performance at banquet  
Hawaiian theme party, casino games

Cost is \$30, \$120 including hotel (Concourse Hotel in the Governor's Club!), \$70 if you share a room with someone.

For more details, go to: <http://www.cae.wisc.edu/~swe/Regionals2004/index.html>

Support for production of this newsletter provided to the Wisconsin Section by Rockwell Automation and Westbrook Engineering



## **Volunteers Needed!**

Interested in being involved? Here's your chance! Consider these great opportunities:

- We have what we hope is a fun year outlined at [http://www.msn.fullfeed.com/~swewi/upcoming.htm!](http://www.msn.fullfeed.com/~swewi/upcoming.htm) We would be interested in help with two meetings in Milwaukee and one in Madison. In Madison we are hoping to plan a family event, so ideas on that are particularly welcome. If you are interested in meetings elsewhere in the section, also let us know. Email to [swewi@idcnet.com](mailto:swewi@idcnet.com).
- The 2004 National Conference will be in Milwaukee! Most of it is planned, but there's still a chance to participate. Contact Abby Peele [Abigail.peele@med.ge.com](mailto:Abigail.peele@med.ge.com) for more information.
- There are also opportunities at the national level. The Society of Women Engineers will be the lead society for National Engineers' Week (E-week) in 2006. If you want to be on the steering committee, you can contact Patti Garland at [patti.garland@swe.org](mailto:patti.garland@swe.org).
- Other national and regional volunteer opportunities are posted regularly to the mailing list RegionH-Business. See <http://www.msn.fullfeed.com/~swewi/moreswe.htm> for more on mailing lists.
- Judges needed for the Future Cities Design Competition regional runoff, Milwaukee, Saturday morning, January 24. The Wisconsin Section will present a special award. Please email to [swewi@idcnet.com](mailto:swewi@idcnet.com) if interested.
- The national Bylaws and Procedures Committees will need additional volunteers. Please consider assisting these teams.

### **For BYLAWS:**

If you are interested in assisting the committee, contact Susan Best ([susan.best@swe.org](mailto:susan.best@swe.org)). Indicate if you have an interest in a particular area (student issues, template / standard bylaws, etc.), or are willing to help in all areas needed.

### **For PROCEDURES:**

The procedures committee is responsible for reviewing and editing all of the Society's procedures, for example board, council and elections procedures. We are NOT responsible for writing the procedures. We ensure that these documents are not in conflict with each other or with the Society's

bylaws. Our team needs people who are familiar with SWE's bylaws and processes or people who may have created procedures or bylaws for other organizations. We also need people who are simply good at editing and grammar. If you are interested in assisting the committee, please contact Sarah Corbin at [sarah\\_corbin@baxter.com](mailto:sarah_corbin@baxter.com).

## Considering an MBA? – Wine Tasting Event



The Grainger Center for Supply Chain Management at the University of Wisconsin-Madison School of Business is hosting a free Wine Tasting **Thursday, November 20 from 6:30-8:30PM** in the Capitol Conference Room Of Grainger Hall. Students, faculty, and staff will be on hand to pour wine and answer your questions. To learn more about the Grainger Center program visit them on the Web-- [www.bus.wisc.edu/granger](http://www.bus.wisc.edu/granger).

**Please RSVP** by 5PM-Monday November 17, 2003 - [tbouras@bus.wisc.edu](mailto:tbouras@bus.wisc.edu) or 608.262.1941

**Section Website:** <http://www.msn.fullfeed.com/~swewi>

Check out the website for lots of useful SWE information! Do you have other ideas? Let us know! We'd love to add even more material to the site! Send e-mail to [swewi@msn.fullfeed.com](mailto:swewi@msn.fullfeed.com).



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*"Within minutes of my first visit to the Grainger Center, I was extremely impressed with the caliber of the students and faculty. They were all collectively committed to making quantum improvements to supply chain processes. Their attention with industry is second to none."*

—Maureen Strahan  
VP Global Supply Operations  
Hewlett-Packard

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## **Women In the Engineering Industry: by Kaitlin Duck Sherwood**

*Editor's Note: The following is Part 2 of an article written by Kaitlin Duck Sherwood.*

Women In the Engineering Industry  
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Being a woman in engineering industry is different from being a man in engineering industry. Not better, not worse, but different. I'm going to try to talk about the things that are going to annoy you and help you when you get out to The Real World.....

### **Speak Up!**

In general, you should not wait for people to poll you for your opinion, for your status, for your needs and desires. You have to speak up and tell them yourself. There is a scholarship in General Engineering - the Elizabeth Ruff scholarship - whose description basically says that it is for sweet, unpretentious, unassuming girls. (Yes, it really does say, "girls".) I read the criteria and said, "Whoever wins this has my deepest sympathy. This is practically a recipe for failure in the engineering workplace." Especially in meetings, you can't wait for them to say, "Now, Marilyn, how do you feel about this?" You'll have a long wait.

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### **Expressing Certainty**

Also on the subject of pretentiousness, I have a friend who observes that if a man thinks the answer is three, he'll say "The answer is three." If a woman knows the answer is three, she will say, "I think the answer is three." Women tend to be more tentative. This is not necessarily bad - you may end up with higher credibility than the man who keeps insisting that the answer is three when it is really is seventeen... but you might look wishy-washy.

### **Don't Take It Personally**

Men also take things a lot less personally. They will yell and scream and call each other bloody idiots over a technical point, then go have a beer together. The fact that someone doesn't like a particular idea of yours does not necessarily mean that they don't like or respect you. They just may lack diplomacy. If someone is in your face, it's probably because he or she feels responsible for but not in control of something. This is a deadly combination. If some guy gets nasty with you, do what I do: assume he had a fight with his wife, got into a fender-bender, has to come up with \$3000 to fix his roof, and left his wallet at home. Then feel sorry for him and see if you can make his day better.

This can have some very nice outcomes. This guy who was famous for being abusive barged into my office, just livid, and started beating on my desk with his fist. "Your goddamn group can't do shit right @#\$\*((R\*@\$#%(\*#\$&!" I let him rant and rave until he wound down, then said, "Yeah, well, we very well might have screwed up, let's take a look at it."

That stopped him dead in his tracks! He was so braced for a fight that he didn't quite know what to do when I wouldn't fight back. We looked at the code, and it turned out that he had screwed up. I showed him what he had done wrong, explained what he needed to do to fix it, and told him that if he would go fix it right away, I'd stay late to personally oversee my group's part of it so that it would be ready to move on first thing in the morning.

It was priceless! He just sort of slunk away and never gave me any trouble after that. My friend Anne reports a nearly identical occurrence with Customer From Hell, so it wasn't just me.

### **Accept Blame Properly**

Accepting guilt can be really useful. Not just for defusing cases like that jerk, but also for establishing credibility. If you say, "Yeah, I screwed up" when you do screw up, then when you say, "No, that was not my fault", people will believe you. Now, when you do accept blame, DO NOT GROVEL. DO NOT MAKE EXCUSES. I worked with a woman who would spend five minutes apologizing for a screwup... and then make the exact same screwup next week. Contrition and excuses are not useful: I want the problem resolved.

When accepting guilt, do the following:

Make a brief statement of contrition,  
accept guilt,  
explain briefly how you are going to solve the immediate problem,  
and explain how you are going to prevent this from occurring in the future.

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For example:

"I'm sorry,

I didn't clearly explain to Mike which include files to use.

I will personally go rebuild the kernel now - it should be ready at about 4:30.

I'll also go put a comment in the README file about which include files to use."

(Note that if a subordinate screws up, you accept the blame as being your fault. If they did something wrong, you didn't train them right, you didn't give them adequate instructions or equipment or something. If you blame them you look like a whiner. If you protect your people, however, they will follow you through the depths of hell.)

### **Insecurity**

Now, some people get really nervous about the idea of admitting guilt, being afraid that it will make them seem less competent. Here's what you need to know:

#### **#1: Everybody screws up.**

Everybody. It happens all the time. I know you are all freaked because you've all had profs who gave zero partial credit on the grounds that if the sign is wrong, the bridge will fall down. This is true, but there are an enormous number of checks in the real world to make sure that the sign is not wrong.

You design, then simulate, then redesign, then simulate again, then prototype, then test, then redesign, etc. etc. etc. Engineering is an incredibly iterative process, and it is that feedback loop that keeps the bridges from falling down, NOT that everybody but you does everything right the first time.

#### **#2: EVERYBODY is insecure about their job performance.**

I read an article in Psychology Today when I was in college that interviewed people at all different levels of corporations. They were surprised to find that the higher you went in a corporation, the more successful people were, the more insecure they were about their jobs! There was a real strong fear among high-placed people that someday they'd be found out! That everybody would suddenly realize that they were totally clueless! Moral: nobody has a clue, so relax already.

#### **#3 The most successful people are NOT those who screw up the least.**

The most successful people are those who learn best from the screw-ups they make, and act fastest to make amends. I was at a startup that was very careful about who they hired. They only tended to hire people who had always had raging successes. Unfortunately, this left them ill-equipped to deal with a troubled project. My friend Anne says, "I have been on some large, highly successful projects, but I didn't learn as much from them as I did from the small, disastrous projects (which failed because they were small and we thought we didn't have to do all the stuff you have to do for a big project -- WRONG!)"

I know someone else who observed that at Intel, the people who were on projects that failed miserably eventually ended up as corporate VPs - because they had learned so much more than their colleagues whose projects had succeeded.

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It's very difficult to examine a success and figure out why it went right. It is much easier to take a failure and figure out why it went wrong. So look at your screwups as valuable learning aids!

### **Measure Your Job Performance**

Now, this doesn't mean you shouldn't pay attention to your job performance. It is a really good idea to figure out some way of measuring your performance - something, anything. My friend Anne quoted Gilb's law (from the book *Peopleware*): any measurement you make is better than no measurement at all. I'd advise as a minimum generating weekly status reports (regardless of whether your boss asks for them or not). Mention what you are working on, why it has taken you longer than you thought (because it always does), what would help you in terms of equipment, cooperation from other departments, etc.

### **Benefits of Being Female**

There are some benefits of being a woman surrounded by men.

### **Men Like Women**

Most men like women. It's a strong evolutionarily favorable trait. So all other things being equal, you may well get more cooperation from men than they would give to other men. Part of this also is that men can be really territorial around other men. They can play all kinds of status games with each other that can make them real jerks to other men. Women by and large not only don't play those games, they are oblivious to the fact that they are going on. This means that men can usually relax more around women.

### **Being Remembered**

Because there are relatively few women around, if you are the only woman in a meeting of thirty, guess who the Vice-President is going to remember? Yes, you will be more exposed. Yes, your screw-ups will be more visible. (I don't remember who said it, but I liked the quote: "Women have not yet achieved the right to be mediocre.") But your successes will also be more visible.

### **Exploiting the Underground Economy**

Women also tend to be more empathic and more diplomatic, two traits that are highly useful in collaborative efforts. Companies are all dependent upon what I call "the underground economy". This is an economy based on personal ties that has nothing to do with the formal power structure. This is what I invoke when I get on the phone and say, 'Psst! Hey Dottie! I got a sputtering system down, and I need some oxide wafer to qual it and bring it back up. The fab manager is breathing down my neck, but hotwall is down and can't get me any wafers. Can you get me about twenty oxide wafers?' And then Dottie shows up five minutes later, slips me a box of wafers, and says, "Here you go. Don't ask where I got them." (It isn't that she stole them from somewhere, it's that company policy frowned upon hoarding wafers. I presume that she knew a technician who had some oxide wafers in his or her desk that were left over from some experiment, and she called in a favor from that tech, and I ended up with wafers.)

This kind of thing happens all the time in The Real World. Frequently the unit of exchange is not

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physical, it is information. Also, exchanges don't even necessarily stop at company boundaries. I have friends call me up and say, "My boss is afraid to use an aluminum casting for this part because he says it won't be waterproof. What the hell is he talking about?" Or I call up friends and say, "Honey, sweetie, darling, I'm having trouble with my computer and I think it has to do with file locking; could you explain to me again how file locking works?"

I think that all other things being equal, women tend to be better networkers because they do tend to pay attention to other people's needs.

### **The Rules**

Women have a lot fewer rules that they have to follow. Men are practically handed a rule book at birth and told, "If you break these rules, you will be Not Taken Seriously." Women used to have a whole set of really rigid rules as well, the whole barefoot and pregnant routine, uncomfortable shoes, etc. That finally became so unbearable that The Rules got challenged to the point where it is common for them to be broken. The remnants of The Rules still linger, and give women all kinds of grief, but if you think you are oppressed, think about all the Rules men have to follow!

If you weigh less than 200lb and are less than 6' tall, you may not wear pastels.

You may only wear a skirt or dress on Halloween.

You must wear a tie to formal occasions.

You may not be neutral about The Super Bowl.

You must always have a job.

You may NOT stay home and raise kids.

You may not touch another man, unless your are thumping him on the back, shaking his hand, punching his lights out, or participating in a sporting event.

You are allowed to exhibit only one feeling: blinding anger.

For example, I have one friend who had large sums of money in the bank and didn't like his job. I told him he ought to quit his job and go travel around the world. He rather liked the idea, but couldn't. He absolutely could not bear the idea of someone asking him, "Where do you work?" and not having an answer. Men are starting to notice that they have all these Rules, and are starting to rebel: asking for custody of children, staying home, wearing pink, but as we know, it is a slow path to equality.

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## **Advertising Information**

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For more information, contact Lisa Henn ([lisa.henn@swe.org](mailto:lisa.henn@swe.org), or (608)241-3496)

## Upcoming Events!

- Nov. 13, 5:00 PM..... WE Energies, Pleasant Prairie Plant Tour!
- Nov. 20, 6:30-8:30 PM ..... Wine Tasting Event sponsored by the Grainger Center for Supply Chain Management! See p. 2 for details.
- Feb. 6-8..... Region H Conference, Madison, WI. See p. 1 for details.



### *About The Society of Women Engineers...*

#### **Our Principles:**

The Society of women Engineers is a non-profit organization dedicated to informing young women, their parents, counselors, and general public, of the qualifications and achievements of women engineers, and the opportunities open to them.

#### **Mission:**

- Stimulate women to achieve full potential in careers as engineers and leaders.
- Expand the image of the engineering profession as a positive force in improving the quality of life.
- Demonstrate the value of diversity.

#### *Address changes to:*

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