

***Paving the Road to Success, Part One***

by Sue Dorward

In early 2007, a college student asked me to recommend reading material that would help her prepare for a successful career as a woman in engineering. Despite my experience as a technology executive and now a coach, I drew a blank. There is ample literature encouraging girls to pursue science and engineering and about the barriers that we face in academia and industry. There are organizations, networking opportunities, and even specialized training programs to support women in science and engineering. But to my surprise, I knew of no canonical book or publication to recommend to this student. (Now, thank goodness, I can recommend *Women in Engineering* magazine!)

I set out to collect advice for the next generation of women engineers, to help support them as they face challenges in the workplace. I asked experienced women engineers, ***"What is the best career advice that you ever received, and how did acting on this advice contribute to your success?"*** In this first installment, a diverse group of 17 successful, experienced women is reaching out and supporting the next generation. They are passing on the words of wisdom that inspired them, and helping others envision and create their own successes.

As you read through the advice, keep in mind that these are not silver bullets intended to help everyone at all times. You may wholeheartedly agree with some of the advice while questioning the value of other advice. Some may be useful to you in your current situation, and some may not. However, all of the contributors are sharing advice that they consider to be the most valuable that they were ever given.

Do you have advice that you would like to share? Please contribute to this initiative by sending your best advice to [sue@sudocoaching.com](mailto:sue@sudocoaching.com).

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***"Don't compare your insides to someone else's outsides."***

- Jasmine Strong

I was just sixteen years old when I started my first job as a professional engineer, working on a new design launch with a team of much older, more experienced colleagues. They all seemed implacably calm and collected at all times. By contrast, I was a mass of fear and panic, racked with doubt and with no idea

what was going to happen next. What if my ideas were flawed? What if the new design failed?

Someone told me that I was comparing my insides to their outsides, and that in fact everyone was sweating over the new design launch. He told me that from what he could see, I did not seem to be in turmoil either. To him, I looked just as calm as everyone else.

I learned that I can be aware of my own internal state, but I can only perceive others' external states. That was a breakthrough for me. Now I am the totally centered Zen master you see before you!

Most feelings of inadequacy come from comparing your internal state to someone else's external state. Recognize the power that comes from the realization that everyone else has the same problem you do.

*[picture here] Jas Strong is an engineer at large. Over the course of her eclectic career, she has skirted the hardware-software divide, working on projects ranging from the world's smallest digital TV receiver to the world's largest supercomputer. When she is not building things, she spends her copious spare time on motorcycles, photography and music. She lives in San Francisco with a solar panel, too many old cameras and a ridiculous quantity of Lego.*

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***"Be true to yourself."***

- Stacey Morrison

Most people are intimidated by my intellect. I try not to flaunt my intelligence, but I am not afraid to let it leak out. I have decided that I am not going to hide my intelligence just because, for example, someone does not like the fact that I use huge words. (I tell them to get themselves a dictionary and expand their vocabulary!) I am also very good at reading people, picking up signals from their body language and voice inflections that others miss. This can intimidate people because they think I am reading their minds.

I am not an in-your-face person, and I try to tone down my personality until people get to know me. However, I have decided that I cannot be friends with everyone, so I just try to be friends with people who are receptive to me. I am not going to bend over backwards for someone who has decided that I am the enemy. Relationships are definitely a two-way street and I can only do so much

until the other person reciprocates.

If I am true to myself, then people will like me for me. If others do not like me for myself and I have to pretend to be someone else for them to like me, I lose a part of myself. Having the confidence to be myself makes me a better person.

*[picture here] Stacey Morrison has been working in information technology for over 18 years. She was born in Biloxi, Mississippi, but considers Gwinn, Michigan her hometown. She received a BS in computer science from Michigan Technological University and an MS in computer science from the University of Houston-Clear Lake. Stacey is currently working on her Doctorate of Management in Organizational Leadership from the University of Phoenix. Her dissertation topic concerns the effect diversity has on communication issues between managers and employees in the aerospace industry. Stacey lives in League City, Texas with her daughter and orange tabby/Persian cat.*

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***"Make sure people know the value of your work."***

- Lisa Crispin

Thinking about making myself visible to others helped me become a leader. Back when I was a programmer in the early '80s, one of my first managers told me that an important aspect of leadership is making sure people know about the value you have contributed in your work. He said, "Leadership means making sure people know what you do."

Initially, this sounded like tooting my own horn. Like many women, I am not comfortable with that idea, especially given my natural timidity. With time, I began to understand what he meant, and I found a variety of ways to make others aware of my accomplishments and skills.

Sometimes I send a regular, brief email report to management about what my team and I have accomplished and how it benefits the organization. Sometimes I get up in front of a meeting and talking about some new feature or process and what I or my team contributed to producing it. Sometimes I simply have the courage to express my opinion about an issue or take an idea and run with it.

I currently work on an 'agile development' team that uses SCRUM and Extreme Programming practices. Every morning we have a 10-minute standup meeting where we each say what we did the day before, what we plan to do today, and what obstacles are in our way. I think it helps us as a team to know what each

person has contributed each day, and how we might be able to help teammates. We are all visible, and we are all leaders. I think this is just another aspect of the advice I got all those years ago.

I enjoy sharing my knowledge and experiences with others through giving tutorials at conferences, writing articles and contributing on mailing lists. I could not do these things if I had stayed in my dark little corner, working away but not telling anyone about it.

[picture here - choice of 2] **Lisa Crispin** co-authored *Testing Extreme Programming* (Addison-Wesley, 2002) with Tip House, and is now co-writing *Agile Testing* (Addison-Wesley, 2008) with Janet Gregory. Lisa regularly contributes articles about agile testing to publications such as *IEEE Software*, *Better Software* and *Methods and Tools*. She leads tutorials and workshops on agile testing at conferences in the U.S. and Europe. Lisa is currently freelancing as a tester at ePlan Services Inc. in Denver, developing web-based financial applications using XP and Scrum. For more about Lisa's work, please see her website, <http://lisa.crispin.home.att.net>.

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**"Be your own cheerleader."**

- Peggy Ward

In my first role at my company, I had several successes and accomplishments for which I was expecting a promotion. I thought that my manager was keeping track of my accomplishments and recognizing my great work. When the time came, though, he did not promote me. When I told him of my surprise and disappointment, he advised me, "You need to be your own cheerleader. No one else will do it for you."

From then on, I ensured that my manager and others I worked with knew of my accomplishments. I forward e-mails with notes of praise or thanks I received. I also keep a file with notes, comments, and words of praise from others, to review from time to time to lift my spirits when I doubt my own performance. I have no trouble now in letting management know what good work I am doing. I have found that they appreciate the information, especially electronically, so that it is easier for them to include these items in performance reviews.

It is important to understand all of your contributions, big and little, in all aspects of your job - from actual performance against objectives to side projects or efforts such as informal mentoring. They all contribute to leadership development.

[picture here] **Peggy Ward** works as Manager of Corporate Sustainability at Kimberly-Clark Corporation. She leads global advancement of the company's sustainability strategy. This position places emphasis on developing and communicating Kimberly-Clark's sustainability strategy plan to internal and external stakeholders. Peggy earned her bachelor's degree in chemistry from Colgate University and a doctorate in physical chemistry from the University of Pennsylvania. She also conducted postdoctoral studies at the Université du Maine in Le Mans, France. Peggy serves on the board of directors for the Emergency Shelter of the Fox Valley, which provides temporary shelter to homeless individuals and families in a safe environment.

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***"Do not be afraid to ask for help: it's a sign of intelligence, not weakness."***

*- Mary Fernandez*

AT&T has a graduate fellowship program that pairs each recipient with an employee mentor. As a recipient of one of these fellowships, I was assigned an exceptional mentor who helped guide me throughout graduate school and into my career as a researcher. To this day, I value our relationship and his advice.

Having learned the value of mentoring, I became a mentor myself, to pay back the enormous debt that I felt to my own mentor. For the past 10 years, I have participated in the MentorNet e-mentoring program ([www.mentornet.net](http://www.mentornet.net)), in which I corresponded with students by e-mail, helping them navigate their ways through their higher educations and early careers.

To my surprise, I have found that I benefit from mentoring as much as my student protégés! To help others with their careers, I have had to better understand my own career by identifying those behaviors that contributed to my successes and my failures. Most of all, mentoring has made me a better listener.

I encourage every student that I meet to find a mentor, in informal and formal settings. There is no substitute for a good mentor in life, whether professionally or in any other dimension.

[picture here] **Mary Fernandez** works as Principal Technical Staff Member in Large-Scale Programming Research at AT&T Labs - Research, where she focuses on problems at the juncture of programming-language and database research. She is married and has two energetic daughters. To keep up with them, she is a devoted student of Iyengar yoga.

***"When someone else's attitude causes a problem that holds you back, you have to help him get over it."***

*- Elizabeth Ross*

When I was first promoted to a management position, I was young for the job and working with people who did not want any changes to how they worked. Some people did not like my style, some did not like being held accountable (a new experience), and others felt they would have been a better choice for my job.

A friend saw I was struggling and advised, "You can go sulk because they are not being fair to you, or you can figure out a way to make them come around." She made me realize that even if someone else's attitude (about you being a woman, younger, or otherwise threatening in some way) is causing a problem for you, it is still your problem because it is keeping you from being successful.

After that conversation, I spent a lot of time working on relationships with my colleagues, not just on the tasks we had to complete. I even baked cookies. It was not a one-time activity though. Even though I am right to assign a task or even demand that something be done, I always have to find a way to approach the situation with the person in a way that they would be comfortable with as well.

I think about that advice all the time. I always have a choice to act and determine how I will act. I remind myself to look at the situation from other perspectives. I am not always successful, but I keep trying.

*[picture here] Elizabeth Ross works as a Director of Technology Projects Execution at AMEC, an international project management and services company that designs, delivers and supports client assets for customers across the public and private sectors. Elizabeth lives in Brookline, Massachusetts.*

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***"If you want something, ask for it. Don't be a Sleeping Beauty!"***

*- Ulrike Pfeffermann*

This advice has worked well for me, but I would like to illustrate it by sharing the stories of a couple of my co-workers who learned it the hard way.

Years ago, I worked in a reasonably diverse IT department. The manager repeatedly assigned one of my female colleagues tasks that helped her advancement. Another female with similar capabilities felt overlooked and confronted the boss, saying, "Why do you always give the challenging work to Daisy?" He replied simply, "She is the only one in the staff who came to me and asked for it!"

Daisy later explained to me that she wanted to be promoted into management. She had met with her manager and asked for his commitment and support to help her realize her goal. She asked him what skills she would need to develop in order to be considered management material, and requested that he give her "stretch" assignments accordingly. None of the other staff had made a similar request, so the manager did not feel that he could or should stretch them in the same way. The other women in the department had sat there like Sleeping Beauty waiting for Prince Charming, rather than taking the initiative.

As another example, a colleague wanted to move back to the UK so she accepted a position in London. She was from the North of England and ultimately wanted to move there. Less than a year later, an appropriate position in the North became vacant, and she "hoped that they would think of her," since her managers knew that was where she was from. However, they never approached her about the position and gave it to someone else. When she shared her frustration with me, I asked her whether she had ever told anyone in her company that she wanted to move to the North, or if had she spoken up when she knew about the vacancy. She had not.

With my encouragement, she shared with her manager her desire to move to the North, and asked him and others involved in job assignments to keep this in mind. Six months later, the position opened up again she got the job. Why was she not offered the job the first time? The management knew where she was from, but they assumed that she wanted to live in London and also did not expect that she would want to move again so soon. As one manager explained, "I would not have dared to do that to my own family, so it did not occur to me that you would want to move on so quickly." They were trying to be sensitive to her needs and goals, and had made reasonable assumptions about what these were. If she had not explicitly requested to move to the North, they would have continued to assume that she was happy in London and not transferred her. They could not read her mind: she had to speak up!

*[picture here] Ulrike Pfeffermann has over 25 years experience in all areas of IT. She earned a Mathematics degree from the Technical University in Darmstadt, Germany, then worked for 20 years at Dow Chemical in Germany, the US and Switzerland. Ulrike*

*was CIO of Gate Gourmet, a Swiss airline catering company, before joining Sun Chemical in 2005 as CIO Europe. In 2006, she was promoted to CIO and moved to New Jersey. While as CIO she covers all aspects of IT including outsourcing and offshoring, she still is a systems analyst at heart.*

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***"Always ask for more."***

*- Suzanne Ronca*

When negotiating for a new job, always ask for more. We (as women) often under value our worth in the workplace, while our male peers, often over inflate their value. Furthermore, it is not a sense of greed which drives this "ask for more", but rather a reflection of corporate society, which measures employee value in terms of salary and benefits.

During a job change many years ago, I asked for a 30% salary increase along with many benefits - like an extra week of vacation - and the hiring company agreed. Wow! I was psyched.

Then I spoke to my mentor, who replied, "Before you accept the offer officially, ask for one more thing." When I told him that they had already offered more than I had hoped for and that I did not want anything else, he explained, "It's not about what you want; it's about proving that you are valuable to them. Ask for anything - a company car, a signing bonus, whatever - just ask for something."

I thought it over and decided that my new employer should pay for my new gym fees, as I would need a new membership in the area where I was working. When I was finalizing the acceptance over the phone with my hiring manager, I told him, "Oh, just one more item. I will need to change my gym. Do you have a corporate gym membership? If not, that's going to cost me an extra \$50 per month more plus an initiation fee." He replied, "I can't offer you a gym membership, but how about this: I'll throw an extra \$1,500 onto your salary if you'll accept our offer right now."

I smiled and did a little jig (which he could not see through the phone) and replied calmly, "Looks like we have a deal. When do I start?"

*[picture here] Suzanne Ronca is Director of Business Development at McAfee Inc., where she is responsible for driving partnerships and revenue growth with various technology solutions and services providers. While at McAfee, Suzanne has also held management positions in Sales, Sales Engineering and Professional Services. Prior to*

McAfee, Suzanne was responsible for Security Planning & Information Management in AT&T. Suzanne has a B.S. Computer Engineering from Lehigh University, a MS Electrical Engineering from University of Colorado, a Master's Certificate in Project Management from GWU, and an Advanced Executive Education degree from UNC. She has received numerous awards and holds a U.S. patent for a real time fraud monitoring system.

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***"If you see something that needs doing and it is something you want to do, just do it."***

*- Judy Clapp*

This advice has worked well for me over the years. For example, after seeing that the company President was having trouble writing a book, I volunteered to work with the person assigned to help him. It turns out that this person was not particularly interested in working on the book, so he faded from the picture. As a result, I got to work with the President and received a nice commendation in the book. In addition, the President got to know me and my capabilities, which led to other interesting assignments.

As another example, I saw the early emergence of the Internet and browsers as an opportunity to share knowledge, so I started an "Experience Factory" where I pulled together the writings that people had done and made them available online. This became a model for sharing in our company.

*[picture here] **Judy Clapp** has had a long career in software and systems engineering, spanning development of early real-time systems to management of teams doing research in artificial intelligence. She began her career at MIT, moved to Lincoln Laboratory and then to The MITRE Corporation, where she has worked for many years. Although mostly retired, she has continued to use her experience to write case studies and share lessons learned about large complex systems engineering projects. She has won awards for her leadership, most recently a Gold Medal from Smith College and the Society of Women's Engineers Achievement Award.*

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***"Put a stake in the ground."***

*- Prof. Sami Rollins*

I was three years into a PhD program and still unsure about whether it was the right place for me. I had had some successes as a graduate student, but also lots

of frustration. I did not feel like I was getting enough feedback, and I just did not know where my graduate career was going. In the back of my mind, I kept thinking that I wanted to leave with a Master's and move on to a job that would give me more direction.

I decided to take a summer internship at an industrial research lab. My manager gave me a general area in which to work, but he also allowed me a reasonable amount of freedom in choosing my project. As a result, I spent the first few weeks of the summer doing background research and coming up with wild ideas. Each time I met with my manager, he would give me feedback and I would immediately think up some new direction for the project. After a few iterations, he decided it was time for me to stop thinking and start working, and told me that I needed to put a stake in the ground. I think he felt that we had come up with many valid ideas; I just needed to pick one and start working. So I did, and I had a productive summer.

More importantly, when this advice finally sunk in I realized that it applied not only to my summer job, but to my entire graduate career. My problem was not that I could not finish my PhD. Rather, I was having a hard time because I simply had not committed to completing the program. When I returned to school the following fall, I had a new sense of commitment to the program. I knew I was going to finish, and I needed to shape a dissertation topic that would get me there. I realized that my topic did not have to be perfect, and that I did not have to solve all of the world's problems with my research. I picked a project, put my head down, and got to work. Two years later, I had a PhD.

Interestingly, I think this was the best advice I ever took, but also the best advice that I do not apply often enough. As a junior faculty member, I spend too much time worrying about whether I should take on a particular project or task and not nearly enough time committing to a set of projects I can handle and putting my head down to do the work.

*[picture here] Sami Rollins works as an Assistant Professor in the Department of Computer Science at the University of San Francisco. She received her BA from Mills College and her MS and PhD from the University of California at Santa Barbara. She taught for three years at Mount Holyoke College prior to joining the faculty at USF. Sami's expertise is in networking and distributed systems, and she is currently researching data and energy management for mobile systems. Sami teaches networking and distributed systems, introductory computer science, data structures, and algorithms. She is also extremely committed to increasing the participation of women in the field of computer science.*

***"Don't attempt to boil the ocean or solve world hunger. Get it done in manageable pieces and demonstrate success."***

*- Patricia L. Sampson, PMP*

This advice was given to me over 25 years ago. At the time, I thought it was simply good project management. I later realized that it was a corporate survival skill.

Early in my career, I was on a market research team for a large telecommunications carrier. Although my formal education was in marketing, my IBM training in mainframe sales was the equivalent of a Masters in Computer Science and enabled me to "speak" both languages.

I was tasked with working with my IT colleagues to build a sophisticated corporate database, for Sales & Marketing to use for customer profiling, market research, target marketing, and lead generation. This was quite an undertaking for someone without any formal project management training. However, my very wise and seasoned manager gave me the best advice for tackling the project: "Don't try to do this all at once. Break it up into manageable pieces. That way, you'll be able to complete segments of the project and show successes along the way."

The advice to phase a project was good common sense; the suggestion to demonstrate progressive success was priceless!

*Patricia L. Sampson, PMP, is a marketing and sales operations professional specializing in accelerating customer acquisition and increasing customer retention. Her experience includes market development, product launch, and sales force productivity improvement in a number of organizations including PMOLink, AT&T Solutions, Timeplex, D&B, Western Union, and IBM. She has an MBA in Marketing from Fairleigh Dickinson University and a BA in Marketing and Management from Montclair State University. She is a certified Project Management Professional (PMP) and Six Sigma Green Belt. She is currently on assignment as a Marketing Project Manager at a leading Pharmacy Benefit Management company in northern New Jersey.*

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***"Pace yourself."***

*- Jennifer Grashel*

The best advice I ever got was given to me during my first few months after college. I was working as an instrumentation and controls engineer at a Fortune 100 chemical company. I cannot remember whether I was straggling in late or leaving early, but I remember walking down the hall with one of my coworkers, who would have been approaching mid-career at the time. I must have been expressing guilt about shunning my work, because he stopped me and said, "You know, you have a lot of years ahead of you. I have two words of advice for you in your career – pace yourself." I asked him what he meant, but he just smiled and repeated, "Pace yourself."

Years later, I have a better idea of what he meant. I have spent my career in a capital projects environment where the workload tends to be either feast or famine. We go from traveling like maniacs and having more work than any human being can possibly accomplish to a couple years later searching for cost savings and plant expense projects to occupy our time. If you are not careful, you can burn yourself out during those busy times. And if you don't take advantage of some extra playtime during the famine years, you won't be rested and ready for the next feast.

I always found it curious (and a nice perk) that the group I worked in was fairly undisciplined about start and stop times. The goal was to get the work done. If you could do that while working banker's hours, so be it. As I had the opportunity to be involved in more projects and get out in the field, I realized why the office worked the way it did: construction and startup take a lot of time, and travel makes you tired. So being an effective employee in the midst of construction, startup, and travel all comes back to ... drum roll ... pacing yourself.

I remember one particular stint where I was criticized for working too much. A six-month temporary assignment that turned into eighteen months when the lead controls engineer retired in the middle of the project. It was definitely feast time for me as I took over his role. A manager who took it upon himself to look after me would bug me regularly about my car being in the parking lot well after five o'clock too many times. Aside from asking him what he was doing at work that late, I would remind him that I was fine. I was pacing myself. I was stealing those hours back once or twice a month when I left at noon on a Friday to fly home for the weekend and did not return to work until noon on Monday.

For my work on that project, I earned two stock awards and a promotion, so my extra time and effort were worth it. I had my long weekends throughout the

project to keep me from burning out, and I even had the opportunity to take a little breather and work some banker's hours when I returned to the home office.

People may try to make us feel guilty for leaving early or coming in late occasionally, but the old adage about "all work and no play" really holds true. It all comes down to what it takes to maintain your effectiveness as an employee. So pace yourself, and do not feel guilty about it.

*[picture here] Jennifer Grashel is an engineer specializing in management of engineering and construction projects. Her experience includes process engineering, process control, product reformulations and launches, and project engineering from concept to startup in organizations including Union Carbide, Dow Chemical, and most recently the Ross Products Division of Abbott. She holds BS and MS degrees in chemical engineering from The Ohio State University.*

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***" Nobody is disposable -- the world is smaller than you think."***

*- Strata R. Chalup*

Working at MIT as a consultant for the EECS department, and later as Director for the Center for Cognitive Science, I had to deal with an enormously wide range of customers, from new freshmen to tenured professors to industry partners. The most valuable advice I received was from Alan Wu, the Director of IT for MIT EECS, who delivered it by example as well as verbally.

Back in the early 1980's, we were in the middle of the annual fall overload, when new students arrive, class accounts are set up, and a special 7x24 Network Operations Center was run to keep track of freshmen during Rush Week. It was hard to imagine a more busy situation, and this was my first experience with staffing during this particular time. Some of the other staffers and I watched with growing impatience each time someone came to the door of the operations area.

Alan would talk to the visitor as if he had all the time in the world. If he had to cut a conversation short due to a genuine emergency, he did so in a careful and deliberate manner, with a sincere apology for the inconvenience. If he were unavailable for a conversation at all, he would come and tell the visitor personally, ask for a quick summary of the issue, and try to set a time to talk again. During all of these conversations, Alan was careful to maintain a polite and moderate tone, even when the other person was already upset with whatever had occasioned their visit to the staff area. If the problem could

literally have been solved by reading a large and obvious sign in the computer lab, he had a way of explaining things calmly and then pointing out the sign almost as an afterthought, so that the visitor would not feel any humiliation.

During the wee hours of the morning, when things had slowed down to a manageable pace, Alan mentioned that he noticed me looking a bit frustrated earlier - a tactful understatement! He said, "You might have been wondering why I took the time to talk with people. It's because nobody is disposable. When you have been in the field longer, you will understand better. People that you think you will see just once and never again will turn up years later, where you least expect to see them. It's a small world out there."

These kinds of late-night conversations often take on a kind of mystical importance that one later realizes was lack of sleep, rather than a profound understanding of the universe. This time, however, the insight was completely correct. I have lost track of the number of colleagues, customers, conference panelists, and others whom I thought I would encounter just once and never see again, but who later reappeared in another role.

Like many people, I do not deal with overload as well as I would like, but ever since that conversation with Alan Wu, I have tried to put in the extra effort to treat people well, and to mend fences when I have put my foot wrong. I think it is the single most valuable lesson that I have learned. Certainly in the 20+ years of my career since then, I have found that pure technical expertise often takes a back seat to one's people skills and connections. Time and again I have heard clients say, "There are a lot of people who can do this, but you're the first one who hasn't talked down to us." It is a skill that needs constant exercise, and can be as elusive in the face of stress as any other mindfulness practice. It is definitely worth the effort. After all, if you're not disposable, why should anyone else be?

[picture here] **Strata R. Chalup** founded *VirtualNet Consulting*, now *Virtual.Net Inc* (<http://www.virtual.net>), in 1993. As a technical process manager, Strata specializes in establishing IT/IS best practices at growing companies, helping them to transition smoothly into well-run infrastructures. In addition to providing process and best practices consulting for a variety of clients, Strata also teaches project management and technical troubleshooting. She co-authored the second edition of *The Practice of Network and System Administration* (Prentice Hall, 2007) and contributed to the upcoming Elsevier *Handbook of System and Network Administration*.

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***"Sometimes a face-to-face meeting can be worth 1,000 emails."***

*-Elizabeth Hewitt*

When I first became a manager, I inherited a project that involved colleagues from all over the world, in different time zones and with different cultures. One colleague, Ronald, was my sole source of information for a very important part of the project. Ronald was extremely reluctant to respond to any of my emails and never returned a phone call.

During the course of the project, an opportunity arose for us both to attend a face-to-face project meeting. My manager encouraged me to go, but I thought that the meeting topic did not apply to my part of the project. Nonetheless, my manager encouraged me to go, saying, "Sometimes a face-to-face meeting can be worth 1,000 emails."

Reluctantly, I traveled to the meeting. I had the opportunity to meet and get to know Ronald. After that meeting, Ronald was much more responsive to all of my contacts. In fact, we developed a relationship that translated into help for other projects. Previously, I had assumed that if a project was important enough, or if my emails were cleverly worded, colleagues would respond because they would be helping to drive the business. However, sometimes you need a relationship to move a project along when you have no control over other people.

Accordingly, my manager's advice has stuck with me. Every time I have the opportunity to start a project with someone new, I try to meet with that person face-to-face.

*[picture here] Elizabeth Hewitt works as the Analytical Chemistry Group Leader at Noramco, Inc (Johnson & Johnson). Her group focuses on developing and validating new analytical methods for new drug substances. She has worked on bringing several new drugs to market at Johnson & Johnson and Pfizer. She has a MS in Chemistry from Duke University and is a Design Excellence Certified Green Belt.*

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***"The difference between a \$60K a year engineer and a \$120K a year engineer is the ability to write."***

*- Sharon L. Langfeldt*

A senior engineer at Digital Equipment Corporation told me this very early in my career, and I took her advice to heart. As an undergraduate, I earned a minor in English. After teaching for a year, I moved into working with computers. As I

moved up within engineering, I documented various efforts and developed customer consumables, which got me transferred into more customer-facing (and higher paying) roles.

In my 29 years in IT, I have come to understand the importance of communicating well with customers. Being able to do presentations and gracefully handle irritated customers is of untold value. When I moved into technical management, I tended to hire people with top-notch skills working with customers. It was easier to train them in the technical aspects of the job than to try to develop an engineer's communication skills.

I have worked with brilliant engineers who wrote poorly and could not communicate. They could only work well with machines and other engineers. Not to say that is bad, but their poor communications skills limit their career options. They cannot work effectively in sales support or sales engineering roles, which are often more lucrative.

*Sharon L. Langfeldt is a senior systems engineering professional, specializing in working with customers to utilize technology to solve business issues. Her experience includes software engineering, application migration, technical management and engagement management. She has spent 29 years in the computer business, is certified in Prince II project management, and enjoys working with teen groups about computers and life.*

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***"Management means managing, not doing it all yourself."***  
*- Carrie Buchman*

When I received my first management promotion, my first instinct was to do more of what I had been doing. This is what got me promoted, right? A very wise mentor explained that the rules had now changed and that my job was to manage the activities of others: to provide leadership and set strategy and direction, not to be the expert in all topics.

Without that advice, I would probably have failed miserably! Even now, I remind myself that it is not about my knowledge and technical capabilities; it is about building and leading a team of people with technical capabilities to achieve or exceed their objectives.

Just recently, when a member of my team was having trouble handling her workload, I started doing the work myself to keep us on track. I had to stop myself and talk to the team about the situation, and they collectively picked up the work. This is a much better approach and contributes to the feeling of mutual support among team members.

It is so easy to "just do it yourself" when things are not getting done on time or to an acceptable standard. The "I'll just do it" mentality can drown a manager and it does not develop the team, leaving everyone feeling cheated. I have learned to take a deep breath, and do more coaching and less doing. I end up with a better work-life balance and my team learns new skills in a supportive environment - a win-win.

[picture here] **Carrie Buchman** works as a Director of IT Quality and Compliance at Johnson & Johnson. Her assignments have varied from computer simulation of submarine acoustics, to project managing components of an experimental space shuttle replacement, to project managing, designing and validating FDA regulatory compliant computer systems. She has participated on the Software Engineering Institute, ANSI and ISO standards committees at various times in her career. Carrie earned her undergraduate degree in Physics and Mathematics from Smith College and a Masters degree in Computer Science from Fairleigh Dickinson University. She is a certified Project Management Professional (PMP) and a six-sigma Green Belt.

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***"Continually learn new skills so that you always have options."***  
- Elizabeth Keller

My father has always been my mentor and guide. He started out as a business and finance graduate, and then went to work for IBM. IBM offered him additional training and education that helped him move quickly into engineering. My father has always taken advantage of employer-sponsored opportunities to expand his knowledge base, which has allowed him to stay eminently employable.

Many years ago while I was still in high school, his words of wisdom to me were, "Always leave yourself a way out. Get all the training and skills you can reasonably consume whenever the opportunity presents itself. You should also make time, on your own, to always learn new skills and technologies so that you have professional options. If you specialize in only one thing, one niche, then when the demand for that niche skill depletes you will be left behind with nowhere to go."

While working for NASA, I fell in love with technology. I quickly became the "go to" person for tech-related issues and even developed an automated data acquisition system while I was there. Subsequently, while working as a full-time employee in IT for both public and private sector organizations, I immersed myself in opportunities to learn new skills, ranging from systems administration, to print and graphic design, to web application development.

When I found myself laid off from a dot com, I quickly realized that I have a broad enough knowledge base to be of service to other professionals who rely on technology but do not know how to use, customize, or troubleshoot it. I am now successfully self-employed as a professional IT consultant, providing a broad range of services and skills to small business owners.

To this day, I am constantly learning new skills, which helps me stay current and provide better service to a wider range of clients. I relish opportunities to take on something I have not done before, because I am confident that (1) I will be able to learn what I need to get the job done and (2) the experience will open more doors for me.

I am the mother of four daughters and always try to lead by example. I continue to stretch myself professionally and regularly demonstrate what I do to my children. I even have them help me build and modify desktop computers, so that they try new things and do not feel intimidated by technology.

*[picture here] Elizabeth Keller owns a successful technology consulting practice. While finishing her Master's degree Elizabeth went to work for NASA's Space Sciences division, as part of a team that developed life science experiments for flight on board the space shuttle. When Elizabeth left her job with NASA to stay home with her newborn daughter, she taught herself about the Internet in order to keep herself employable and expand on her technology skills. She learned website design and development while creating an award-winning, science education website called extremescience.com. This experience enabled her to successfully transform from scientist to technology professional.*

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*Sue Dorward specializes in coaching emerging technical leaders. She earned BA and MS degrees in computer science (Smith College and Princeton University) and certificates in executive coaching and leadership development (New York University and Rutgers University). Formerly a college instructor, senior systems engineer, and vice president of technology organizations, Sue has been coaching technology professionals since 2005.*

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