From Engineer to Manager: Tips You Need to Know
BY KATHY KOWALENKO

Are you dreading the possibility of having management duties added to your job responsibilities this year? Many engineers find themselves unprepared for the transition from focusing on technical tasks to overseeing other engineers. To help you gain insight into how to become an effective manager and leader, the IEEE Graduates of the Last Decade group recently sponsored a webinar titled “Geek in the Lead: Growing From Engineer to Manager.”

IEEE Senior Member B. Michael Aucoin, a professional trainer and consultant in electrical engineering, project management, and engineering management, presented the hour-long session in December, and it’s now available free for download. Aucoin is the founder of two companies: Leading Edge Management and Electrical Expert Inc., both in College Station, Texas. He is the author of Right-Brain Project Management: A Complementary Approach [Management Concepts, 2007] and From Engineer to Manager: Mastering the Transition [Artech House Publishers, 2002].

“Many people going through the transition to manager feel ineffective and frustrated, but it doesn’t have to be that way,” Aucoin says. “Engineers are uniquely qualified to be managers and leaders, in large part because they understand systems-thinking so well. Once you understand that organizations are simply systems of people, you’ve got it made.”

Here are some points Aucoin covered that can help make your promotion go smoother:

BASICS 101
First, realize that you probably will no longer do nuts-and-bolts design work but instead will lead a team of people responsible for that work. And you’ll be going from sole proprietor to learning how to get things done through others. To do that, you need to create an environment that fosters self-motivation.

“Understand what the major factors are that drive people—that’s what a good leader taps into,” Aucoin says. “Those factors usually involve the desire for meaningful work. Your role is to seek greatness for your team, and greatness is within anyone’s reach.”

Another way to motivate your staff is to take steps to remove bureaucratic barriers that get in the way of productivity. “It’s an important function of the supervisor to stand up for their people, to fight the junk in the organization that gets in the way of them doing great things,” Aucoin says.

That includes company politics. Strive to play politics ethically—doing things that help others get what they want, such as working to get your team, boss, or company to achieve strategic objectives.

Remember that you’re going to be judged on how well your team performs. The key is knowing how to lead them well.

“This is often the biggest learning curve for any technical manager,” Aucoin says. “How well other people perform forms the basis for how you will be evaluated. If you are responsible for a team and they are not performing well, the buck is going to stop with you, the manager.”
There is a stereotype that engineers don’t have much personality and don’t relate well to people, but that’s nothing to worry about, according to Aucoin. “You don’t have to be a charismatic person to be a great manager or leader,” he says. “The lack of career success that some engineers experience has nothing to do with their technical knowledge or technical skills—it’s about the relationships they’ve developed.”

One of the most important skills to acquire for the transition is good communications. Perhaps 90 percent of a manager’s job involves communicating through making presentations at meetings, responding to e-mail and phone calls, and visiting customers.

Another important skill is handling conflicts with staff members. It’s a task that often makes new managers uncomfortable. But Aucoin points out that healthy conflict is necessary.

“When differences of opinion are expressed in a healthy way with a good process, it leads to better products and services,” he says. “Where we get into trouble is when conflict becomes destructive or focuses on individuals.”

Concentrating on the customer is another crucial element, Aucoin says. Engineers like to do things that are technically elegant, but that’s not necessarily what customers are most interested in.

“Customers want their problems solved and their needs taken care of, so visit their place of work, have lunch with them, and see their operations to better understand how to solve their problems,” Aucoin suggests. “It’s not always about giving them neat technology, although that might be part of the solution.”

**MANAGER VS. LEADER**

In the question-and-answer session following his presentation, Aucoin cleared up the difference between a manager and a leader. A manager, he says, is more concerned with tasks and administrative matters—a caretaker in the sense that he or she looks after what is already in place and wants to make it more efficient.

A leader is someone who looks for things that haven’t been done or seeks to change the team or organization’s direction to make it more effective. It could be a small or major difference.

“Every organization needs people to take leadership roles—and anyone can be a leader. The organization is much healthier if everyone steps up into appropriate leadership roles,” Aucoin says. “That doesn’t mean fighting for power; it means that in your domain you step up and take responsibility for a project to see it through and work with others to carry out their parts as well.”