A Network of Standards

Most electrical engineers leave college and enter the working world lacking any knowledge or practical experience when it comes to the standards, codes, and recommended practices in their industry. That was certainly true for Kent Sayler, but he quickly made up for his deficiency—his consulting work demanded it. Today, he is not only a skilled practitioner but he also actively serves on various working groups that write and establish revisions and updates to industry standards, codes, and recommended practices.

Sayler grew up in the small town of Flomaton, Alabama, with a population of 1,400. His parents and two older siblings all graduated from college, and Sayler was expected to continue this family tradition. “Like so many engineers,” Sayler said, “I liked math and science classes and did well in them, so engineering seemed a good direction for me.”

Formal Education

What caused Sayler to choose electrical engineering, in particular, was an evening news report proclaiming that the top five starting salaries for B.S. degrees were all in engineering professions like chemical engineering, electrical engineering, and nuclear engineering. “So I decided on electrical engineering,” Sayler explained. “I thought it was more concrete and tangible than the other engineering fields because I could see visible examples of electric power lines everywhere.”

After two years at a community college, Sayler transferred to Auburn University for his junior and senior years. “Auburn offered six different curriculums in the electrical engineering major, and I chose the power systems emphasis,” he said.

Sayler also participated in a cooperative work-study program during his college years. As a co-op student, he worked for a telecommunication equipment manufacturer in one job, and, in another, he worked for a rural electric cooperative. These jobs gave Sayler some early practical exposure to electrical work while also allowing him to network with his coworkers, many of whom still keep in touch with him. Meanwhile, at Auburn, Sayler signed up for a power engineering class taught by a new professor, Dr. Mark Halpin, and found that he liked the subject and Halpin as well.

Transition from College to the Working World

When Sayler was getting close to earning his B.S. degree, Halpin asked him what his plans were after graduating. Sayler told him that he hoped to get a job in Southern California to be near his girlfriend (and future wife), who lived on the West Coast. But Sayler admitted that he had no definite strategy for getting a job there. Halpin knew another IEEE Industry Applications Society (IAS) colleague, Kevin Peterson, the president and chief executive officer of P2S, Inc., a consulting firm located in Long Beach, California, that provides engineering, commissioning, and construction management services. The company was growing at the time and looking to hire well-qualified power systems engineers. So Halpin proposed...
to Sayler that if he put in two more years to earn his M.S. degree in electrical engineering at Auburn, then Sayler would be a qualified candidate for just such a job opportunity in Southern California. The deal was sealed and two years later, with Halpin’s endorsement and advocacy for Sayler, he was hired by Peterson and P2S, Inc., and moved to Southern California. This was the first time in his career that Sayler had witnessed the power and impact of having a network of personal connections.

Typical Workday
As a consulting engineer, Sayler is responsible for providing solutions to fulfill his clients’ needs. He notes that it is different than his student co-op job, working as a manufacturing engineer responsible for producing products for sale. His typical workday consists of managing various industrial and commercial medium-voltage infrastructure designs, and his days are often unscripted and unpredictable. Some days he may be involved in one or more of the following work activities: client relationships, customer service, problem analysis, design and engineering, and project management. Sayler stated, “As a project manager, I may have 15–20 plates spinning at the same time, so it’s usually hard to know ahead of time what’s going to need my attention.”

He rarely finds himself in the office for an entire day. During one week, he was at a federal airfield in Silicon Valley for several days, then moved on to a container terminal in Long Beach, and rounded out the week in a utility substation for a university in Orange County, California. Sayler enjoys the variety in his work because he deals with different people, problems, and solutions. “There is nothing routine or boring about my work,” he said.

Discovering the IEEE IAS and Its Benefits
Sayler acknowledged that his early exposure to the IEEE and IAS was thanks to Halpin, who usually invited a graduate student to accompany him on some of his IEEE speaking and meeting engagements. While driving his professor from place to place, Sayler was able to listen in on business conversations during Halpin’s phone calls to IEEE and IAS colleagues. After accepting the position with P2S, Inc., Sayler became more active with the IAS. One morning, he found a note on his desk at work from his boss, saying that he should check out the Industrial and Commercial Power Systems (I&CPS) Technical Department of IAS, which Sayler is heavily involved in today.

Within the I&CPS, Sayler has been active in the Power Systems Engineering Committee (PSEC), and has served as secretary, vice chair, and chair. He is currently an associate editor of paper reviews for PSEC. Sayler said, “In school, I never learned about the National Electrical Code (NEC), so it and the IEEE Red Book became a very important reference book and study material for me.” Sayler also became a fan of the other volumes in the IEEE Color Book Series, which were produced by the working committees of I&CPS. He pointed out that the entire IEEE Color Books Series is undergoing extensive updating and transformation into the new, so-called Dot Standards. Sayler serves on the Technical Book Coordinating Committee as a member of the Power Systems Design Working Group. It seems a safe bet that Sayler will continue to increase his involvement and volunteer efforts to help create the standards, codes, and recommended practices that will benefit our electrical industry.

When asked how he has benefitted from his IAS involvements, Sayler quickly responded, “My network within IAS includes industry experts located across the world whom I’ve become friends with, and, therefore, I can seek out their help in the areas of their expertise. That’s a valuable resource that multiplies my own effectiveness at work.” Being active and known in IAS for his technical committee and standards work, Sayler said that he was recommended in 2014 to fill one of IEEE’s open positions on code-making panels for the NEC. As a result, Sayler is now a member of the Standards Coordinating Committee 18 within the IEEE Standards Association, where he acts as an IEEE external representative and voting member for NEC Code Making Panel 1. Thanks to his IAS connections, Sayler now has another arena where he can contribute his voice and energies for the betterment of the electrical industry.

Valuable Lesson Learned
Sayler recalls a valuable lesson he learned as a teenager working at a local pizza place. One night, near closing time, a customer entered the restaurant with a very complicated order. Sayler, who was the only one working in the kitchen, was also tending the cash register and starting to close up for the evening. As a result, Sayler realized the customer’s order would take longer than usual to complete, and he apologetically told her this so she would be aware. The customer accepted Sayler’s news and replied that it was no problem, as she was willing to wait. Upon his later retelling of this story to others, Sayler received valuable business advice from the mother of one of his friends. She told him, “I can wait
patiently to get my order from you, as long as I know you haven’t forgotten me or taken me for granted. But if you ignore me, then I won’t come back.”

This experience taught Sayler the importance of keeping the customer informed, regardless of the news being good or bad. He realized that it is a principle that applies not only to the restaurant business but to all kinds of business relationships in general. As an engineering consultant at P2S, Inc., Sayler said it’s important for him to be responsive and available for his clients so that they know they are not being taken for granted. “Communication and being responsive to our customers are important key factors to obtaining future work for our company,” he affirmed.

Leisure Time
From 2011 to 2012, Sayler began running as a way to exercise and release stress. This hobby started as part of a friendly interoffice “fitness challenge.” By running regularly in the early morning hours, he was eventually able to run more than 50 mi per week, and he loved it. Today, with a four-year-old son and two-year-old daughter in their family, leisure time (and sleep) for Sayler and his wife is sparse, so running is on hold for now. Sayler muses that perhaps one day he will be able to resume running regularly again.

Advice for Young Professionals
From his own experience, Sayler wholeheartedly believes in this advice: “It’s not so much about what you know, but more about who you know that helps you get ahead in life. And it’s also about who knows you!”

Conclusion
Sayler has found that he has a passion for rolling up his sleeves and pitching in to help the working groups responsible for establishing and updating the various standards, codes, and recommended practices of our electrical industry. Not only will he benefit, but other electrical practitioners and humanity as a whole will advance by having this body of written guidelines that promote safer and more effective electrical designs and applications. As a young professional, Sayler has discovered a rewarding and satisfying way of making a difference and giving back to the electrical industry. How about you?

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series standards. Concepts contained in the IEEE Violet Book are being issued as 3002 series standards. The IEEE Yellow Book has already been issued as a three-part 3007 standard: 3007.1, 3007.2, and 3007.3.

The standards produced by working groups in the PCIC include the following:

- IEEE Standard 841, IEEE Standard for Petroleum and Chemical Industry—Premium-Efficiency, Severe-Duty, Totally Enclosed Fan-Cooled (TEFC) Squirrel Cage Induction Motors—Up to and Including 370 kW (500 hp), is now accepted by all process industries as the premier motor standard to improve process reliability.
- IEEE Standard 1683, IEEE Guide for Motor Control Centers Rated Up to and Including 600 V ac or 1000 V dc with Recommendations Intended to Help Reduce Electrical Hazards, is an example of how standards and safety are linked.
- IEEE Standard 1716, IEEE Recommended Practice for Managing Natural Disaster Impact on Key Electrical Systems and Installations in Petroleum and Chemical Facilities, is an important document for the recovery of electrical installation after natural disasters, such as hurricanes.

The IEEE IAS standards working groups meet at several IAS conferences, including the Petroleum and Chemical Industry Conference, the Electrical Safety Workshop, and the I&CPS Technical Conference, with some also meeting at the IAS Annual Meeting. As IAS Standards Department chair, I invite you to join these working groups and attend both the I&CPS Technical Conference in May in Niagara Falls, New York, and the PCIC Conference in September in Cincinnati, Ohio.