

# Institute of Electrical and Electronics Engineers-Chicago Section



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## e-SCANFAX IEEE CHICAGO SECTION

January 2008

### Calendar Of Events This Month

**January 8, 7:00pm**  
Executive Committee  
DeVry - Addison  
Chicago Section

**January 8, 7:30pm**  
[Tech Trends of the Future](#) Communications Society

**January 9, 5:30pm**  
[Rate Cases](#) Power Engineering

**January 16,**  
[Generator Application Considerations](#) Industrial Applications

**January 16, 7:30pm**  
[Do H-1B Visas Impact the Tech Sector?](#) Career Networking

**January 26, 8:30am**  
[Chicago Future City Judging](#)

#### Upcoming

**February 17-23**  
[Engineers Week](#)

**February 22, 5:30pm**  
[Chicagoland Engineering Awards Banquet](#)

**March 28**  
[NetSecure08](#) Communications Society

**April 21-24**  
[Powering Toward the](#)

### This Month's Articles

#### Chair's Column

Why do engineers become engineers? [\[more\]](#)

#### Show Your Pride in IEEE

Get an IEEE Chicago Section hat or license plate holder. [\[more\]](#)

#### Segway Inventor to Receive 2008 Washington Award

Engineers Week, which is February 17-23 this year, is chocked full of educational activities. [\[more\]](#)

#### Chicago Section Honors e-Scanfax Visionary

IEEE Chicago Section members presented Doug Staszkesky with his Outstanding Member Award [\[more\]](#)

#### IEC 61850: Not Just a European Standard

At the November Power Engineering Society Meeting, Brent Duncan of Siemens reviewed the new standard for substation automation. [\[more\]](#)

#### Calls for Papers and Volunteers

[NetSecure08: The 6th Annual Systems and Network Security and Digital Forensics Conference and Expo](#) is currently accepting proposals for technical presentations, panels and tutorials on security, digital forensics and steganography, policy and compliance, and privacy. Online registration is also now open. The conference, which will be held on Wednesday, **March 28, 2008**, is co-sponsored by the **Chicago Chapter of the IEEE Communications Society**. The speaker/presenter submission deadline is February 6th.

Volunteer at the [2008 IEEE Power Engineering Society Transmission and Distribution Conference and Exposition](#) at McCormick Place. [\[more\]](#)

The [2008 Electro/Information Technology Conference](#) is seeking papers on basic and applied research in electrical and computer engineering as related to Information Technology and its applications. The conference, which will be held **May 18-21, 2008** at

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[Future Power Engineering](#)

Iowa State University, is sponsored by IEEE Region 4 (R4) to which the Chicago Section belongs. Papers are due February 11, 2008.

### Chair's Column



I have been reading the news articles on the professions that students are choosing in today's world. They are not choosing technical fields – like engineering – in the numbers that will be needed. It led me to think: "Why did I choose a technical field of study?" Or perhaps more simply, "Why did I become an engineer?"

I was in the 8<sup>th</sup> grade when Sputnik was launched, and I know it influenced my choices. My aptitude for math and science made engineering a very real possibility. In rural Missouri, my parents, teachers and neighbors, including one who was an engineer, were very supportive of my dreams and encouraged me a lot. Being an engineer seemed like an exciting and much appreciated profession in the years following the launch of that first man-made satellite. And, today, I look back at my career as an engineer with a real sense of satisfaction: engineering was the right career choice for me.

So what does this have to do with students' choices today? The options and choices they are facing today are not so different from the choices we faced. Let's dialogue with them and share our stories as we listen to their dreams. Our answers and our choices may not be their choices, but we can help in asking good questions. I would challenge all of us who chose engineering as a career to be a part of the dialogue with young people. We may talk one-on-one with students or as part of an organization. For opportunities within IEEE please contact [me](#). There are near-term needs in planning the **February Engineering Week** activities described in this e-Scanfax.

Bernie Sander  
Chair, IEEE-Chicago Section

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### Show Your Pride in IEEE

Get an IEEE Chicago Section hat or license plate holder. Hats are \$15 and license plate holders are \$5. Shipping is \$5 per order. So, order multiples and save. Contact [Katie Williams](#) to arrange payment and shipping.



Christina Sander, the 4-year-old granddaughter of Chicago Section Chair Bernie Sander, tries on the IEEE Chicago Section hat. We'll publish photos of other "hat models" if you send them to the [e-Scanfax editor](#).

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### Segway Inventor to Receive 2008 Washington Award

Dean Kamen has dedicated his life to developing technologies that help people lead better lives. On Friday evening, **February 22<sup>nd</sup>**,

2008, he will receive the **2008 Washington Award** at the **Chicagoland Engineering Awards Banquet** at the **University Club of Chicago**. Some of Dean's notable breakthrough medical devices include the **HomeChoice® portable dialysis machine** marketed by **Baxter Healthcare** and the **Independence® iBOT® 4000 Mobility System**, a sophisticated mobility aid, developed for **Johnson & Johnson**.

Dean Kamen sitting in the iBOT® which uses gyroscopes to compensate for the lack of balance that users with disabilities might experience.



Dean is also credited as the inventor of the **Segway® Human Transporter**, which was designed to provide a clean alternative for short distance travel and to enhance people's productivity. One of Dean's newest projects is a water purification system designed to provide drinking water to the estimated 1.1 billion of people in the world who lack access to clean water. An inventor and entrepreneur, Dean is the president of **DEKA Research & Development Corporation**.

Dean is also a tireless advocate for science and technology. He founded **FIRST (For Inspiration and Recognition of Science and Technology)**, an organization dedicated to motivating the next generation to understand, use, and enjoy science and technology. During the reception prior to the Awards Banquet, the **Illinois FIRST Lego League and Robotics Competition** teams as well as winners of the many other Engineering Week competitions will be on hand to demonstrate and explain their winning entries. The impressive young competitors – our next generation's engineers – stay for the dinner, giving all a chance to mingle and learn from each other.

A consortium of engineering associations, including the IEEE, sponsors the Washington Award and Chicagoland Engineering Awards Banquet. IEEE members **Dennis Lamont, Pat Hennelly,** and **Jim Fancher** serve on the organizing committee. Dennis reports that this year, Dean was by far the front-runner: "He is quite an individual. What he has done with his medical devices is quite something." And those who have heard him say he is a dynamic speaker.

For tickets to what is guaranteed to be an inspiring evening, [email](#) or call the Western Society of Engineers at 630/724-9770. For more information, visit the Chicagoland E-Week [website](#).

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### **Engineering Week Inspires Future Engineers**

Green roofs, Illinois engineers, architectural innovations, VoIP and frozen bananas will all be part of the **24th Annual DuPage Area Engineers Week Expo** on **Saturday, February 23, from 11 am to 3:30 pm** at **Illinois Institute of Technology's Rice Campus** in Wheaton. The Expo, which is free and open to the public, has a series of interactive displays that are designed to enhance interest in math, science and engineering. This year's theme is "Engineered in Illinois," with a particular focus on "sustainability," including "green buildings." New exhibitors this year include SCARCE, DuPage County's environmental education arm; robotics from IIT's Mechanical Engineering Department; and architectural exhibits. There will also be model planes and a wind tunnel, lasers, and bicycle power. For more information, visit the [DuPage E-Week](#)

[website](#). For other E-Week activities throughout the Chicago area, visit the [Chicagoland E-Week website](#) where you can learn about events at **Northwestern University** and **Argonne National Laboratory** designed to encourage girls to consider careers in math, science, and engineering; the **International Bridge Building Contest**, **Future City** competition, **FIRST Robotics Program** and **Lego League**, and much more.

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### Chicago Section Honors e-Scanfax Visionary

In December, IEEE Chicago Section members gathered at **Doug Staszkesky's** home to present him with his **Outstanding Member Award**, which had been announced at the IEEE Chicago Section New Officers Orientation Program and Awards Dinner in September.



IEEE Chicago Section members Tom Tobin, Wanda Reder, Michele Beaulieux and Bob Alworth flank Doug Staszkesky with his Outstanding Member Award. IEEE Fellow John Estey stopped by right after the picture was taken. Except for e-Scanfax editor Michele Beaulieux, all work for S&C Electric Company.

Doug received the award "for successfully organizing and managing the migration of SCANFAX to e-Scanfax." **John Zulaski**, who served as Chicago Section Chair the year for which Doug was honored, noted that the transition from a print newsletter to a digital publication was a highlight of his term as chair: "Our situation at the time was that we had a newsletter that took six weeks to get out. By the time it got out, the information was dated. It was very expensive, eating up more than half the budget. Doug turned all that around. He was the spark that came up with the initial vision of what the new publication should be. The content is now one thousand times better, plus it's timely. We've got a better product for less money. What could be wrong with that?" And according to John, "It was all on Doug's initiative." Thank you, Doug!

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### IEC 61850: Not Just a European Standard

At the November Power Engineering Society (PES) meeting, 30 attendees were briefed by **Brent Duncan** of **Siemens** on the IEC 61850 standard for substation automation.



Mel Carr (left) stands with speaker Brent Duncan. Both gentlemen are with Siemens.

The "new" standard may be new for Americans but not for Europeans. Jointly developed by users and manufacturers, IEC 61850 creates a uniform basis for protection devices and systems, communications, and control of substations. It has the potential of

reducing costs by reducing engineering. Instead of attempting to manage a variety of protocols, users can employ a single protocol to support all aspects of substation automation. Communication is accomplished over a high-speed Ethernet network, and although not required, fiber optic cable can greatly improve system robustness. As a worldwide standard, several manufacturers make IEC 61850 compatible equipment, giving users more options when specifying systems.

One of the first systems to be installed in the U.S. is in our own backyard of Naperville, Illinois. The City of Naperville recently installed Siemens protection relays with dual-fiber IEC 61850 interfaces. Since all the relays were connected in a redundant loop, a highly reliable system resulted that is immune to a single cable failure. A hardened managed Ethernet switch handled the communication of Generic Object-Oriented Substation Event or "Goose" messages, the format for which is defined in the thick IEC 61850 standard document.

No longer can we just consider U.S. standards. The new age is international standardization and it has already arrived for substation automation.

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### **PES T&D Show: Get a Shirt and Get in Free**

The **2008 IEEE Power Engineering Society Transmission and Distribution Conference and Exposition, [Powering Toward the Future](#)**, is looking for volunteers to make the over 10,000 conference participants expected from around the world feel welcome in Chicago. Volunteers will help assure the smooth operation of the event so that attendees of the **April 20-24** "T&D Show," which will be held at **McCormick Place**, can focus on learning about today's electrical utility industry innovations and technologies. Volunteers are needed to provide event information, monitor buses, staff special events, greet participants, monitor rooms, and staff the companions and international visitors lounges. Morning, afternoon, and all day shifts are available. In exchange, volunteers will receive a shirt to wear when they volunteer and entrance into the Exposition Hall. For more information or a registration form, contact 2008 IEEE PES T&D Conference and Exposition Volunteer Coordinator **Rich Gordus** at 630-576-6079 or by [email](#).

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