



Madison Section NEWSLETTER

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January 2004

Sonic Foundry - Mediasite Live

Date/Time: Thursday, January 29, 2004, 11:45 AM - 1:00 PM

Speaker: Dee Fussell, Software Engineer, Sonic Foundry, Inc.

Location: Rocky Rococo's Pizza, 7952 Tree Lane (Madison Beltline Hwy. at Mineral Pt. Rd.), 608.829.1444

Menu: Pizza buffet, salad and soft drinks (cost \$10.00, free for student members)

RSVP: by January 26th to Les Schroeder via email (l.schroeder@ieee.org) or call 608.260.1356

Non-member guests are always welcome!

This month's presentation will begin with a brief introduction to Sonic Foundry - who we are and what we do. We will then discuss streaming media with some emphasis on audio and video capture and give an overview of the Mediasite Live product.

DeLosse K. Fussell (Dee) graduated from UW-Madison in 1994 with a double major in Electrical Engineering and Computer Science. Since then he has worked with several companies including Infovet, Inc., Nicolet Instrument Corp., and Fussell Software and Consulting doing various forms of software development and programming. Currently with Sonic Foundry, he is the lead developer working on the award winning Mediasite Live product used for media capture, manipulation and streaming. When he's not working, he's golfing, or fishing, or golfing, or playing racquetball, or golfing...

Panel Discussion - Blackout of 2003: Recommendations for Maintaining Adequate Power System Reliability

Date/Time: Thursday, February 12, 2004, 11:45 AM - 1:00 PM

Panelists: Fernando Alvarado, Ian Dobson, Ian Hiskens; Power Engineering Faculty, Electrical and Computer Engineering, University of Wisconsin-Madison

Dennis Ray, Executive Director, Power Systems Engineering Research Center (moderator)

Location: Rocky Rococo's Pizza, 7952 Tree Lane (Madison Beltline Hwy. at Mineral Pt. Rd.), 608.829.1444

Menu: Pizza buffet, salad and soft drinks (cost \$10.00, free for student members)

RSVP: by February 9th to Les Schroeder via email (l.schroeder@ieee.org) or call 608.260.1356

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On August 14, 2003, large portions of the Midwest and Northeast United States and Ontario, Canada, experienced an electric power blackout. The outage affected an area with an estimated 50 million people and 61,800 megawatts (MW) of electric load in the states of Ohio, Michigan, Pennsylvania, New York, Vermont, Massachusetts, Connecticut, and New Jersey and the Canadian province of Ontario.

The Interim Report from the Joint U.S.-Canadian Task Force grouped the contributing causes of the blackout as follows:

- Inadequate situational awareness at FirstEnergy Corporation (FE).
- FE failed to manage adequately tree growth in its transmission rights-of-way.

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- Failure of the interconnected grid's reliability organizations to provide effective diagnostic support.

FE and others have criticized the Interim Report. Through six commissioned papers, FE asserted that "Deregulation of power generation deserves much of the blame for the cascading power failure."

The Joint Task Force is now preparing its recommendations in response to its findings. Our panel will identify likely recommendations, and will offer their perspectives on what needs to be done to mitigate the frequency and scope of blackouts.

IEEE Madison Section Election Results

The annual officer elections for the IEEE Madison Section were held at the December 18th, 2003 monthly meeting. The slate of candidates was elected unanimously. Congratulations to the new officers for 2004:

Chair:	Sandy Rotter
Vice-Chair:	Bob Sier
Secretary:	Les Schroeder
Treasurer:	John Hicks
Mem. at Large:	Tom Yager
Mem. at Large:	Wayne Lenius
Mem. at Large:	Mitchell Bradt



Introduce A Girl To Engineering Day Celebrated Globally

Introduce a Girl to Engineering Day, now in its fourth year, is slated for 26 February 2004. Girl Day encourages engineers, particularly women engineers, to make the world of engineering come alive for young females. Since its inception, an estimated one million girls have experienced engineering firsthand each year, with more than 110 organizations participating in 2003. To learn more and for suggestions on how you can participate, visit: www.eweek.org/site/News/Eweek/girlsdays.shtml.

Government Hops on the Smart Card Bandwagon

by Terry Costlow

Smart cards have gained slow acceptance in the United States, but the pace may finally be picking up. Government bureaus ranging from the Department of Defense to regional transportation agencies seem to be driving the shift toward acceptance in this country.

Smart card proponents have been expecting a takeoff for years, but the ramp up has been slow at best. A number of cautious government entities have completed independent studies and are begin-

ning to move forward. Their plans center around two fairly new smart card technologies: wireless communications and cards that have more than one application, such as identification and payment.

"It looks like the time of the multi-application card has arrived, with the Defense Department rolling out 4.5 million and other agencies planning major rollouts," said Bill Holcombe, chair of the federal government's Smart Card Project Manager's Group in Washington, D.C.

And so the takeoff has begun. Additional federal agencies, including the Transportation Security Administration (TSA) and General Services Administration (GSA), are preparing to issue cards to employees and to many of the private-sector employees who work in the agency buildings. According to GSA smart card program analyst John Moore, the Federal Identification Credential Committee is defining the philosophy and technology needed to issue smart ID cards to all government employees.

On the state front, Texas is issuing cards designed to reduce Medicare fraud and identify employees. In addition, a growing number of mass transit agencies have adopted smart cards, and many more are expected to follow suit.

"It's unquestionably the trend," said Hallie Smith, public transportation consultant for the Intelligent Transportation Society of America, an Atlanta-based group that works closely with government agencies. "The technology has evolved to the point where it's getting easier and less expensive."

Public entities have helped spark a small boom in smart card use. "The United States is the third largest market for microprocessor-based smart cards, behind China and the United Kingdom," said Marvin Tansley, a vice president at Axalto, the Austin, Texas, smart card division of Schlumberger. "That's pretty significant, given that in 1995 there were not any significant numbers in use here."

U.S. APPLICATIONS GO WIRELESS

Many smart card applications in the United States use wireless transmissions, underscoring a difference from Europe, which started using smart card technology years ago, before contactless technology was ready.

"Over the past several years, wireless has matured and standards have fallen into place," said David DeKozan, vice president of market planning and support for Cubic Corp. in San Diego, Calif.

WHY SMART CARDS?

Perhaps the greatest asset smart cards bring to the table is that they are more difficult to counterfeit than other ID card techniques. In addition, they can store far more data than mag stripe cards. But although wireless cards offer benefits in ID applications, the quick transaction times for simply walking through a turnstile are a real boon in transportation. "Transit has been the lead dog in the race, creating an incentive for contactless cards," DeKozan said.

In applications for such groups as transit agencies, smart cards reduce the expense of counting and transferring currency while providing benefits for riders. "They are much more convenient for customers, and for transit agencies, handling cash is very, very



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■ DC Power System Design for Telecommunications

April 7–9, 2004 in Madison, WI

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expensive," Smith said. Many consumers find it simpler to wave a card in front of a reader than to handle tokens or mag stripe cards.

The greatest benefits come when groups work together on multi-application cards. "In the Orlando (Fla.) area, one card gets you on transit, pays for parking and lets you go through toll booths," Smith added.

PARTNERSHIP ARRANGEMENTS POSSIBLE

As more cards and readers emerge, many feel that both public and private entities will start forging arrangements that let them use the same cards. For example, a coffee chain may use the same smart card used by the local transit system, conceivably increasing the number of people who shift from cash to cards.

"We're starting to see transit agencies put in hundreds of millions of dollars of infrastructure in the field, turnstiles, ticket readers on buses and the back-end systems to process the transactions. I think you'll see other people building on this service infrastructure," DeKozan said.

Most observers feel that most of the technical and financial issues surrounding this form of the cashless society have been ironed out. But as more and more entities use the same card, handling the funds may show some wrinkles.

"When you divvy up the funds, some of the back-end issues get a bit complicated. But with each implementation, these problems get solved and the bugs are taken out," Smith said.

Terry Costlow has written about the electronics industry for more than 20 years, covering a wide range of technologies and topics.

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