IEEE

Madison Section NEWSLETTER

Volume 7, Number 9 | *Serving IEEE Members of South Central Wisconsin* | December 2004

Interconnection of Independent Power Producers to the Transmission System

Date/Time: Thursday, December 16, 2004, 11:45 AM - 1:00 PM
Speaker: Radoslav Barac P.E., Senior Substation Engineer, Realtime Utility Engineers
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 December 13th to Les Schroeder via email (l.schroeder@ieee.org) or call 608.444.9144

Non-member guests are always welcome!

Managing the interconnection of an Independent Power Producer (IPP) is becoming a more and more difficult process within an entire IPP project. Several planning factors are involved in identifying the locations of new IPPs. These factors include financial, environmental, legal, and engineering concerns that must be evaluated and addressed as prerequisites for the success of any new generation project.

Federal Energy Regulatory Commission (FERC) Orders 888 and 889 mandate open access to the nation's transmission systems, but transmission providers are still in control of the power grid and could make IPP interconnection more complicated by requiring IPPs to connect according to their own standards.

The System Impact Study and Facility Study indicate to developers the work needed to be done in order to be connected to the grid, including modifying existing transmission lines, adding new lines, developing an interconnection facility, scheduling the project phases and accurately estimating project costs. At this stage the IPP can make the decision whether to drop its request for interconnection or proceed with engineering and construction.

While IPPs usually take an individual approach to the request for interconnection, grouping them will provide interconnection to the existing transmission system at a reduced cost.

Radoslav Barac P.E. received his B. S. in Electrical Engineering from University of Kosovo in Serbia & Montenegro (Yugoslavia) in 1981, and Master of Project Management from Northwestern University, Evanston, Illinois in 2003. He has over twenty years of experience in the power-engineering field. Barac is a Senior Substation Engineer with Realtime Utility Engineers. Prior to joining Realtime, he was a Project Engineer with Sargent & Lundy for twelve years where he worked on various IPP projects nationwide. He is a member of the NCEES Committee for PE Electrical and Computer Exam, member of IEEE - Power Engineering Society, individual member of CIGRE and a speaker for NCEES, presenting the message of the P.E. licensure values. Barac is registered professional engineer in twenty states.

IEEE Entrepreneurs Network Affinity Group: Upgrade Your IEEE Membership

Date/Time: Thursday, December 16, 2004, 7:00 PM - 8:30 PM
Location: Bahr Management, Inc., 3510 West Beltline Hwy, Middleton, WI. 53562-1535, 608.831.2310
RSVP: by December 13th to Dennis Bahr via email (bahr@inxpress.net).

This meeting is an opportunity for IEEE members to upgrade their membership from Associate Member to Member, or Member to Senior Member. You can receive the professional recognition of your peers for technical and professional excellence among other benefits. Details on elevating your membership from Associate to Member can be

CONTENTS

Meeting Notices 1
IEEE Madison Section Elections 2
CARE 2
The Hat Trick: Having It Both Ways 3

IEEE
Networking the World™

IEEE MADISON SECTION NEWSLETTER

Printing and Mailing by: SprintPrint
2790 S. Fish Hatchery Rd.
Madison, WI 53711

Published 9 times per year (Jan. - May & Sep. - Dec.) by the Madison, Wisconsin Section of the Institute of Electrical and Electronic Engineers (IEEE), as a service to its members in south-central Wisconsin.

Mailed at Madison, Wisconsin as 3rd Class, Non-Profit postage. Permit No. 953.

Online at: **http://www.bugsoft.com/ieee/**

For address changes: notify IEEE headquarters, address-change@ieee.org and contact Craig Heilman, cheilman@ieee.org, 608.424.6860

For advertising information: contact John Hicks, jhicks@wisc.edu, 608.233.4875

For editorial comment: contact Craig Heilman, cheilman@ieee.org, 608.424.6860

IEEE MADISON SECTION OFFICERS

Chair:	Sandy Rotter, 278.0377 rotter@ieee.org
Vice Chair:	Bob Sier, 877.7603 rsier@atcllc.com
Treasurer:	John Hicks, 233.4875 jhicks@wisc.edu
Secretary/ E-mail Coord:	Les Schroeder, 444.9144 l.schroeder@ieee.org
Member at Large:	Tom Yager, 225.3913 tyager@ieee.org
Member at Large:	Wayne Lenius, 664.1464 lenius@bigfoot.com
Member at Large:	Mitchell Bradt, 664.2008 x128 mbradt@realtimedesign.biz
Newsletter Editor/ Webmaster:	Craig Heilman, 424.6860 cheilman@ieee.org

found at <http://www.ieee.org/organizations/rab/md/memelv.htm>. Details on the Senior Member Program and the benefits and requirements can be found on the following IEEE web page: <http://www.ieee.org/organizations/rab/md/smprogram.html>. You can also download an application form from the same location. Note that the IEEE recommends submitting a current resume with your Senior Member application.

NOTE: if you are already a IEEE Senior Member or a Fellow and would like to serve as a reference at this meeting, please contact Dennis Bahr at 608.831.2310 or bahr@inxpress.net.

IEEE Madison Section Elections

At the December 2004 monthly meeting, the IEEE Madison Section will conduct its annual officer elections prior to the technical presentation. Nominations may be made by telephone or via e-mail to the Chair (278-0377, rotter@ieee.org).

Additional candidate nominations are welcome and encouraged for all positions. The nominations to date include:

Chair:	Sandy Rotter
Vice-Chair:	Mitchell Bradt
Secretary:	Les Schroeder
Treasurer:	John Hicks
Mem. at Large:	Tom Yager
Mem. at Large:	Clark Johnson

CARE - Congressional Advocacy Recruitment Effort

The most powerful voice in any Congressional office is that of a voter. Elected officials must listen to their constituents if they want to continue to be elected officials. With 227,000 members, IEEE-USA has the potential to be a major voice in Washington.

But we'll only be heard if we speak up! The CARE network is designed to help electrical engineers find and amplify their political voices. CARE helps teach IEEE-USA members how to communicate effectively with elected officials, and then alerts members when action is required. This allows CARE advocates to bring their concerns directly to Members of Congress through timely phone calls, letters, e-mail and personal visits

CARE membership is not a commitment to act on any IEEE-USA Action Alert. Rather, it is a public statement of your support for IEEE-USA's grassroots advocacy program, and an expression of your willingness to help strengthen that program.

No experience is necessary. IEEE-USA will provide CARE members with all of the resources and training they need to be effective

advocates in Washington. All that is needed is an interest in helping strengthen the engineering profession by engaging the political system.

To join, simply send an email to Russell T. Harrison, Legislative Representative - Grassroots Affairs, r.t.harrison@ieee.org, or use the form at <http://www.ieeeusa.org/policy/care/>. Your participation will help strengthen the profession's voice in Washington and help advance IEEE-USA's legislative Agenda.

The Hat Trick: Having It Both Ways

by Donald Christiansen

We seem to be living in an era where the past is denigrated. Neighbors are embarrassed if their home, or its décor, is "outdated." We must have the latest version of an ISP program or be considered technically disadvantaged. "My iPod can do more than yours" is an acceptable boast.

Engineers, of course, are agents of change, and so we lay the foundations for disenchantment with the old, while helping popularize the new.

But our laudable successes bring with them a certain disaffection. The "tyranny of choice" is one result. Walking through the aisles of cell, answer, and remote-access telephones in Best Buy is like navigating the breakfast food aisle of a supermarket. What to choose? It is time consuming and enervating to the uninitiated. If Ma Bell and W. K. Kellogg were still in charge, selections could be quickly made: "I'll take the black phone and a box of corn flakes." We could go on to more interesting things.

When the choices for the music enthusiast were but three — 78, 45, or 33 1/3 — life was downright idyllic. A three-speed record player silenced all concerns about compatibility. Now our DVD recorder warns us: "Do not play back the following discs: VCD, SVCD, SACD, PD, CDV, DVD-ROM, DVD-RAM, DVD+R/RW, DVD, or audio."

For a while, some products were produced with the idea that they would not quickly become obsolete. They would be compatible with later versions and easily updated. During its first decade (and beyond) of instant cameras, Polaroid designed all functional improvements so that they could be easily adapted to its first camera.

Do we, as individual engineers, hold any responsibility for assuring the compatibility of operation between generations of products? Perhaps that rests only with industry associations, in which we may participate, or with regulatory agencies, to whom we may provide advice. Standards-setting can be contentious, if ultimately advantageous to all players. In a lengthy process involving both industry competitors and the FCC, a compatible U.S. color television standard was hammered out, forestalling competing, incompatible systems coming on the market. In contrast, the PAL system was introduced in Germany and SECAM in France, neither compatible with the U.S. system, or one another.

Industry standards can help avoid the expenditure of time, effort and capital in developing products that are incompatible with that of a more successful competitor. Undue delay in defining standards may result in lots of nonstandard products, all claimed by their makers to do the same thing, only better. Many will not survive, as customers tilt toward a winner. The losers' users may find themselves saddled with quality and service problems, and, ultimately, more e-waste.

A Down Side

On the other hand, prematurely adopting standards can stifle innovation and limit the paths available to designers. It may take the arrival of something truly revolutionary to dislodge an entrenched standard or make it obsolete. In the computer field, standards and protocols are an absolute requirement. Yet, ironically, their very existence may preclude or seriously impede progress toward a simpler, more user-oriented computer era. Where systems and their cultural uses are entrenched, it requires disruptive technologies to advance the status quo.

It would surely be counterproductive to limit design options at the research phase of a new technology. If standards are set too early, or regulatory restraints imposed prematurely, the world might lose a fabulous new product we never knew we needed. If set too late, product evaluation may, defacto, fall to those customers willing to take a chance on one among many contenders. The balance between the two may be delicate — or not. I don't have an answer.

Not everyone is opposed to shopping the aisles of Best Buy or serving as a test customer for a high-tech product that may prove to be short-lived. I must admit that I'm watching the mail for my new digital watch that also doubles as a TV, DVD, and VCR remote. I'll probably be the first on the block to own one, and it's even possible that the neighbors may feel outdated.

Donald Christiansen is the former editor and publisher of IEEE Spectrum and an independent publishing consultant. He can be reached at donchristiansen@ieee.org.

Reach over 700 IEEE members in South-Central Wisconsin with information on *your products and services* every month with an ad in this newsletter.

Our members have professional interests in computers, power engineering, signal processing, communications, industry applications and a number of other technical fields.

For more information, contact John Hicks at (608) 233-4875 or jhicks@wisc.edu.

Per issue ad rates:	1 Time	2 Times	5 Times	9 Times
Business Card	$ 50	$ 45	$ 42	$ 41
2-Business Card	83	76	71	70
1/4 Page	145	135	129	127
1/2 Page	215	203	195	193
Full Page	330	315	306	303

IEEE
Networking the World
2790 S. Fish Hatchery
Madison, WI 53711

NONPROFIT ORG.
U.S. POSTAGE
PAID
Madison, WI
Permit No. 953