

RockIEEE Overlook

Newsletter of



**The Institute of
Electrical and Electronics Engineers
Denver Section**

March 1992

IEEE Denver Section Meeting and Awards Presentation

IEEE Denver Section invites all members and guests, especially officers past and present, to attend the Section Meeting and Awards Presentation.

When

Wednesday, March 11, 1992
6:00 Dinner 7:00 Program

Where

Brooklyn's Saloon & Restaurant
2644 W. Colfax, Denver (under the viaduct)

What

Presentation by Michael Foley, Forensic Engineering, Inc.
"Pitfalls of Electrical Design & Installation"

Dinner Cost - \$13.00

Please call Anita Wanberg, 220-8042 for reservations by Monday, March 9, 1992.

THANK-YOU to John Tierney at Public Service Company of Colorado for his effort in working with the Denver Section membership database.

Society Chapter Meetings and Information

EMC

Electromagnetic Compatibility Society

Tuesday, March 10, 1992

7:00 p.m.

Metrum Information Storage Systems
4800 E. Dry Creek Rd.
Littleton, CO
Northeast end of main building.

Speaker

Russell Pepe
Engineering Manager, Schaffner U.S.A.

"IEC 801 Standards"

Discussion of EMI, transients and surges. How do they occur and what are their characteristics. What is the international electrotechnical commission. What are the IEC 801 standards and how did they evolve. Discuss IEC 801-1 through 801-7 standards and how they relate to other standards (ANSI, IEEE, VDE, etc.)

Open parking is available at the east end of the building. Reservations are not required. Please call Eric Evans, 761-9447, Bill Bryant, 977-6578, or Mark Lapchak, 773-4626, for more information.

Notes: IEEE Rocky Mountain EMC Chapter elections are coming up again. If you would like to be an officer or need information on becoming an officer, please call Eric Evans (303) 761-9447 or Richard Ehret (303) 530-7509.

We are planning to hold another EMC seminar in June 1992. We need volunteers for: Program Chairman, coordinators, papers, etc.

Rapley Engineering Services, Inc
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Commissioning/Calibration/Start-up
CAD/Design/Drafting

CS/ITS

Joint Computer/Information Theory Society

Tuesday, March 17, 1992

7:00 p.m.

US WEST Advanced Technologies
4001 Discovery Dr.
Boulder, CO

Speaker

Dr. Hans B runner
Technical Director
Intelligent Customer Assistance Group
US WEST Advanced Technologies

"MOBIUS"

MOBIUS, the MO(del) B(ased) I(nformation) A(ccess) S(ystem) is an object-oriented data browsing environment developed in 1991 in response to a US West need for better access to data stored in relational databases. This system was conceived with two end user groups in mind: For non-technical end users with no prior familiarity with databases or data query languages, it was designed to provide ad hoc, day-to-day access to corporate subject data without any need for prior training in data modeling or querying. For data access developers and system administrators, it was designed to be adaptable to any relational data model without the requirement for source code programming or data model redesign. This talk will outline the basic architecture, information and control flow, and usability of MOBIAS and its components.

Reservations are required. Please call Bryce Chapman at 673-4762 or Rory Laiho at 924-7534.



Joint PES/IAS

Power Engineering/ Industry Applications

Thursday, March 19, 1992

Brooklyn's Saloon & Restaurant, 572-3999
2644 W. Colfax, Denver (under the viaduct).

6:00 p.m. Social, 7:00 p.m. Dinner (optional @ \$10)
Student IEEE Members Dinner Free
8:00 p.m. Meeting

Speaker

Philip D. Goldhammer
Senior Plant Engineer
Storage Technology Corporation

"How to Bird Dog Power Quality Problems"

Mr. Goldhammer will describe the power quality problems encountered by Storage Tek at their Louisville, CO headquarters and some methods used to locate and cure the problems.

Please contact Barbara at Peterson Company, 388-6322, by Monday, March 16, 1992.

Magnetics Society

Thursday, March 19, 1992

5:30 - 6:30 p.m.

Kaizen Conference Room, Building 6
Storage Tek
Louisville, CO

Speaker

Clark E. Johnson
Consultant

"Government Perspective on Magnetic Recording Research in the United States"

Attendees must collect their badges at the visitor's center. For more information, contact Subrata Dey, 673-6494.

Joint MTT/AP/GRS

Microwave Theory and Techniques, Antennas and Propagation, Geoscience and Remote Sensing

Thursday, March 19, 1992

4:00 - 5:00 p.m.

National Institute of Standards and Technology
325 Broadway, Room 1103
Boulder, CO

Speaker

Zoya Basta Popovic
Assistant Professor, Electrical Engineering
University of Colorado
Boulder, CO

"Quasi-Optical Microwave Power Combining"

At microwave and millimeter-wave frequencies, individual solid-state devices give limited output power levels. However, compared to the alternative tube sources, they are reliable, compact, inexpensive and require small power supplies. Obtaining high power levels from solid-state devices is therefore of interest. Quasi-optical power combining is a possible approach. Theoretical and experimental results from MESFET power combiners with up to one hundred devices will be presented. The devices load a two-dimensional grid and form an active surface. Several subsystems containing other types of active surfaces, such as varactor loaded grids, will also be presented.

Please call Ron Vidano at Ball Aerospace, 460-2001 if you have any questions.

UNIVERSITY OF COLORADO AT DENVER
DIVISION OF EXTENDED STUDIES

in cooperation with the
Foundation for Advanced Software Technology
present a series of seminars on state of the art
software technology

•RAPID EVOLUTIONARY DEVELOPMENT

Jay Arthur

•SOFTWARE METRICS, AND

Gene Miluk

•SOFTWARE TQM

Howard Feldman

March 16-20, 1992

Cherry Creek Inn, Denver, CO
Call 556-2735 for more information

Centennial Subsection Shows Signs of Life

by Paul Meisel

On the evening of January 15, 1992, a group of officers from the Denver Section, both past and present, met with Jorge Aunon of Colorado State University in Fort Collins to discuss how best to revive the activity in the subsection and how to serve the membership in this very large geographical area.

Maybe some of you know Jorge. He is an affable and interesting intellect who happens to be Dean of the School of Electrical Engineering. Jorge had been working with a group of managers from companies in the Fort Collins area who wanted to have technical programs close to their homes and work. What was not known was that the Centennial Subsection existed and that Professor Sadrul Ula from the University of Wyoming, Laramie was the current chairman. Sadrul has been trying to create activity for several years without much success. He, however, hosted a

well planned and exciting Region 5 meeting in Laramie in April, 1991.

The results of this meeting were, we believe, positive. The Denver Section officers and past officers present have committed themselves to helping Jorge and Sadrul reactivate the subsection. This will take several forms including funds. The resurrection was enthusiastically accepted by all who were present. It is our belief that by April we should see the results. For those of you living and working in Fort Collins, Greeley, Laramie, Cheyenne, Sterling and other areas, please help us to help you. Take some time to call Jorge or to write him to express your needs and offer encouragement and help. Remember that many volunteers means small time commitments.

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Ad Size

Rate

One Time

Multiple

Business Card	\$ 25.00/mo.	\$ 20.00/mo.
1/8 page	\$ 60.00/mo.	\$ 50.00/mo.
1/4 page	\$150.00/mo.	\$ 130.00/mo.
1/2 page	\$250.00/mo.	\$ 225.00/mo.
Full Page	\$400.00/mo.	\$ 360.00/mo.
Insert 8-1/2 x 11	\$200.00/mo.	

Business card ads must be actual business cards. All other ads should be provided in camera-ready format or additional set-up charges may apply. Inserts must be provided (quantity approx. 4225) and delivered to the printer.

Deadlines for 1991-1992

April 1992 Newsletter - March 2, 1992

May 1992 Newsletter - April 1, 1992

Please make checks payable to Denver Section IEEE. Send business card or ad copy and check to: Anita Wanberg, AMW, P.O. Box 4056, Englewood CO 80155-4056, (303) 220-8042.

Chairman's Message

by Paul Meisel

As many of you know, the winter weather and the late receipt of the RockIEEE Overlook combined to prevent our first Denver Section meeting. The rescheduled meeting date is Wednesday, March 11. The newsletter should be out in plenty of time for you to make plans to attend. Remember that this is a time of recognition of those who have volunteered their time so that you could benefit from local presentations, the RockIEEE Overlook and the many activities which are sponsored and co-sponsored in the Denver Section.

On April 15, the Denver Section -- All Chapters meeting will be held. This allows all interest groups to meet together to listen to a general current topic and then to attend another meeting in an adjacent room to hear the technology most pertinent to each attendees interests. Partners are always welcome.

Your chapter's officers are always looking ahead in planning the next meeting. Why not get involved by volunteering to speak, to arrange a meeting location, to help with publicity, to call fellow engineers with potential interest in a particular subject or any of the many arrangements which must be made. The more who volunteer, the less the time commitment.

We need additional advertising in the RockIEEE Overlook. If you know of a company or an individual who could benefit by advertising to engineers, call Dave

Richmond our editor and suggest who he should contact. Better yet, volunteer to help Dave with this effort.

New activity is occurring to our North. For you living in the Centennial Subsection, we have found some interest and are more than willing to help with the resurrection. Maybe you can volunteer some time also. Please see the article on this subject on page 4.

Thank You

IEEE Denver Section would like to sincerely thank the advertisers whose ads have been published in the Rock-IEEE Overlook.

We appreciate your participation!

<p>DENNIS A. EDWARDSON Director, T&D Services</p> <p>Black & Veatch Engineers-Architects</p> <p>1400 South Potomac Street, Suite 200 Aurora, Colorado 80012 (303) 671-4200</p>	<p>T3 Systems</p> <p>Thad Smith Robert Mashlan</p> <p>We develop software and firmware for realtime measurement and control applications, targeting embedded microprocessors and PCs.</p> <ul style="list-style-type: none"> * Data Collection & Communication * Motion Control, Custom Interfaces * User Presentation in DOS & MS Windows <p>Free estimates. (303) 449-3322</p>	<p>Serving Colorado and The World — Since 1885 —</p> <ul style="list-style-type: none"> • Power • Mining & Metals • Petroleum & Petrochemicals • Electronics • Aerospace & Defense • Biotechnology • Pharmaceuticals • Hazardous Waste Management <p>United Engineers & Constructors A Raytheon Company Western Operations</p> <p>P.O. Box 5888 Denver, CO 80217 (303) 843-2000</p>
<p>COOPER CONTROL ENGINEERING</p> <p>Control Systems Instrumentation Software</p> <p>Daniel Cooper, P.E. (303) 467-2328</p> <p>11005 W. 41st Ave., Wheat Ridge, CO 80033</p>	<p>Project Economic Analysis Reliability/Availability Engineering Economics Quality Assurance</p> <p>Ray M. Wainwright, P.E. Engineering Consultant</p> <p>3715 South Niagara Way Denver, Colorado 80237 (303) 758-2985</p>	<p>M E T R U M INFORMATION STORAGE</p> <p>Testing Services Littleton, CO</p> <p>FCC/VDE/CISPR EMI Vibration ESD UL/CSA Safety Temperature Humidity Altitude</p> <p>Mark Lapchak Carlos Ortiz (303) 773-4626 (303) 773-4566</p>

Professional Activities

by Darrell Sabatka

The new year has started off with the employment picture still grim. The experts forecast a slow turn around by the summer of 1992.

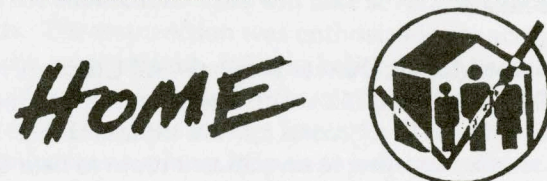
Let me update you on some of the activities. I had some preliminary discussions in late December with Business People, Inc. (BPI) for their tech fair on February 3rd and 4th. Unfortunately, time did not permit advance notification to our membership. However, an advertisement showed up in the Sunday newspapers on January 26th and February 2nd that the Job Fair was in cooperation with IEEE. I'm sorry if this caused our membership some confusion. I hope some of you did attend the BPI Job Fair. BPI provides high tech job fairs for engineering, systems, and software development professionals. BPI plans to be back in Denver, October 5-6, 1992.

Plans for a one day Employment Assistance Workshop are in progress for April or May. The tools you will learn and techniques you develop in the workshop will help

you win at the employment game. If you would like to volunteer your time, please call me.

If you need immediate assistance I have some materials which may help.

Let's Make Homeless A Four Letter Word...



Contribute to the Homeless Prevention Fund
Check-Off
your donation on your
Colorado State Income Tax Return

Schedule of Conferences and Meetings

March 6-8, 1992	Denver	News 4 Education Expo	Suzanne Thompson	(303) 988-3803
April 14-16, 1992	Denver	Telecommunications Assoc. Expo.	Diane Lindsay	(303) 397-2254
April 24, 1992	A.F. Acad.	CO-WY Jr. Academy of Science	John Tary	(303) 452-6111
April 22-24, 1992	Denver	EMC-ESD Internationnal	Kristin Hohn	(303) 220-0600
May 11-13, 1992	Denver	Vehicular Technology Conf. (VTC '92)	Jim Schroeder	(303) 871-3519
May 11-14, 1992	Denver	Power System Relaying (PES)	John Appleyard	(608) 364-5622
June 25-26, 1992	Denver	Software Reliability	Rick Karcich	(303) 673-6223
Sept./Oct. 1994	Denver	IAS Annual Meeting	Paul Meisel	(303) 761-6960
September 10-14, 1995	Denver	Petroleum & Chemical (PCIC)	John Nelson	(303) 431-7895
July 27-August 2 1996	Denver	PES Summer Meeting	Fred Jones	(303) 431-7895
1997	Denver	PES Joint Power Generation	Gary Petersen	(303) 329-1506
May 1997	Denver	MTT	Hussain Haddad	(303) 460-2114
			John Dunn	(303) 449-1055
			Claude Weil	(303) 497-5305

Proposed Conferences and Meetings

International Conference on Harmonics in Power Systems (ICHPS) 1996
ESMO 1996
Sections Congress 1996
Transmission & Distribution 1997
ITC 2000
ICC 1995-2000
EMC 1995-2000

PES/IAS Tutorials 1992

"Introduction to EMTP"

Thursday, May 7, 1992

1:00 - 5:00 p.m.

Public Service Company
Rear Building Training Center
5909 E. 38th Ave., Denver CO

This course will discuss, in general, solutions to power system transient problems using the Electromagnetic Transients Program (EMTP). Some of these problems include: line switching, closing into a line with a trapped charge, isolated capacitor bank switching, back-to-back capacitor bank switching, and ferroresonance. Various EMTP models such as transformers, transmission lines, system equivalents, and surge arresters will be discussed.

Instructor

Jeff Selman, MSEE
Engineering Supervisor for Tri-State G&T and
Honorarium Instructor at UCD

For further information, contact Brian Moreau at
(303) 671-4270

Deliverance from the Dilemma

Today's myriad of controls, computing, and networking seem to offer more hype than help. But, these recent advances do include ways to update according to specific situations -- and with sound selections for future growth.

March 5-6, 1992
Denver, Colorado

Presentations

GM Truck & Bus Automation Shifts into High Gear
Ernest O. Vahala, GM Truck & Bus Group
Sorting the Technology; Handling the Challenges
Dr. Odo J. Struger, Allen-Bradley Company
Computing & Software Advances -- Controlling your Manufacturing Destiny
Dr. Jesse P. Quatse, Litton Integrated Automation
Our Manufacturing Infrastructure & Realistic Expectations
Dr. William Bottoms, Petricof & Company
Dick Morley's Crystal Ball
Richard E. Morley, Flavors Technology Corporation
For more information, contact (303) 491-6471

Congratulations Mr. Edwardson

Black & Veatch Names New General Partner

Kansas City, Missouri (January 23, 1992) -- Black & Veatch has named Dennis A. Edwardson as a General Partner. Mr. Edwardson is a Regional Director of Transmission and Distribution Services for the Western Region of the United States.

Mr. Edwardson received a Bachelor of Science in Electrical Engineering from the University of Kansas in 1972. He is a member of the Institute of Electrical and Electronics Engineers (presently Student Fund Chairman for the Denver Section) and is a Registered Professional Engineer. He joined Black & Veatch in 1975.

Black & Veatch is an internationally-recognized engineering and architectural design firm which provides engineering, architectural, financial, and management services including studies, facilities design, and construction management. Established in 1915 in Kansas City, Missouri, the Firm employs approximately 4,500 professionals in 45 offices throughout the world.

EMC/ESD International 1992

EMC/ESD International 1992, premiering April 22-24 at the Sheraton Denver Tech Center, Denver, Colorado, will bring together the industry's newest products and information. More than 50 companies will bring their top people to exhibit the latest technologies and newest products, and 60 technical sessions/papers will provide information on the most innovative techniques, the newest designs and other insights.

The educational content of the conference has been crafted by full time industry professionals, and attendees will have the opportunity to network with other professionals interested in the design, integration, testing and analysis of systems and individual devices for radiated and conducted electromagnetic interference. To register or receive complete information: Phone (303) 220-0600; FAX (303) 770-0253.

The Institute of Electrical and Electronics Engineers - Denver Section

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Centennial - **Sadrul Ula**, Electrical Engineering Dept., University of Wyoming, Laramie WY 82071, (307) 766-6268

Society Chapter Chairmen

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Electromagnetic Compatibility - **Mark Lapchak**, Metrum Information Storage, 773-4626
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The Institute of Electrical and Electronics Engineers



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The Month at a Glance

March 6-8, 1992

News 4 Education Expo

March 10, 1992

EMC Meeting

March 11, 1992

Denver Section Meeting

March 17, 1992

CS/ITS Meeting

March 19, 1992

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