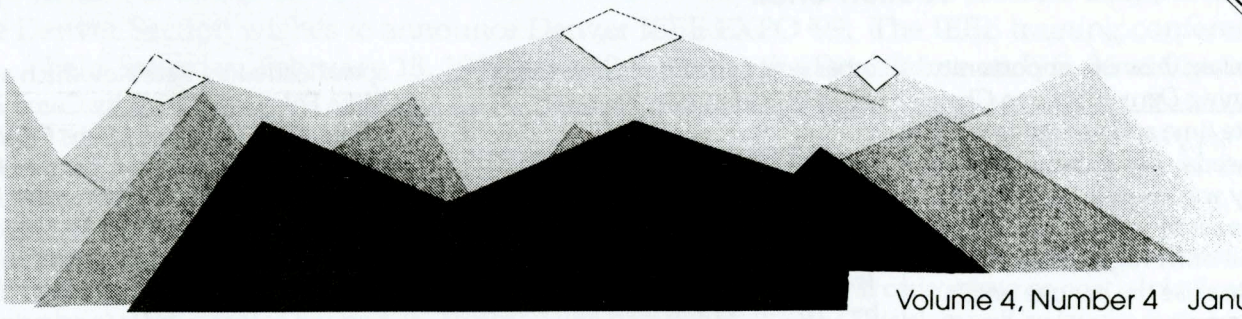
RockIEEE Overlook



Volume 4, Number 4 January, 1999

Visit the IEEE Denver Section Home Page at www.engr.du.edu/ieee/densec.html

Society Chapters

Come Meet With Us!

by Tom Basso, Treasurer, Denver Reliability Chapter

The Denver Chapter Reliability Society covers the Front Range with participants traveling from as far as Colorado Springs and Fort Collins. Our meetings are targeted for the third Thursday of the month usually starting near seven p.m., and lasting a couple of hours. Members volunteer to host a meeting by leading a topical discussion or giving a presentation. Typically we meet at the host's workplace and often the Chapter provides pizza and refreshments. All having an interest in learning more about reliability are welcomed to attend.

The planned topics and tentative schedule for our upcoming meetings are design of experiments and data reduction (1/99), software reliability (2/99), accelerated stress testing (3/99), training seminar on reliability and failure analysis (4/99), and possibly a follow-on to our November 1998 meeting. Details on upcoming meetings can be requested from Kirk Gray, Chairperson, or myself, Tom Basso, Treasurer (thomas_basso @ieee. org).

Our 1998 - 1999 technical meetings started in October at the National Renewable Energy Laboratory in Golden. There we heard progress on a proposed life prediction protocol for photovoltaic (PV) solar cells. Already, a number of PV module manufacturers offer a 10, 20 or 25 year warrantee for their traditional crystalline silicon solar cell modules. This talk had focused on activities to help assure reliability of new modules composed of thin film materials.

The November meeting included all attendees participating in a roundtable discussion entitled "Designing for Reliability" with the focus on hardware aspects. Held at the SeaGate Corporation facilities in Longmont, that day meeting covered the higher priority concerns of the attendees. We also enjoyed a tour of the facilities and the fine lunch provided by SeaGate.

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January - May, September - November

PES/IAS

PES/IAS meetings are typically held on the third Thursday of the month September through May excluding December. All participants are requested to sign up in advance by calling Barbara Linton at (303) 388-6322.

Computer Society

All members interested in participating in the Computer Society of Denver, please contact Jim West @ 303-218-5658 or j.west@computer.org.

Officers

Society Chapter Officers can enroll in an officer training class held during the Denver EXPO. This class covers everything you need to know to run your society chapter. See the enrollment form on page three of this newsletter. Contact Lisa Brookman at 303-571-7575 for more information

Sitting in the Chair

by Cliff Alston, IEEE Denver Section Chair

I appreciate this new opportunity as the incoming Denver Section Chair to contribute time and energy to IEEE goals and needs. My training for this opportunity was conducted through the example set by retiring Chair Ron DeLyser and other high achievers, and I plan to raise the bar one notch higher this year by pursuing a set of goals designed to improve Section support to our IEEE members, the Region and the Institute.

While the following goals must compete with the standing duties of the Section, I intend:

- to emphasize support to Student/Professional/Industrial Outreach programs;
- to underwrite/conduct more educational activities featuring distinguished lecturers;
- to increase substantially the recognition for achievements awarded to IEEE members at all levels of membership; and,
- to complete the evolution of Section communications to reflect/support the way we intend to do business in the new millennium.

The first goal is intended to reflect extensive planning efforts conducted by several Section volunteers, particularly Paul Meisel. Paul's long range planning work identified critical areas of improvement where the Denver Section should focus. Hopefully, my proposed short term plan will reflect his longer range plans to increase our relevance to the professional and social aspects of our community. Hopefully, the three other goals will also increase this effort in community outreach.

Education will be an important component of Section activities this year. The calendar of workshops begins with the Section Officer Training Seminar/Dinner, organized by Chair-Elect Jim west and scheduled for Saturday, 13 February 1999. In addition, Kathleen Meehan will enjoy my full support in exercising authority as Student Activities Vice Chair to promote short courses, workshops, seminars, etc. within the Section. Later this year, professional training will also be available at the IEEE Sections' Congress to be held in Minneapolis.

I shall pursue the goal of prestigious recognition for professional and community activities by IEEE Section members with the most relish. Our members' performance in society has always been exemplary, and I hope our past Chairs Bob Struthers and Dave Richmond will continue to help identify, nominate and reward our top performers. My goal is to further this effort to highlight and recognize commendable work by IEEE members, throughout the Section, throughout the year.

The most difficult achievement this year shall be spearheaded by Pete Koloditch and Mike Foley, our Publicity Committee Chair and Communications Officer, respectively. These two gentlemen have accepted the challenge to complete the metamorphosis of Section publications and communications. We need a consistently timely, effective and secure vehicle for sharing pertinent data, information and intelligence with IEEE members within the Societies and Chapters, throughout the Section and the Region. Pete and Mike have already begun this work, and are aware of the great interest in their results.

These four goals shall be part of the Section's business in the coming twelve months. I will appreciate any and all help, guidance, suggestions and feedback from all who wish good fortune for our Section and its members. Thanks in advance for your support throughout this last year of the millennium. Happy New Year!

IEEE EXPO '99

The Denver Section wishes to announce Denver IEEE EXPO '99. The IEEE training conference will be held Saturday, February 13, 1999 from 12-8 p.m. at the Doubletree on U.S. 36 at Sheridan.

Two classes are available:

"Starting a Business"

This class is presented by the Colorado Small Business Development Center and will provide the materials and training required to get your business idea off the ground. The class will concentrate on special challenges for engineering-oriented businesses. Jayne Reiter will be the instructor. This class will be taught from 1-5 p.m.

"VHDL Programming"

This computer-based class is presented by AVNET and will provide an excellent introduction to VHDL programming using the latest software tools. Phil Brinkley will be the instructor. This class will be taught from 1-5 p.m.

Space for these classes is limited. Payment is required upon registration.
Contact Jim West @ 303-218-5658 or j.west@computer.org for more information.

Denver Section Students

The conference showcases Denver Section Student paper presentations from 1-4 p.m. All members are encouraged to attend presentations from all major colleges along the Front Range.

Officer Training

Society Officer Training will be conducted in another session. If you are a society officer (or want to be), please enroll for this free training on everything IEEE has to offer to your society. A training book will be provided.

Registration Form

Reserve your space today - Reservations are required for training classes.

Name _____

Address _____

Phone # _____ IEEE # _____

Reservation and Prepayment required for the Training Classes (Select only 1 item)

VHDL Programming Class with Dinner	1-7 p.m.	$40	_____
VHDL Programming Class **WITHOUT** Dinner	1-5 p.m.	$25	_____
Starting a Business Class with Dinner	1-7 p.m.	$30	_____
Starting a Business Class **WITHOUT** Dinner	1-5 p.m.	$15	_____
Society Officer Training Class **includes** Dinner	1-7 p.m.	FREE	___ 0 ___
Section Meeting and Dinner	5-7 p.m.	$15	_____

Dinner Selection:

Salmon with Wild Rice Pilaf _____
Chicken Parmesan with Fettucini Alfredo _____
New York Strip with Gorgonzola Demi-Glace _____
I have special dinner needs: _____

Please make check payable to **"IEEE Denver Section"**
Send check to: Jim West, IEEE Denver Section, 7329 S. Tamarac Ct., Englewood, CO 80112

Email Etiquette

by Martha Longshore, IEEE Corporate Communications

*Never "flame" anyone. Antagonistic or critical comments -- known as "flames" -- can hurt people, cause awkward situations and create conflict. Email is NEVER the place to make negative comments. Resolve problems by phone or in person.

*Watch your words! Words can be misconstrued. Check wording carefully, and be concise and to the point. This will reduce time spent following up on emails that need clarification.

*Don't "over CC" people. Send email only to people who need or want to see it.

*Never assume anything. While you may be familiar with Internet jargon and various "emoticons" -- such as the popular smiley face :) -- don't assume the recipient has your level of familiarity.

*Avoid using all caps. This is considered a form of electronic shouting.

*Keep attachments to a minimum. The larger the attached document, the longer it takes to download and the more memory it uses on a recipient's computer. Consider faxing lengthy documents. Or if time it not an issue, use regular mail.

*Limit sending unsolicited emails. Make sure your email has value to the recipient. If you don't, it may be considered junk mail and be deleted without being read.

*Remember, NOTHING is private in email. Even when a message is deleted, many software programs and online services can access messages on the hard drive. Before you click "send," consider what may happen if the message is read by someone else - for instance, your boss. Here's a good rule to follow: Don't put anything in an email that you wouldn't put in an office-wide memo.

Airport Security

by Martha Longshore, IEEE Corporate Communications

To avoid being robbed at an airport, be especially careful in these key areas thieves target:

1. Check-in lines and baggage claim areas. Always keep your baggage wedged between your feet or have a hand on your bag and laptop at all times. Thieves often work in pairs. While one is distracting you, the other may be stealing your bags.

2. Security checkpoints. Don't put your laptop on X-ray conveyor belts. Instead, hand it to a security officer. It's easy to have bags back up at these X-ray points. A thief could momentarily provide a diversion and then simply lift your bag or laptop off the conveyor belt without being noticed.

3. Shuttle buses. Even though these buses often provide a specific area to store bags while going to and from the airport and parking lots, it's best to keep your belongings with you.

Denver Section Mailing List

Join the IEEE Denver Section mailing list. This list is maintained and run by the Denver Executive Board. This mailing list enables the Denver Section to send announcements and Section information to section members.

IEEE HQ using a Majordomo processor enables this mailing list. Commands should be sent in the BODY of an email message to "majordomo@ majordomo.ieee.org".

Sample email message:

TO: majordomo@ majordomo.ieee.org

SUBJECT: Denver Section Request

BODY: subscribe denver-section [your email address]

The IEEE Executive Board encourages members to send postings about IEEE events, training opportunities, or any other events of interest to IEEE members to j.west@computer.org.

Student Papers

All Student Chapters in the Denver are reminded to get ready for the Denver Section Student Paper Contest.

Cash prizes are available.

The contest will be held during the Denver EXPO.

Contact Kathy Meehan, 303-871-2833.

Keeping Proper Lab Notebooks

by Bill Vobach*

In addition to assisting an engineer or researcher as a reference tool, a lab notebook can serve several important legal functions as well. For example, the United States follows a "first to invent" patent system. Under this system, when a dispute occurs between two inventors as to who should be entitled to a patent for the same invention, the inventor who can prove that he or she was the "first to invent" will be entitled to the patent. Given the value of a patent, both inventors have a vested interest in showing that they were actually the first inventor. Therefore, to prevent someone from lying about when they first invented, the U.S. Patent and Trademark Office and the courts look to evidence, such as lab notebooks, to corroborate or authenticate an inventor's alleged date of invention. In this way, the lab notebook serves as physical evidence, separate from the inventor's testimony, to prove the inventor's date of invention.

In a second situation, a lab notebook might be used to overcome a reference that is cited against a patent being litigated in court. For example, a defendant in a patent infringement lawsuit, might try to show that a patent is invalid by finding a reference that was published before the application for that patent was filed. Similar to the first situation, the lab notebook can be used to show that the inventor came up with the invention before the reference was first published. Once again, the lab notebook is serving as physical evidence.

A third situation where a lab notebook can be useful is in a dispute over trade secrets. Sometimes, a business will feel that trade secrets have been stolen by a competitor, e.g., when an ex-employee of the business who possessed sensitive information goes to work for the competitor. In this type of situation, a lab notebook can be useful for the competitor to show that one of its engineers actually knew the sensitive information before the other business's ex-employee ever started work for the competitor. Once again, the lab notebook can serve as physical evidence to prove this fact.

Given these possible situations, it is very important that those who work in research and development follow proper procedures in keeping their lab notebooks to ensure that the notebooks can be put to good use when needed. While the following is not a comprehensive list, it serves as a good starting point to accomplish this.

• Keep a bound notebook. A bound notebook helps to show that entries were made on the dates indicated. In contrast, a loose-leaf binder is suspect because there is a greater possibility that the entries were fabricated and then inserted into the loose-leaf binder or that material was removed. Similarly, electronic notebooks, such as records kept as word processing files, are suspect because the entry timestamps can often be altered.

• An inventor should sign and date each lab notebook entry.

• Each notebook entry should be reviewed, signed and dated by a colleague who understands the subject matter with a statement such as "Reviewed and understood by (name of witness) on (date)." This need not happen daily; however, it is preferable to do it frequently, such as weekly. Otherwise, it is difficult to prove that the inventor's dated entry really was authentic. It is also important that this witness not be a potential co-inventor. Also, if for some reason you must use a colleague who is not a co-employee, make sure that a confidentiality agreement is in place with that person.

• A line should be drawn across blank sections of a page. This will help to show that the inventor was not leaving blank pages or spaces to add data later.

• When data is developed at a later date, it should be entered on its own page with a reference to the earlier page. Don't insert new test data on an earlier page -- keep everything in chronological order.

• When attachments such as photographs of prototypes, computer printouts, etc. are generated, attach them to a page of the notebook and sign across both the notebook page and the attachment. Once again, this will help to show that the attachment was in existence on that date.

• Record the big picture of the project, such as the types of devices in which the circuit will be used. Also, record some background on the project, such as the goals and objectives to be accomplished.

• Give specific details about the work involved.

• In addition, record broad concepts about a possible invention and fundamental observations.

• Record test results, regardless of whether they are good or bad. It is often necessary to show that once you conceived an invention that you continued working on it until a patent application was filed. By recording all activities, you create a record that you were diligent in working on the invention and did not abandon it.

• Record circuit diagrams, sketches, software algorithms, etc., as well as possible alternatives that you might employ at a later date.

• Record contributions by potential co-inventors and memorialize important conversations and telephone calls relating to the project.

• Don't erase entries; instead, line through mistakes. Erasures could give the appearance that you were

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***Today's Engineer* Fall Issue Preview:**

What Engineers Can Learn From Venture Capitalists

WASHINGTON, Nov. 17, 1998 -- "History is strewn with sad tales of brilliant technologies that never made a cent; what you want to do is marry a terrific technology with a terrific business plan." So goes the argument in "Why Should a Venture Capitalist Give You a Dime?," the lead article in the Fall 1998 edition of TODAY'S ENGINEER magazine.

Have you ever wondered how engineers can make their everyday jobs more closely incorporate the very best aspects of an entrepreneurial venture, complete with the discipline, innovation and gusto normally associated with such projects? Authors Trudy E. Bell, Arthur P. Cimento and Jeffrey C. Sinclair attempt to answer this important question by presenting new ideas to help product development teams work together toward more productive and cohesive goals.

The main point of the argument is simple: An engineer on an interdisciplinary product development team -- no matter what the size of the company -- should approach the project as if he or she were developing a product for an entrepreneurial start-up about to apply for venture financing. And just how does seeking venture financing relate to the engineering profession anyway? Stated simply, venture capitalist firms want to know first and foremost how a start-up company plans to make money off an idea. They are more interested in management teams and complete marketing plans than they are in specific technological concepts. As an engineer, you can greatly benefit by thinking like a an entrepreneur seeking venture capital -- concentrating specifically on sound business issues, as opposed to just the technical features of your product.

The article goes on to describe the various players that can -- and should-- comprise a sound interdisciplinary product team. Most importantly, it presents a picture of how these players can interact in the most effective ways possible to realize the over-riding goal of the project, utilizing the best resources and talents of all the members simultaneously.

Pick up "Why Should A Venture Capitalist Give You a Dime?" in the Fall 1998 issue of TODAY'S ENGINEER, the magazine dedicated to illuminating the minds of engineers with new ideas and trends in the ever-changing world of work.

The IEEE-USA publication aims at helping technical professionals transcend traditional boundaries, think strategically, and develop an overall business perspective. Be on the lookout for future articles and issues that will change the way you work and think.

To subscribe, call 1-800-678-4333 and ask for Product number PB-331. Annual subscriptions are US $12.95. For more information on TODAY'S ENGINEER, call 202-785-0017 ext. 313; e-mail <ieeeusa-magazine@ieee.org>; or visit the magazine's Web site at <www.todaysengineer.org>.

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Pender M. McCarter, APR, Fellow PRSA.

Lab Notebooks

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trying to hide harmful information.

- Avoid using words that have legal implications. For example, it is very dangerous to say that something is "obvious" as this has a unique legal meaning under the patent laws.
- Finally, when you complete a project and no longer need the notebook, create an archive depository for your old notebooks in a safe place.

In general, your goals in keeping a lab notebook should be to show that you conceived all of the details of an invention and that you can prove the date on which you came up with the information.

** Bill Vobach is a patent attorney with the Denver office of the San Francisco and Silicon Valley law firm of Townsend and Townsend and Crew LLP. The opinions expressed in this article are those of the author and not necessarily those of Townsend and Townsend and Crew LLP or its clients; w.f.vobach @ieee.org; (303) 571-4000.*

IEEE-USA Professional Activities

IEEE-USA Scores With Digital Millennium Copyright Bill

- After a year and half of debate and controversy, Congress finally passed The Digital Millennium Copyright Act (WIPO Copyright Treaties Implementation and On-Line Liability) before ending this session. Legislators stripped controversial provisions protecting databases from the bill at the recommendation of many engineering and scientific organizations, including IEEE-USA. In addition,

IEEE-USA worked closely with the staff of Sen. Orrin Hatch, R-Utah on the Senate Judiciary Committee, to craft appropriate language that reached balanced protection for Internet content providers and Internet service providers (ISP). Content providers will have better protection against Internet theft of their copyrighted material, while ISPs will not be held liable for copyright infringement committed by their subscribers-as long as they remove the infringing web site once they are notified by the copyright holder. While IEEE-USA supported this protection, it also urged Congress to adopt language that would protect Internet users from false accusations of copyright infringement. IEEE-USA is concerned that this portion of the bill may harm small businesses and intends to pursue this issue during the 106th Congress.

Information Advantage Cuts Through the Clutter

The IEEE Information Advantage (www.ieee.org/products/infoadvantage) is a members-only benefit program that puts existing services, plus the new IEEE BooksPlus on-line book-buying service, under one roof. IEEE Information Advantage consists of Bibliographies On-Line, IEEE OPeRA (On-line Periodicals Research Area), ASK*IEEE document delivery service, the IEEE Personal E-Mail Service, and a final component, the new IEEE BooksPlus on-line book buying service.

IEEE BooksPlus (www.ieee.org/products/booksplus) complements the IEEE's discounts by giving members the opportunity to purchase professional books, technical references, and textbooks from other top computer science and engineering publishers on-line, at discounts of 20 percent - discounts not available at bookstores, on-line retailers like Amazon.com or Barnes & Noble, or even by contacting the publishers directly.

IEEE members will be required to register for an IEEE Web account to gain access to BooksPlus. For more information, contact Carol Coffey, 732-562-6547, c.coffey@ ieee.org

Newsletter Deadlines and Advertising Information

Deadlines for the RockIEEE Overlook are as follows.

Newsletter	Deadline
September 1998	August 1, 1998
October 1998	September 1, 1998
November 1998	October 1, 1998
December 1998	No Issue
January 1999	December 1, 1998
February 1999	**January 1, 1999**
March 1999	February 1, 1999
April 1999	March 1, 1999
May 1999	April 1, 1999

Send ads to Anita Wanberg, P.O. Box 4626, Englewood, CO 80155-4626 or call (303) 220-8042. Make checks payable to IEEE Denver Section.

Artwork should be submitted in camera-ready form (PMT). Please accompany all artwork with a check and a letter stating the number of times and dates the ad should be run. Ads should fit **within** the dimensions listed below.

Description	Dimensions	Single Rate	Multiple
Business Card	2.5" w x 1.5" h	$ 25.00/mo.	$ 20.00/mo.
1/8 page	3.5" w x 2" h	60.00/mo.	50.00/mo.
1/4 page	3.5" w x 4.5" h	150.00/mo.	130.00/mo.
1/2 page	7.5" w x 4.5" h	250.00/mo.	225.00/mo.
Full page	7.5" w x 9.5" h	400.00/mo.	360.00/mo.
Inserts	8-1/2 " w x 11" h	250.00/pg.	200.00/pg.

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