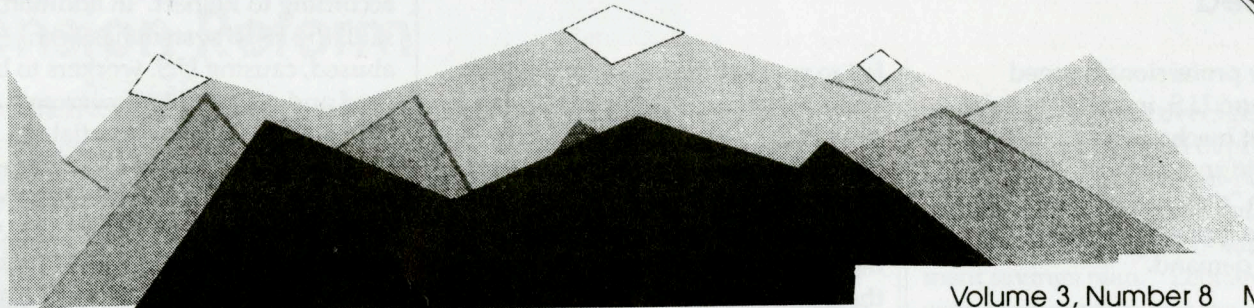


RockIEEE Overlook



Volume 3, Number 8 May 1998

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

Meetings

Electromagnetic Compatibility

June 16, 1998
7:00 p.m.
NIST, Boulder

Speaker
Donald Bush

"A Historical Summary of EMC Measurements"

Call Joe Kramer @ (303) 402-5272
for details.

1998 International IEEE EMC Symposium

August 24-28, 1998
Colorado Convention Center
Denver, Colorado
For details call Barry Wallen
at (303) 692-6600

Lasers & Electro-Optics

LEOS Meetings are generally held on the third Thursday of the month at NIST, 325 Broadway, Boulder, CO. Refreshments are served at 7:00 p.m., with the speaker starting at 7:30 p.m.

Denver Section Meeting and Awards Presentation

combined with
Joint Power Engineering, Industry Applications

Thursday, May 21, 1998
5:30 p.m. Brooklyn's 2644 W. Colfax

Speaker
John Horak, Basler

"Load-Shedding & Power Plant Stability Using Frequency Relaying"

A tour of the RTD Light Rail Facilities follows the meetings and Awards Presentation. Please call Barbara Linton at Peterson Company for reservations, (303) 388-6322.

IEEE-USA at Immigration Hearings: Let Free Market Solve High-Tech Workforce Imbalances

WASHINGTON, Feb. 25, 1998 - "Claims of high-tech worker shortages are inflated, the available domestic labor supply is understated, and the wisdom of expanding immigration is overrated" by groups lobbying Congress to increase or eliminate the current annual cap on H-1B skilled-employment visas, according to Dr. John R. Reinert, president of the Institute of Electrical and Electronics Engineers - USA (IEEE-USA), who testified today at immigration hearings held by the Senate Judiciary Committee. Reinert, representing the public-policy of 220,000 U.S. electrotechnology and information

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Immigration Hearings continued

technology professionals urged Congress and U.S. industry to help free-market mechanisms work more efficiently to correct labor imbalances rather than "resort to increased immigration as a quick fix for growing workforce demand."

While lauding the value of a "balanced, fair and properly utilized" immigration system in promoting U.S. competitiveness, Reinert cautioned that quickly expanding the high-tech worker pool with inexpensive foreign labor would have negative short- and long-term consequences for the national interest. "Opening the immigration floodgates is a simple and easy solution that will create complex and difficult problems down the road," he stated.

"The hidden blessing in the current high-demand market for certain technical specialties is that it should encourage us to retrain displaced workers, attract under represented women and minorities, better educate our young people, and recommitment willing and able older workers who have been forced out of the field," Reinert testified. "By raising the visa limits, the government instead would provide a powerful incentive to squander these important national resources and cause an increasing erosion of our domestic technical infrastructure."

After noting that salary studies

fail to support the notion of a widespread shortage of technical professionals, Reinert argued that advocates of increased immigration have oversimplified the dynamics of labor supply. "Since engineering employment increased by 12 percent during the past decade even as engineering degree awards declined 17 percent, we know that supply is much more a function of degree output," he said. "In fact, more than 80 percent of those working now as computer scientists, systems analysts and programmers have educational backgrounds in other fields. Future growth in the supply of electrotechnology and information technology workers will come not only from a recent upsurge in enrollments in technical-degree programs, but also from retraining of workers made available by continuing layoffs, early retirements and transfers from other fields."

Reinert also recalled "the checkered history of using immigration to avert predicted high-tech shortages." In the late 1980s, an expanding economy and National Science Foundation report of an impending shortage of engineers led Congress in 1990 to create the H-1B visa program, which was followed shortly by a recession, large-scale defense cutbacks, and the corporate restructuring movement. The combination of lowered workforce demand and expanded immigration resulted by 1994 in historically high levels of engineering unem-

ployment and the lowest real engineering salaries in two decades, according to Reinert. In addition, he said, the H-1B system has been abused, causing U.S. workers to be fired and replaced by lower-paid foreign workers. "The potential for large-scale abuse of the H-1B program -- highlighted in a 1995 Labor Department Inspector General's report -- is still there, since legislative and regulatory attempts to reform the system have been thwarted over the past several years," he stated.

"Our choice now is not easy but it is clear," concluded Reinert. "Training and education will help the free market utilize our domestic technical labor supply more efficiently -- resulting in many benefits to American industry, workers and the nation. Substantially increased immigration will likely lead to potential abuses of U.S. and foreign workers now and a decline in economic competitiveness, living standards and national security for years to come."

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IEEE-USA Testimony Endorses SAFE Pension Reform

WASHINGTON, March 10, 1998 - The Institute of Electrical and Electronics Engineers - USA (IEEE-USA) backed the Secure Assets for Employees (SAFE) Plan Act (H.R. 1656) in testimony today before the U.S. House Ways and Means Committee Subcommittee on oversight of pension issues. James V. Leonard, vice chairman of IEEE-USA's Engineering Employment Benefits Committee, testified that the SAFE Plan Act would "help expand pension coverage in the rapidly growing, small business sector and, at the same time, offer promising solutions to the vesting, portability, retirement-asset preservation, minimum benefits standards, and administrative complexity problems that IEEE-USA members are concerned about."

Leonard noted that the SAFE Plan would allow qualifying employers with up to 100 employees to establish a retirement plan in the form of an annuity or as a trust. All employees who received at least \$5,000 in compensation from the employer during any two consecutive preceding years and at least \$5,000 in the current year would be eligible to participate. The employer could contribute an amount equal to 1 percent, 2 percent or 3 percent of each eligible employee's annual compensation to the annuity or the trust. Once these contributions have been made, each employee's benefit would be fully and immediately vested.

According to IEEE-USA's Leonard, "The SAFE proposal facilitates pension portability by permitting terminating plan participants to use the assets held in a SAFE trust to purchase a SAFE annuity that will pay the promised benefit at retirement; to make a direct trustee-to-trustee transfer to a subsequent

employer's plan; or to transfer the present value of their SAFE assets into a rollover IRA." In addition, argued Leonard, SAFE would protect the real value (purchasing power) of earned benefits by funding employer and employee contributions based on present-year salaries and by providing an opportunity for an enhanced benefit if the SAFE annuity or trust earns more than 5 percent in any given year. Moreover, he said, "SAFE also ensures preservation of benefits for use in retirement by providing for a direct transfer of SAFE assets to an annuity or to a rollover IRA should participants change or lose their jobs." Finally, "the SAFE proposal includes provisions permitting the accumulation of up to ten years of past service credits and simplifies reporting and administrative requirements that should make it a particular benefit option for small businesses," he stated.

Leonard also addressed the Clinton Administration's Secure Money Annuity or Retirement Trust (SMART) plan, which he noted bears many resemblances to the SAFE Plan. However, he said that a major objection of IEEE-USA is that the SMART proposal would specifically exclude professional-service providers from the plan. "To us, it makes no sense for the Administration to

propose a pension coverage expansion proposal that will deprive a growing part of the small-business community of an opportunity to participate in such an important retirement savings plan." Leonard also expressed concern that the President's proposal does not provide for past service credits, which he argued would likely make SMART less attractive than SAFE to many small-business owners.

IEEE-USA promotes the careers and public-policy interests of 220,000 U.S. members of The Institute of Electrical and Electronics Engineers Inc., the world's largest technical professional society.

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What Does Patent Pending Really Mean?

by Bill Vobach*

You have probably seen on an item in the store or on a competitor's sales literature the phrase "Patent Pending." If you saw it as a consumer, you may have felt the product had greater value. However, if you saw it as a competitor, your reaction was likely one of fear. The "Patent Pending" phrase serves as a useful phrase for an inventor or company for both reasons. However, as either a consumer or competitor you should be aware of the limitations of the phrase.

Currently, there are several different types of patent applications one may file with the U.S. Patent Office (not to mention foreign patent offices). For example, one may file a provisional patent application, a design patent application, a plant patent application, and a utility patent application. The utility patent application is the version that most of us think of when we think of patents. It applies to inventions that have a utilitarian feature (e.g., an improvement in the operation of a mousetrap). A design patent application, on the other hand, is filed to claim ornamental features of a product (e.g., a more attractive mousetrap with rounded edges). A provisional patent application is a nebulous application -- it essentially is a submission of material to the patent office that is filed without any claims as to what the invention comprises. Finally, a plant patent application is for plants (the botanical kind -- not the industrial kind) and is also the rarest of all patent applications.

Once a U.S. patent application is filed, whether it be a provisional, design, plant or utility application, products that it pertains to that are sold in the U.S. may be marked with the notice "Patent Pending". Other phrases that indicate an application has been filed, such as "Patent Applied For" may be used, as well. The marking may be used until the

patent application expires, is abandoned, or issues as a patent. For example, a provisional application only lasts for a year and a half to several years, depending on several factors -- but most importantly, the breadth of protection being sought in the application. During this pendency of the patent application, keep in mind that no patent rights have actually been granted. Therefore, the "Patent Pending" notice does not indicate that you are currently infringing any rights -- only that you might infringe rights beginning from the date a patent is granted.

Importantly, one should not use the marking unless a patent application has been filed. Similarly, once the application expires, becomes abandoned, or issues as a patent,

then the marking of the product and sales literature with the "Patent Pending" type of notice should be stopped -- if a patent issues, then the product can be marked with the actual patent number. Federal law prohibits false marking under 35-U.S.C. 292. Enforcement of this provision is not retained solely by the federal authorities -- any person may sue for the penalty!

As you can see from the types of applications that may be filed -- especially the provisional application -- the "Patent Pending" marking can indicate the possibility of a significant invention or just a marketing ploy. Because patent applications are kept secret by the patent office until a

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Newsletter Deadlines and Advertising Information

Deadlines for the RockIEEE Overlook are as follows.

Newsletter	Deadline
September 1998	
October 1998	
November 1998	
December 1997	No Issue
January 1998	November 28, 1997
February 1998	December 26, 1997
March 1998	January 30, 1998
April 1998	February 27, 1998
May 1998	March 27, 1998

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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.

IEEE-USA Backs Pension Portability Improvement Proposal

WASHINGTON, March 19, 1998 - Dr. Timothy Grayson of the Engineering Employment Benefits Committee of The Institute of Electrical and Electronics Engineers - USA (IEEE-USA), strongly endorsed the new Retirement Account Portability (RAP) Act that was introduced today by Representatives Earl Pomeroy, D-N.D., Jim Kolbe, R-Ariz., and 17 other members of the U.S. House of Representatives.

"Improvements in pension portability -- like the ones in this bill -- are urgently needed to enable increasingly mobile American workers, including engineers and scientists, to take their earned pension benefits with them from job to job, from one employment sector to another and even from one career to another," Grayson said at a Capitol Hill news conference today. He added: "I'm a recent graduate of the University of Rochester, and have already had four jobs in my chosen field. Since college, when I held research and teaching positions, I've worked as a university employee with a 403 (b) plan and as a private sector employee with a 401 (k) plan. Although I'm looking forward to a long and prosperous career with my current employer, statistical averages indicate that I will change jobs three or four more times before I retire.

Unless I can transfer my pension benefits from one employer's plan to another, or roll them into or out of an Individual Retirement Account, I stand to lose a substantial part of my retirement savings."

Grayson cited U.S. Department of Labor research findings that two-thirds of the American workers who participate in employer-sponsored pension plans lose as much as 50 percent of their benefits under current patterns of job mobility and pension coverage. However, he said, the RAP Act will make it easier to transfer earned pension benefits from one employer's plan to another when workers change jobs and from one employment sector to another (e.g., from the public sector to the private sector) if they change careers.

According to IEEE-USA's Grayson, the RAP proposal will also loosen current restrictions on the use of Individual Retirement Accounts as portability vehicles. No matter where they work, individuals will be able to move pension benefits into and out of IRAs should they

change or lose their jobs. "Greater freedom of choice and more administrative flexibility will enable more working Americans to save more for retirement -- and keep more of their savings for use in retirement -- as they move in and out of the workplace," stated Grayson.

Grayson praised Congressmen Pomeroy and Kolbe for their leadership in crafting an innovative legislative proposal that he said removes almost all of the current impediments to the transferability of benefits from one defined-contribution plan to another. In addition, he pointed out, the plan also helps to reduce another cause of portability issues by reducing vesting requirements in certain kinds of defined-contribution plans -- since workers also lose pension benefits if they change jobs before earning a vested or irrevocable right to those benefits.

Patent Pending continued

patent issues, there is no way for you to find out the contents of the application, unless you have the cooperation of the owner of the patent application. Therefore, be aware of the opportunities to use "Patent Pending" to your advantage; but also, keep in mind what it can really mean when shopping or analyzing a competitor's patent position.

* Bill Vobach is a patent attorney with Santangelo Law Offices in Fort Collins, CO; w.f.vobach@ieee.org; (970) 224-3100

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Premiere Issue of *Today's Engineer* Hot Off Presses

WASHINGTON, Jan. 28, 1998 - *TODAY'S ENGINEER*, the first magazine to focus solely on nontraditional professional-development requirements for engineers of all disciplines, has published its debut issue.

The premiere issue of the quarterly magazine includes a series of articles and editorial departments geared for the professional development of all engineers, packaged with eye-catching illustrations and cutting-edge graphic design. The content highlights critical nontechnical skills such as the ability to think critically, creatively, independently and cooperatively; strong interpersonal and communications skills; and high ethical standards.

The cover story, "The Dawning of a New Age: Crossroads of the Engineering Profession," urges engineers to rise above the Dilbert model and redefine their profession by transcending traditional boundaries, thinking strategically, and developing a business perspective. A feature article, "Project Scope Creep," provides helpful guidance for product-development teams on how to avoid common pitfalls that can prevent bringing new products to market on-time and on-budget. "It's Not Eighth-Grade English" explores the task engineers hate most, but spend much

of their time doing - 'communication' - and provides helpful instruction on "engineering communication," which, according to the article, is "a lot more like engineering itself than it is academic writing." "Who Are We?" takes a look at the results of a survey which assessed the similarities and differences of men and women engineers in all engineering disciplines.

"Out with the Old, In with the New" is a tutorial on the procedure used to revamp an aged and outdated product line. The article uses a case study to explore how one manufacturing company revitalized its line of lighting products that resulted in reduced parts and labor costs, a nearly doubling of annual sales, on-time production schedules, and a defect-free finished-goods audit of 250,000 units.

The premiere issue begins with a salute to National Engineers Week, featuring a column from the 1998 Honorary Chair, Wayne Allen, the Chairman and CEO of Phillips Petroleum. Also near the front of the book is the "Short Circuit," a breezy collage of short, informative features including project tips, best practices, "The Masters," and a "Top Ten List."

Departments found in every issue include "Newsmakers,"

"Trends," "Technology Policy," and "Management Briefs." In the premiere issue, "Management Briefs" focuses on how to run a more efficient, productive, and, consequently, shorter meeting. The "Trends" department provides guidance to help engineers assess where they fit in their organization helps the reader develop a strategy to enable them to meet their engineering career goals.

"Engineers, like all professionals, are being asked to wear more hats than ever before," said editor-in-chief Gus Gaynor. "It's no longer enough to be a master of technology alone. You have to have terrific leadership skills, know about product marketing and management, thrive in an entrepreneurial and competitive environment, and have a broader understanding of what it takes for your organization to succeed. In short, you need to be able to 'think outside the cubicle.' We believe the debut issue and succeeding issues will help engineers meet this challenge."

TODAY'S ENGINEER is published by IEEE-USA, which promotes the career and public-policy interests of U.S. members of the world's

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IEEE-USA Publishes *The Engineer's Guide to Lifelong Employability*

Washington, Jan. 19, 1998 -- IEEE-USA has released *THE ENGINEER'S GUIDE TO LIFELONG EMPLOYABILITY*, a comprehensive career resource book for all engineering disciplines designed to help professionals locate and obtain rewarding engineering jobs throughout their careers.

The 173-page GUIDE teaches the cutting-edge skills needed to prosper in today's technical job market. Engineers will learn how to conduct effective electronic job searches and make use of a whole gamut of sources beyond the traditional newspaper classified ad. They'll also learn how to write a new computer-searchable resume that showcases specific skills and experience, how to create and use a career network to their advantage, and apply knowledge on transitioning from work to school, researching prospective employers, and interviewing and negotiating the job offer. There is even a chapter on consulting as an employment alternative.

"This book should be required reading for every graduating engineer, every engineer over the age of forty, and every engineer who has thoughts about becoming self-employed. It is quite simply the best book on the market today about engineering career management," wrote

Ed Safford, Lockheed Martin Senior Engineering Staff, in a recent review of the GUIDE. "I would describe this guide to lifelong engineering employment as the single most succinct, useful, and hard-hitting book on the topic I have ever read," echoed Larry Stern, IBM project manager, in a review in the January 1998 issue of *SPECTRUM* magazine.

THE ENGINEER'S GUIDE TO LIFELONG EMPLOYABILITY is priced at \$19.95 for IEEE members and \$24.95 for non-members. To obtain a copy, call (800) 678-4333 and ask for Product Number UH2970. For additional information and a complete list of IEEE-USA's employment efforts, check out its employment-assistance Web site at URL <www.ieee.org/jobs/html>, or contact William Anderson at (202) 785-0017, ext. 330, or <w.anderson@ieee.org>.

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Today's Engineer continued

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Announcing A New Self-Study Course

Produce Clean Software Designs, Take An Object-Oriented Analysis Challenge

PISCATAWAY, NJ, August 10, 1997 -- The process of developing software is extremely creative and potentially satisfying, but often fraught with pitfalls, delays, and "bugs" resulting in frustration. A new self-study course on analyzing and designing object-oriented (OO) systems from the Educational Activities Board of IEEE can help reduce the level of frustration and software programming flaws.

This continuing education course, authored by Dr. Eric J. Braude of Boston University, consists of a textbook -- Object Oriented Modeling and Design, (Rumbaugh et. al, Prentice Hall) -- a study guide, a workbook and a final exam. Those who receive a passing grade on the final exam, will be awarded eight Continuing Education Units (CEU's) and an IEEE Certificate of Achievement.

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