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- F. Other \_\_\_\_\_

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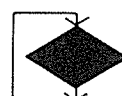
- A. Design
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- A. Communications Voice/Data
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Rules: All Call-In Entries will be registered twice. All Mail-In Entries  
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HP Calculator Description: HP-28S Scientific Calculator



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The IEEE

# Newsletter

PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

## North Jersey Section Calendar

**December 5, 1988**--"Switch Modeling"--NJ IEEE Systems, Man & Cybernetics Society, 6 PM, Bellcore, 6 Corporate Place, Piscataway, N.J. Reservations required for dinner buffet following meeting. Dr. Michael Liechenstein (201) 471-0721.

**December 8**--"PACE Meeting: Obsolete After 30?"--North Jersey Section's Professional Activities Committee, 7:00 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Jacques Geyer (201) 393-2998.

**December 12**--"Current Trends In Microwave CAD"--IEEE North Jersey Section Young Engineers Committee, 7:30 PM, ITT Auditorium, 500 Washington Avenue, Nutley, N.J. Sam Benzacar (201) 881-1200.

**December 14**--"High-Temperature Superconductivity"--North Jersey Section, IEEE Power Engineering Society, 7:30 PM, Jersey Central Power & Light Co., Madison Ave. at Punchbowl Rd., Morristown, N.J. Dennis Sobieski (201) 430-6698.

**December 14**--"Reducing Spinal Cord Scars With Millipore Implants"--Metropolitan Chapter of the Engineering in Medicine and Biology Society and the NY Academy of Medicine, 7:30 PM, Rockefeller University, York Ave. at 66th St., Rm. 305, NYC. Ben Caref (718) 270-1568.

**January 25, 1989**--"Transition Of Engineers To Managers"--New York/North Jersey Chapter of the Engineering Management Society, 7:00 PM, Stevens Center Bldg., Stevens Institute of Technology, Hoboken, N.J. (Buffet at 6:30 PM, reservations and fee required.) Jay Gilbert (201) 420-5369.

**January 11-March 29**--"Seminar: Programming In The Language C"--IEEE North Jersey Section, Wednesday evenings, 6:30-9:00 PM, Jersey Central Power & Light Co., Madison Ave., & Punchbowl Rd., Morristown, N.J. John A. Baka (201) 455-8534.

**February 1**--"1989 PES Winter Meeting - Students All-Day Session"--Power Engineering Education Committee and corporate members of the power industry, New York Penta Hotel in NYC. Barney Adler, (215) 841-4858.

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### NEWSLETTER STAFF

Editor..... M.M. Perugini  
Business Manager..... A.M. Beattie

**Deadline for receipt of material** is the 1st of the month preceding the month of publication. All communications concerning editorial and business matters, including advertising, should be addressed to: The Newsletter, c/o Girard Associates, Inc., 6 Robert Terrace, Mt. Arlington, N.J. 07856 (201) 398-5524.

### REPORT ADDRESS CHANGES TO:

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445 Hoes Lane, P.O. Box 1331  
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It is not necessary to inform the North Jersey Section when you change your mailing address. The NEWSLETTER and other section mailings use a list provided by IEEE's national headquarters in New York. This means the Section has no need to maintain a mailing list or addressing plates. Section membership records are changed when Headquarters notifies us.

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PACE Meeting:
Obsolete After 30?

The North Jersey Section's Professional Activities Committee will meet on Thursday, December 8, 1988 to hear a talk on "Your Engineering Career: Are You Obsolete After 30?" Mr. Richard Tax will be the speaker at this meeting.

About The Talk
Are engineers obsolete at age 30 or is it 33 or perhaps 37 years? So claims a study conducted by researchers at Northeastern University. Not so, says Richard Tax and associates from the North Jersey Section of the IEEE. Tax has reviewed and critiqued this report as well as looked into the many similar reports over the years which have claimed engineering obsolescence and shortages. He asserts much of this has been propaganda to support the position of academia for continued education and of industry to build a case for age discrimination.

A close scrutiny of the limited statistics and somewhat skewed conclusions of these researchers reveals little justification for such findings. However, these reports have received considerable publicity.

This discussion is for every engineer concerned and dedicated to improve the quality and status of the engineering profession. It brings the manpower issue out of the closet and attempts to put down the fabricated reports, the propaganda and the press releases that demean the engineer and affect the profession.

Some of the reports under investigation sell engineer shortage propaganda. The Northeastern study unjustly demeans the engineer. Both types and their correlation will be addressed. The responsible councils, associations and engineering societies will be noted and their involvement during the past ten years reviewed.

Tax will discuss, in detail, the events surrounding the investigation of the MHTC-Northeastern University report that cites a "...festering obsolescence problem." The report said engineers become obsolete, and the "statistically typical electrical engineer can now expect to face 30 years of declining productivity until retirement." Tax formed and guided an IEEE investigating committee that identified the report as a "shoddy piece of workmanship that reeks of deception and age discrimination."

About The Speaker
Richard Tax has a BSEE degree and is a Senior Member of the IEEE. He was

Chairman of the North Jersey Section in 1985-1986 and Chairman of the 20,000 member Metropolitan Section Activities Council for 1987-1988. He was appointed Chairman of the Professional Activities Committee for Engineers (PACE) in 1976. Tax has written more than 60 articles dedicated to professional activities. In 1977, he started the USAB Task Force for the BLS, Occupational Handbook. With Congressional assistance this Task Force made significant corrections to the Handbook. He is a member of the USAB Manpower Committee. Mr. Tax received the North Jersey Section Award for Leadership in 1979, the Region 1 United States Activities Board (USAB) Award for Leadership in 1981, the IEEE Centennial Medal in 1984, USAB Citation of Honor in 1984 and Professional Achievement Award in 1988.

Refreshments will be served affording you a relaxed atmosphere to meet the speaker and socialize with your friends and associates.

All IEEE members and guests are invited and encouraged to attend.

Time: 7:00 PM - 10:00 PM, Thursday, December 8, 1988.
Place: ITT Auditorium (next to the Tower), 500 Washington Ave., Nutley, N.J.
Further Information: Jacques Geyer (201) 393-2998.

High-Temperature Superconductivity

The December 14, 1988 meeting of the North Jersey Section, IEEE Power Engineering Society will feature a talk on "High-Temperature Superconductivity." The speaker will be Mr. Gordon Thomas of AT&T Bell Labs.

Few developments in modern science have generated as much interest and imagination among scientists, business and the public as the recent discovery of high-temperature superconductive materials.

Mr. Thomas will provide the audience with a better understanding of the science of superconductivity, its potential for useful application, as well as a small demonstration.

All Welcome
Admission is free, and all are welcome.

Time: 7:30 PM, Wednesday, December 14, 1988.
Place: Jersey Central Power & Light Co., Madison Avenue at Punchbowl Road, Morristown, N.J.
Further Information: Dennis Sobieski (201) 430-6698.

Switch Modeling In Phone Networks

On December 5, 1988, the NJ IEEE Systems, Man & Cybernetics Society will host a presentation on "Switch Modeling." The speaker will be Dr. John B. Lewis of AT&T Bell Labs.

About The Talk
While short-range planners of AT&T switch deployment make extensive use of site-specific data and detailed engineering simulation, long-range planners often use approximate, easy-to-use formulas sensitive to general trends. Dr. Lewis's talk will cover the modeling behind one such formula: switch site as a function of expected load in a changing network. Although most of this modeling has been in use in one form or another for the past decade, it is not entirely familiar to specialists in this field. Using a mostly graphical portrayal, Dr. Lewis will focus on the key concepts involved.

About The Speaker
Dr. John B. Lewis is a senior member of the Switched Network Evolution Planning Group at AT&T Bell Labs in Holmdel, and is currently working on the long-term capacity requirements for switching systems. Since 1974 he has been modeling long-distance switching systems as determined by the traffic network, studied local switching-system failure, and composed switched-network evolution alternatives. During 1968-74, he was with the Bell Labs Systems Studies Center where he modeled the detection and localization of submarine sound sources. Earlier he was engaged by the Goddard Space Flight Center to develop atmospheric temperature algorithms. Dr. Lewis received a BSEE from Worcester Polytechnic Institute in 1961 and a D.Eng. from Yale University in 1968 where he was recipient of the prestigious Honeywell Award for distinguished research.

Dinner Buffet
There will be a dinner buffet following the meeting, reservations required (RSVP below).

Time: 6:00 PM, Monday, December 5, 1988.
Place: Bellcore, 6 Corporate Place, Piscataway, N.J. (Lobby Area: Bldg.-A).
Further Information/Dinner Reservations: Dr. Michael Liechenstein, Chairman SMC Society-NJ, (201) 471-0721.

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IEEE North Jersey Section Seminar  
PROGRAMMING IN THE LANGUAGE C

Wednesdays, January 11, 1989 - March 29, 1989 - 6:30 PM to 9:00 PM  
Jersey Central Power & Light Company  
Madison Ave., & Punch Bowl Rd., Morristown, NJ

The North Jersey Section is offering an evening course titled "Programming In The Language C." The course will focus specifically on the Microsoft QuickC compiler, on the IBM PCs and compatible computers with DOS.

C is the general purpose programming language that has become one of the most widely used languages in the world. C features have been known to be efficient, economical and portable, and have proven especially useful in system programming because C facilitates writing fast, compact programs that are readily adaptable to other systems.

The lectures will be covered from fundamental to advanced data structures and handling. All the examples and techniques used throughout the course, are oriented toward the development and maintenance of serious, real-world C applications. Upon completion of the course, the student will have the skills to write useful and practical programs.

Students will be given assignments to do on their own IBM PC or compatible, if one is available; either at home or on the job. A **Microsoft QuickC compiler** and a **text book** will be supplied.

**Prerequisites:** The student should be familiar with at least one of the following languages: BASIC, COBOL, PASCAL, PROLOG and/or FORTRAN.

The instructor is Mr. Tuan Q. Nguyen, a System Engineer at Jersey Central Power & Light Company.

(1) **January 11, 1989**—Introduction to C: Why learn C? Why QuickC? Hardware Requirements; Knowledge Requirements; Convention and Style; Directories and Files Used by QuickC; Setting up QuickC; Starting QuickC; Getting Help: Fixing Errors; QuickC Editor and Environment.

(2) **January 18**—C Fundamentals: Basic Elements of C Programs; Punctuation and Spacing in C Programs: Using Comments in C: Data Types and Declarations of Variables: The Power of Printf ( ).

(3) **January 25**—Getting Input with Scanf ( ); Shortcut Assignments, Increments, and Decrements; Relational Operators; Logical Operators.

(4) **February 1**—Repetition and Looping: The For Loop; The While Loop; Debugging and Loops.

(5) **February 8**—Decisions and Branching: The If Statement; The Conditional Assignment Statement?; Multipath Branching; The Switch Statement; The Break Statement; The Continue Statement; The Goto Statement; More Complex Conditions for Branching.

(6) **February 15**—Functions and Function Calls: Functions and Program Design; Declaring and Defining a Function; Local and Automatic Variables; Register Variables; Passing Information to a Function; Functions with Many Parameters; Functions that Return Information; Recursion; Noninteger Functions; Function Prototypes.

(7) **February 22**—Arrays: How Arrays Are Stored in Memory; How to Declare Arrays; Referencing and Using Array Items; Bounds Checking Arrays in Your Code; How to initialize Arrays; Arrays and Functions; How Array Offsets Advance; Multidimensional Arrays; Advanced Topics and Tricks; The bitwise Operators, Tiny Arrays.

(8) **March 1**—Addresses and Pointers: Addresses Reviewed; What Is A Pointer?; Accessing Variables with Pointers; Passing Pointers to Functions; Pointers and Arrays; Pointer Arithmetic; The Interchangeability of \*amts and amts [ ]; 1value vs rvalue; Type Casting Pointers and Addresses; Far Pointers; Functions that Return Addresses; Dynamic Arrays; Advanced Pointer Techniques.

(9) **March 8**—Strings: Declaring and Initializing Strings; The String Pool and String Addresses; Pointers and Initialized Strings; Formatting strings with printf ( ); String Input and Output; String Manipulation Routines; Arrays and Strings; The Arguments to main( )-argv and argc; Character Classification and Transformation.

(10) **March 15**—Managing Files: Top-level I/O; Mid-Level (Unbuffered) File I/O; The File System; Advanced Error Handling;

(11) **March 22**—Advanced Data Types: Structures - An Array of Different Types; Union-Multiple Types in the Same Space; Enumerated Data with enum; Bit Fields; Advanced typedef.

(12) **March 29**—Large Project: Advanced C Preprocessor; Using QuickC for Large Projects.

Class size will be limited to a maximum of 30 with a minimum registration of 15. Early registration is recommended. Phone reservations will not be accepted. Reservations accepted after January 6, 1989 will require an additional **late fee** of \$25.00.

**Where:** Jersey Central Power & Light Co., Madison Avenue & Punch Bowl Road, Morristown, NJ

**When:** Twelve sessions, Wednesday nights, starting January 11, 1989 from 6:30 PM to 9:00 PM. One snow date has also been arranged.

**Cost:** With Text Book and QuickC compiler: IEEE Members \$175.00; Non-IEEE Members \$250.00.

With Text Book only: IEEE Members \$100.00; Non-IEEE Members \$175.00.

**Contact:** Mr. John A. Baka at (201) 455-8534 (Bus.)

Registration "Programming In The Language C"

To: Mr. John Baka, Distribution Engineering, JCP&L Company, Madison Ave. at Punch Bowl Rd., Morristown, N.J. 07960

Name \_\_\_\_\_ IEEE No. \_\_\_\_\_

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Check if QuickC Compiler is Needed or Not **YES** [ ] **NO** [ ]

Please enclose required fee made payable to "North Jersey Section IEEE"

Signature \_\_\_\_\_

Current Trends In  
Microwave CAD

The IEEE North Jersey Section Young Engineers Committee will meet on December 12, 1988 to hear a talk on "Current Trends In Microwave CAD." The speaker will be Dr. R.J. Gilmore, Vice-President of Engineering at Compact Software.

About The Talk

Computer-aided design techniques for microwave circuits have historically lagged those for silicon and digital circuits and digital circuits. With the increased focus on reproducibility of GaAs MMIC circuits mandated by the U.S. Government MIMIC program, microwave CAD has started to advance significantly. Concept such as yield optimization, schematic capture, and electronic data interchange are being applied to analog microwave circuits, also new techniques for analysis and optimization of microwave nonlinear circuits are being pioneered.

The speaker will present a detailed overview of current trends in microwave CAD, and will focus on three CAD areas: yield optimization, performance optimization and noise modeling of microwave circuits.

Performance driven design alters a set of circuit parameters to maximize some performance criteria, such as bandwidth or gain. This concept can now be applied to nonlinear circuits, in which voltage dependent bias or drive levels can be considered as variable circuit parameters. Other performance criterias, such as output power, spectral purity, or efficiency can be optimized.

Yield optimization is presently available for linear circuits, and enables fixed circuit tolerances to be accounted for when optimizing. A given specification window can be met and production maximized.

Noise modeling allow a single noise measurement to be made to characterize the noise behaviour of a device, which with its small signal device model, is sufficient enough to accurately predict the noise properties of the device within any arbitrary circuit topology.

About The Speaker

Dr. Rowan Gilmore joined Compact Software in 1987 and is presently Vice-President of Engineering. Dr. Gilmore directs the development and enhancements of Compact Software CAD products. He previously worked as a Project Manager at Schlumberger in Houston, Texas and prior to that as a senior design engineer at Microwave Co.,

St. Louis, Mo. Dr. Gilmore received his BE degree from the University of Queensland, Australia, and received his MSEE and D.Sc degrees from Washington University, St. Louis, where he performed much of his original work on nonlinear circuit analysis techniques to microwave circuits. Dr. Gilmore has published numerous technical and workshop papers in the field of nonlinear analysis. He is a member of the IEEE and the IEE.

All Welcome

Members and guests are invited. A free buffet will be provided an hour prior to the scheduled talk.

**Time:** 7:30 PM, Monday, December 12, 1988. (Buffet starts at 6:30 PM.)

**Place:** ITT Auditorium, 500 Washington Avenue, Nutley, N.J.

**Further Information/Reservation:** Sam Benzacar (201) 881-1200; Tom DeNigris, 569-8282; Maitland McLarin (201) 335-6847.



Reducing Spinal  
Cord Scars With  
Millipore Implants

On December 14, 1988, the Metropolitan Chapter of the Engineering in Medicine and Biology Society and the New York Academy of Medicine will present a talk on "Scar Reduction In The Spinal Cord Of Adult Mammals Using Millipore Implants" The speaker will be Dr. Michel Klior, Assistant Professor of Neurology, at the New York Neurological Institute of the Columbia University College of Physicians Surgeons, NYC.

About The Talk

Dr. Kliot will overview current research trends in the scar reduction and enhanced regeneration of fibers in the spinal cord. He will detail the millipore implant technique used in such scar reduction and will discuss the question of plasticity in the adult mammalian spinal cord.

Optional Pre-Lecture Get Together

There will be an informal pre-lecture get together (optional) at 6:30 PM in the Tower cafeteria.

**Time:** 7:30 PM, Wednesday, December 14, 1988 (informal get together (optional) 6:30 in Tower cafeteria).

**Place:** Rockefeller University, York Ave. at 66th St., Room 305, NYC.

**Further Information:** Ben Caref (718) 270-1568; Vijay Kowtha (201) 932-4803; Joe Bogovic (212) 241-8032; Edna Feher (212) 757-0610; Raphael Henkin (718) 630-3738.

*The North Jersey Section Executive Committee meets the first Wednesday (except holidays and December) of each month at 7 PM. These meetings (held at ITT, 500 Washington Ave., Nutley, N.J.) are open to all members. Information on each meeting agenda is available from George Graul, Section Secretary at (201) 798-4403.*

*Electd Section Officers are listed on Page 1.*



Holiday Celebration

The December 15, 1988 meeting of the IEEE NY Section Consultants' Network will feature our "Second Holiday Celebration."

Due to the overwhelming success of our first annual holiday celebration, held last December, we are having a second one at the same location. This will be a holiday celebration dinner at the China Peace restaurant (with food appropriate for the holiday season). We will enjoy an evening of good food, networking, and discuss the results of our fall activities in advertising, show exhibitions, and other networking concerns. Spouses and friends are certainly welcome.

Regrettably, we must charge for this one, but it is well worth the cost.

To assure a reservation, please mail your check for \$20.00 to Jim Wetterau, by December 9th. Phone reservations after that date will be accepted, but the cost at the door will be \$25.00.

Time: 6:00 PM, Thursday, December 15, 1988.

Place: China Peace Restaurant, 44th St., and Broadway, Manhattan, N.Y.

Further Information: Jim Wetterau (212) 321-1999; Bert Lindberg (212) 825-1527.

Joint Computer/Communications Society Chapter Announces Future Sessions SPRING 1989

Jan. 18, 1989	Neural Nets	ITT , Nutley	Sven Sternung
		Nutley	(201) 284-2111
Jan. 25	Protocol Tutorial #3	AT&T-BTL	Sven Sternung
	ISDN	Murray Hill	(201) 284-2111
Feb. 15	Flood Control	ITT	Alex Brown
		Nutley	(201) 284-2570
Feb. 22	Protocol Tutorial #4	AT&T-BTL	Sven Sternung
	CCITT X.25 et.al.	Murray Hill	(201) 284-2111
Mar .22	Cryptography	ITT	George Pick
		Nutley	(201) 884-6040
Mar. 29	Protocol Tutorial #5	AT&T-BTL	Sven Sternung
	IEEE 802.x (Tent.)	Murray Hill	(201) 284-2111
Apr. 19	Point/Point Microwave	ITT	George Parowski
		Nutley	(212) 884-6040
Apri. 26	Operating System	AT&T-BTL	George Pick
	Standards (UNIX)	Murray Hill	(201) 884-6040
May 24	MUMPS - A popular	TBD	Dave Perry
	language used by		(201) 325-8415
	hospitals and some		
	businesses		
May 24	Wiring	ITT	Jim Morgan
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Congratulations New Senior Members

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Raymond Weronick

Should your name be on this list? For information and an application contact Don Weinstein, Kulite Semiconductor, One Willow Tree Road, Leonia, N.J. 07605 (201) 461-0900, ext. 238.

Students Day At '89 PES Winter Meet

A full day's program is planned for Wednesday, February 1, to help engineering students learn more about the career opportunities and technical challenges that await them in the power industry. Students and their faculty advisors may look forward to three special sessions and a social hour, sponsored by the Power Engineering Education Committee and corporate members of the power industry.

At 9:30 AM there will be a panel discussion on Artificial Intelligence and Expert Systems. This is an area of computer application that represents the state-of-the-art technology being employed in the power industry. Various applications will be discussed as examples of the stimulating technical challenges facing the young engineer. Students with other interests are invited to attend any of eleven other concurrent sessions on power system engineering, transmission and distribution, substations, and power apparatus.

At noon students and their professors are invited to join industry hosts for lunch. The luncheon speaker will be the quintessential entrepreneur, Lionel Barthold, the chairman and founder of Power Technologies, Inc., and past president of the IEEE Power Engineering Society. Mr. Barthold firmly believes that an engineering career can be as satisfying and pleasurable as it is financially rewarding. He will share his thoughts on career planning in a talk entitled "Engineering for Fun and Profit."

Following a short break, students, educators and industry representatives will convene for a roundtable discussion. Students will have a chance to raise questions and discuss issues with professionals from a number of universities and from various facets of the power industry, including utilities, consultants, vendors, and architect/engineers.

A social hour will conclude the afternoon's activities.

Students and educators who wish more information, please call Charles McKeough, Villanova University, (215) 645-4978. Industry people please contact Barney Adler, Philadelphia Electric Company (215) 841-4858.

PACE NEWS

By R. Tax

WHOSE SPECIAL INTEREST?

Question! When is a special interest group not a special interest group? Answer! A special interest group is not a special interest group when it is an engineering society. Two issues bring this to mind. First is the editorial by IEEE's president, Russell Drew, in the November issue of "THE INSTITUTE" entitled "Too many engineers?" The second is a bulletin I received from Sally Hanlon, Director of Communications, American Consulting Engineers Council (ACEC), 1015 15th St., NW. Washington, DC 20005, (202) 347-7474.

Looking at the second one first, I find that the current function of ACEC's bulletin is to turn the celebration of National Engineers Week (February 19-25, 1989) into a mass effort to recruit (seduce) our youth into engineering.

Under the title "National Engineers Week Bulletin" and "Focus on Community and Youth Outreach" they follow with:

"Your participation is what will make National Engineers Week, February 19-25, 1988, a national success." (Ed note—multiple errors in dates make this appear to be a repeat of their last years efforts.) "But the success will take planning. Now is the time to arrange your outreach efforts to the local community.

Particularly think about how you can reach your community's youth. Participation in the event is an excellent opportunity to help fight the shortage of engineers by promoting the profession to young people."

Further, they provide a list of ideas to help you "actively celebrate National Engineers Week with your community." The bulletin mentions a sample speech they will provide and audio-visual aids and promotional packets. They suggest using your Chamber of Commerce, Kiwanis, Rotary Club and High School to promote this sham. "Consider honoring a local engineer (possibly retired) with a banquet and an award..." "Invite the press..." they say. There is much, much more, but what really makes me sick is the beginning of their last paragraph. It reads "Reach out to really young kids." Further, they suggest using your local library and elementary school, and to cite engineering projects such as the Statue of Liberty or the Golden Gate Bridge.

This all reminds me of an old pre World War II phrase "Today Germany, tomorrow the world." Is there really very much difference?

It gets worse. There is more. AAES is a sponsor. ASCE is a sponsor. ASME is a sponsor. NSPE is a sponsor. IEEE is also a sponsor. I thought these were all special interest groups concerned with the best interest of their name-sake.

If you would like to see the type of scheming you and your children are up against, send a SASE to Richard Tax, 630 Montview Pl., River Vale, NJ 07675 and you will receive a copy of this two page bulletin. Keep your congressman informed.

If engineers had a special interest group truly interested in their well being, the group would strive for a lifetime career of forty years. They would seek a balance in supply and demand so engineers would be gainfully employed solving engineering problems, enhancing their careers each year with added valuable experience. We could cultivate a community of sharp, experienced engineers. With an over abundance of engineers we see engineers in the profession for more than 10 years with only 2 years of engineering experience. This is not healthy for our industries, the United States or our engineering community. The group would speak well of their members and enhance their careers without encouraging additional numbers of engineers. Not only can't we get IEEE to openly oppose erroneous engineer shortage reports, it appears as though some of our members are supporting these efforts.

In Russell Drew's editorial he cites enough circumstances to indicate that the career of the engineer is in jeopardy. The conditions he cites are those of a surplus of engineers and not a shortage. To the question, should we cut back on student entry into the profession? he replies "...a resounding No." Drew does not realize that the cut backs are inherent in the system; engineering students are trained for engineering jobs that do not exist. Apparently he opposes controls, but controls are like vectors. Controls have both magnitude and direction. Why does Russell Drew, IEEE's 1988 president, support controls that increase the supply of engineers? Why does he, in his closing, advocate sneaking into the classrooms of our children to expose them to more "mathematics and the principles of engineering."

What about the class of '88 that have not found engineering jobs? How about the class of '87 that have not found engineering work? And, what about the class of 1950 that are being forced out to early retirement? Don't forget to include underutilization of engineers. These are your cut backs, Russell Drew.

How about the tax payers dollars wasted on training students for jobs that do not exist. Perhaps a little truth and strength from a special interest group for engineers is needed. It surely would be a refreshing change.

This is a terrible subject to include in our December issue. Perhaps, being forewarned, we can make Engineers Week something worth while instead of just a period of lies and seduction for our "really young kids."

Have a HAPPY HOLIDAY and a GRAND NEW YEAR!

PACE Committee Meets Monthly

The PACE Committee meets on the second Thursday of every month at the ITT Auditorium, 500 Washington Avenue, Nutley, N.J. (near the the ITT Tower) at 7:30 PM. Our Section Executive Committee meets there on the first Wednesday of every month (except in December) at 7:00 PM. Any questions or comments will be well received. Contact Richard Tax at (201) 664-0803 (after 7:00 PM) or write to R. Tax, 630 Montview Place, River Vale, N.J. 07675.

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