



The IEEE

Newsletter

EDITORIAL

Section Dinner Dance

An evening of conviviality and good food at the Governor Morris on March 6 was highlighted by five fellow awards and a talk by Dr. Paul H. Newell of NJIT on the necessity for long-range plans despite political necessities which often short-circuit the long-range planning process.

Dr. Bob McMillan gave a mini-address on the subject of "Adaptability of Engineers". The text follows:

"The engineer is the most adaptable person in the industrial world. He (or she) alone fully understands the product, the process and the industrial climate (finances, time, human relations, etc.). To date the engineer has accepted almost any assignment and used his training and ingenuity to make it work on schedule. He adapts to shortages by substituting other parts, materials or resources. He is not hesitant about rolling up his own sleeves — often even to the extent of doing necessary clerical work — even typing. (This adaptability to accommodate management sometimes progresses too far—but this is another story.)

"The world is changing. In our country we have seen the judicial seize the initiative. Legislation is dominated by huge influence groups. Labor unions, environmentalists, organized crime and the media (among others) manipulate political power. It is often clear that on issues involving technical judgment (energy shortages, nuclear power generation, pollution, mass transit, etc.), these influence groups do not understand the problems or possible tradeoffs. They are guided, many times, by emotion more than fact.

"In short, the engineer (each engineer) must adapt once again. I call on each of you to counteract the mindless, emotional or self-interest-guided thrusts of improperly informed influence groups. To accomplish this you must become politically active and effective either as an individual or a society."

Public Forum On Energy Program

Congressman McGuire (Bergen County) conducted a panel discussion with questions from the audience at Glen Rock School on March 7 with about 500 attendees from Bergen County. His panel included Mr. Pollard, who recently resigned from his position of insuring that nuclear plants met safety specifications; Dr. Gotlieb, Nuclear Fusion Research; and Dr. Draper, of Texas, an expert on nuclear power.

After the panel it was the vast consensus of the audience that additional funds be allocated to the energy program. It was a 2/3 to 1/3 consensus that a moratorium not be placed on nuclear power generation.

Dr. Gotlieb stated that a "Manhattan" type project was not needed. This writer disagrees. The atomic bomb and space program demonstrated that massive engineering and scientific effort can be applied to solve multi-faceted complex problems in a short time frame.

Bob McMillan, Section Chairman

Engineers' Needs

(The chairman of the Socio-Economic Committee, Bob Sinusas, has asked the Newsletter staff to call the members' attention to the following meeting of the Princeton Section.)

Robert A. Rivers, IEEE's Division IV director, and the second person in the Institute's history to challenge the Board of Director's nominee for the position of IEEE President, will be speaking on Tuesday, April 13, 1976 at Princeton University.

Sponsored by the Princeton Section IEEE, Rivers' topic will be "Engineers' Needs — Lifetime Career and Professional Work Environment."

According to Rivers, the engineer in the U. S. needs reasonable assurance of a lifetime career and a professional work environment. Control of that career and work environment presently is more influenced and controlled by other than himself and his professional peers. It is controlled by politicians, by lawyers, by financial interests, by educational and employee groups, and by several layers of management that cannot be reached. The goal of professionalization of the IEEE is to bring the professional work environment under the influence of the IEEE as a representative of its members.

A professional environment system model will be presented to focus the discussion.

Rivers' petition of candidacy is reportedly circulating in hopes of obtaining the signatures of one percent of the IEEE's voting membership. If successful, Rivers' name will appear on the 1976

ballot. He will be running against Robert M. Saunders, of the School of Engineering at the University of California at Irvine, the current IEEE VP for regional activities. Last year, Irwin Feerst became the first petition candidate to challenge the Board of Director's nominee for President. In the subsequent election, Feerst took one-third of the vote from the board nominee and winner, Joseph K. Dillard.

Mr. Rivers received his BS in EE degree from MIT in 1953. Prior to attending MIT, he had been a flight radio officer for Pan American for eight years. He was the design engineer for General Electronic Labs on early microwave telemetering transmitters. He organized Aircom, Inc., in 1954 and has continued as the president since

North Jersey IEEE Meeting: DINNER & WINE

The North Jersey Section of the Power Engineering Society will hold its Fourth Annual Dinner Meeting honoring past chairmen on April 29, 1976. The evening will feature a roast top sirloin of beef dinner and a program by Mr. Dominick Moriello.

Mr. Moriello, of State Prize Liquors in Union, will present a program on how and why to select different types of wine. Several wines will be available for tasting purposes. Mr. Moriello has spoken to many groups in the area and this promises to be a very informative evening.

This Fourth Annual Dinner Meeting will be held at the Rock Spring Inn, 481 Northfield Ave., West Orange, on Thursday, April 29, 1976. A dutch

treat cocktail hour will begin at 6 PM and dinner will be served at 7 PM. The charge for the dinner, including gratuities, and the wine tasting will be \$7.50 per person. Spouses and guests are most cordially invited to attend. Reservations must be made by April 23, 1976 to Anne M. Giedlinski, Jersey Central Power & Light Company, Madison Avenue at Punchbowl Road, Morristown, N. J. 07960, Phone: 539-6111, Ext. 309. Make check payable to Power Engineering Society IEEE North Jersey Section.

Time: 6 PM, Thursday, April 29, 1976.

Place: Rock Spring Inn, 481 Northfield Ave., West Orange, N. J.

N. J. IEEE Meeting: Antennas & Propagation

The Microwave Theory & Techniques Society, North Jersey Chapter, will present a talk entitled "Antennas & Propagation: Problems, Progress and Plans of Microwave Sensors," by Dr. Edward A. Wolff, of IEEE APS Distinguished Lecturer Program & NASA Goddard, on Wednesday, April 28, 1976.

This talk will be a tutorial presentation of work at NASA on satellite communications and earth-viewing remote microwave sensor applications involving several antenna and propagation efforts.

The space communications problems requiring antenna and propagation (AP) work stem from the limited availability

of spectrum and the need to support spacecraft operations. Crowding in the lower parts of the spectrum have led to increasing consideration of frequencies above 10 GHz where tropospheric effects and hydrometeors are important. Propagation and interference work has been done using the ATS-5 and ATS-6 satellites, and more is planned for CTS and the Space Shuttle.

The earth-viewing microwave sensor problems requiring AP work include the determination of sensor response and the desire for high resolution, large spatial coverage, low data rate, small size, low weight, and low cost. Active and passive sensors are being designed and orbited for the measurement of altitude (geoid, tides and ocean currents), ocean wave spectra, surface winds, sea ice, snow fields, glaciers, soil moisture, atmospheric parameters and precipitation.

Dr. Wolff received his BSEE degree from the University of Illinois in 1951 and his MS and Ph.D. degrees from the University of Maryland in 1953 and 1961. He is presently Associate Chief of the Communications & Navigation Division, NASA Goddard Space Flight Center (GSFC), Greenbelt, Md.

He is a Fellow of the IEEE and has played a key role in the organization and growth of MTT/AP activities in the Washington, D. C. area since 1956.

For further information, contact E. W. Niemiec, ITTDCD - Nutley, N. J. at (201) 284-2323.

Time: 8:15 PM, Wednesday, April 28, 1976.

Place: ITT Avionics Auditorium, 500 Washington Ave., Nutley, N. J.

Pre-Meeting Dinner: Ramada Inn, Rt. 3, (eastbound side) Clifton, N. J.

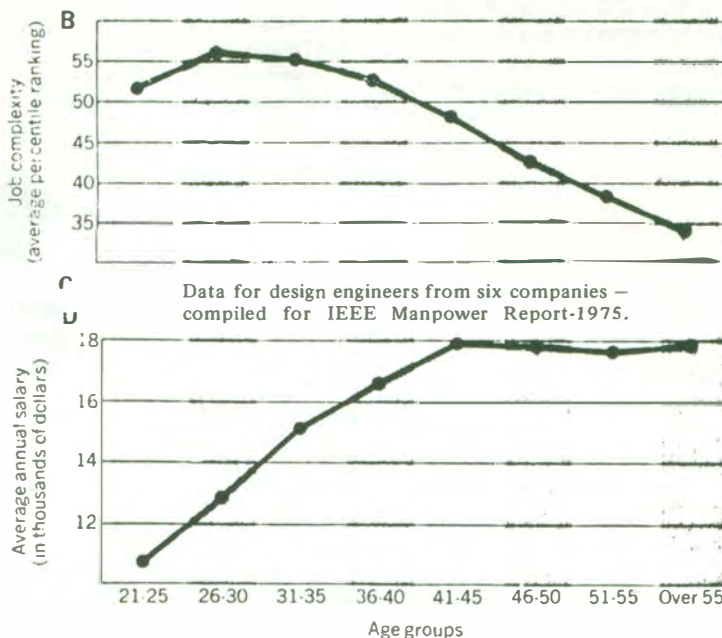
Microprocessors

The North Jersey Section IEEE Computer Group meeting for Tuesday April 20, 1976 will cover "Microprocessors: Hardware — Software — Considerations." Speakers will be Mike Lania and David Beauvais.

For further information call: M. McLarin at (201) 328-3573.

Time: 8:00 PM, Tuesday, April 20, 1976.

Place: ITT Auditorium, 500 Washington Ave., Nutley, N. J.



that time. He has designed well over a thousand microwave related products and presently offers over 1,300 as catalog components. Since 1970, he has devoted a significant portion of his efforts toward the establishment of effective professional activities within the IEEE. He has authored papers on Economics and Employment, Engineering Supply-Demand, and Age Discrimination. He is a member of Eta Kappa Nu and Tau Beta Pi.

For further information, call (609) 452-2700, Ext. 2707.

Time: 8 PM, Tuesday, April 13, 1976.

Place: Princeton University Engineering

Quadrangle Convocation Room. Pre-Meeting Dinner: 6 PM, Tap Room, Nassau Inn, Palmer Square, Princeton, N. J. (Make reservations before April 9).

Tour The Newark
Airport Control Tower

The Reliability Chapter of the North Jersey Section IEEE is sponsoring a tour of the Newark Airport control tower and technical offices. This tour will enable IEEE members, along with their families and guests over 18 years old, to see how the airspace serving Newark is reliably managed. Capacity is limited to 50 adults maximum, so please send in the reservation form immediately. (Deadline: April 19.)

Attendees are directed to follow the road signs to the North Terminal and then proceed to Brewster Road, and Tower Road to the tower. Please use the parking lot located on the left side.

Time: 7:30 PM, Thursday, April 22, 1976.

Place: Newark Airport Control Tower
Cancellations: April 19 - 22, call S. Markowitz, (201) 328-5486.

RESERVATION FORM
NEWARK AIRPORT TOUR

Mail to: S. Markowitz
R. D. # 1, Box 636A
Lake Hopatcong, N. J. 07849

Name _____

Bus. Address _____

Phone _____

No. Adults Attending _____

DECnet To Be Discussed

The IEEE Communication Society (N. J.) has arranged for a seminar to be given at ITT, 500 Washington Ave., Nutley, N. J., on Tuesday, April 27, 1976 at 8 PM. The subject will be: "DECnet — An Inter-Computer Communication System".

DECnet is a system of tools that can be added to operating systems made by Digital Equipment Corp. to establish contact between remote computers, and allow them to request or transmit data and/or commands to another computer. It finds application in distributed processing networks, resource (files, computational ability, compilation, program debugging, and device control) sharing networks and communication networks with multiple nodes, data bases, and terminals. The subject is of interest to those involved or interested in new data communications approaches.

For further information, call Harold Mills at (201) 529-4600.

Time: 8 PM, Tuesday, April 27, 1976.
Place: ITT, 500 Washington Ave., Nutley, N. J.

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That's the day 25,000 "delegates" will gather for the opening of ELECTRO/76, the new IEEE international electronics convention in Bicentennial Boston. Just about everything new and significant in electronics will be there — more than 500 hands-on product and systems demonstrations; more than 130 hours of solid, useful professional programming.

It's All Live and Direct

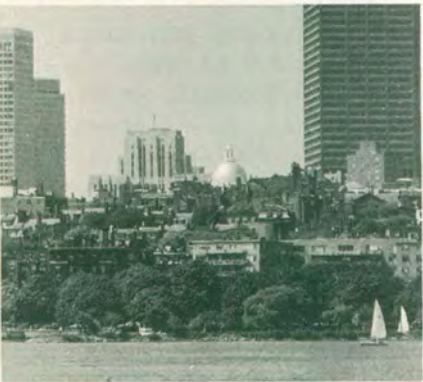
Everything at ELECTRO/76 is up-front and in-person. More than 300 leadership companies presenting the newest high-technology hardware, from micro-processors to "smart" instruments, and from raw materials to complete systems. ELECTRO/76 is the biggest all-electronics event in the eastern United States in many years.

All exhibit space in Hynes Auditorium has been sold out for months, and world-wide electronics industry attention is clearly focused on beautiful, springtime Boston.

Programming by Objective

35 half-day professional program sessions have been selected and refined from more than 100 proposals, by a committee of leaders in electronics technology.

This program is designed for immediate impact — direct usefulness to pro-



professionals in their job assignments with strong emphasis on new-technology applications.

All sessions will be held in ballrooms of the Sheraton-Boston Hotel, immediately adjacent to the Hynes Auditorium exposition halls.

A single low registration fee gives you all four days of ELECTRO/76 — 500 exhibits, strong sessions, and a fine technical film program. All this, and Bicentennial Boston, too!

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available on-the-spot; audio tapes of most sessions will be available within a couple of hours. Visitor registration is computerized — it's quick, silent, and it gives each visitor an embossed Inquiry Badge for use in requesting technical literature.

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The IEEE Convention in Bicentennial Boston May 11-14
Hynes Auditorium and the Sheraton-Boston

For further information: ELECTRO/76 31 Channing Street, Newton, Massachusetts 02158 (617)527-6944

Deadline for receipt of material is the 1st of the month preceding the month of publication. All communications concerning editorial matter should be addressed to: Ray Vaccari, Editor, 236 Summit Road, Mountainside, N. J. 07092. All communications concerning business matters, including advertising, should be addressed to: The Newsletter, c/o Girard Associates, Inc., 399 Howard Boulevard, Mt. Arlington, N. J. 07856.

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REPORT ALL ADDRESS CHANGES TO:

Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, N. Y. 10017

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.

SECTION OFFICERS
1975-1976

Chairman Robert E. McMillan
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Secretary Norman A. Bleshman
Member-at-Large Ken Oexle
Member-at-Large Donald G. Bathke
Jr. Past Chairman Max J. Schindler

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GEMB Discusses Sleep & Ambulatory Monitoring

The Metropolitan New York Chapter of the IEEE Group on Electronics in Medicine and Biology (GEMB) announces the following program for April 13, 1976: "Temporal Aspects of Sleep And Ambulatory Monitoring In Hypertension and Sudden Infant Death Research."

Speakers will be Charles K. Pollack, M. D., director, Sleep Lab, Montefiore Hospital Medical Center; and William Gruen, president, Ambulatory Monitoring, Inc.

For further information, call W. J. Buchsbaum, Sc.D., Metro GEMB vice chairman, at (212) 240-5594.

Time: 7:30 PM, Tuesday, April 13, 1976.

Place: Rockefeller University, South Lab, Room 204, 66th St. & York Ave., N. Y. C.

Pre-Meeting Dinner: 6 PM, Tower Cafeteria, 64th St. & York Ave.

AT&T Netcong Tour

On Wednesday, June 2, 1976, at 8 PM, the New York, North Jersey, and Long Island Joint Chapter Instrumentation and Measurements will hold its Annual General Meeting at the AT&T Long Lines "Netcong" Underground Communication Center Located near Netcong in Roxbury Township, N. J.

The station is one of the principal links in the long distance voice and data traffic network linking the New York Metropolitan Area with the rest of the country. Among the equipment in the station are coaxial cable, microwave radio relay, Autovon and experimental mm waveguide. The station is designed for survival in a nuclear war. The survival features include heavy reinforced concrete underground construction, blast resistant doors, self-contained energy and food supplies, etc. Mr. Joe Cochran, the AT&T manager of the station, will give an overview on this AT&T facility. The description of the communication and survival features of the station will be followed by a guided tour. This visit should prove an unusual experience and will give you a feel for the technology necessary to provide vital communication services in normal days as well as in an extreme emergency.

For further information and reservations, please call Mr. D. A. Alsberg, Bell Laboratories, at (201) 949-3825.

Time: 8 PM, Wednesday, June 2, 1976.

Place: AT&T Long Lines Netcong Underground Communication Center, Roxbury Twp., N. J.

A TWO DAY INNOVATIVE SEMINAR/WORKSHOP FOR PROPOSAL CONTRIBUTORS AND MANAGERS

COMMENTS FROM ATTENDEES

"Extremely informative and enlightening. The slides and commentary were presented very well, and the various workshops very well designed and helpful."
- A Marketing Administrator

"Very good and very useful. To me as a technical person mostly interested in the technical content of proposals, the forceful illustration of the need to address the full list of proposal evaluation criteria was worth the whole effort."
- A Senior Scientist

"Generally well organized and effectively presented. The parts most useful to me were those dealing with Bid-No Bid Decisions and Proposal Organization."
- A Systems Engineering Manager

"Good mix of media to express points! The most useful part for me was the Source Selection Workshop."
- A Director of Commercial Development

"Worthwhile! Getting an overall picture of the proposal writing process, learning how proposals are evaluated, customer cultivation techniques -- these were the most useful parts for me."
- An Analytical Chemist



BIOGRAPHICAL DATA

Dick Close is a management consultant specializing in the strategy and tactics of government new business acquisition. He has been active in the Electronics Industry for the past thirty years. With the AIL Division of Cutler Hammer, he held the positions of Development Department Manager, Program Manager and Division General Manager.

With Raytheon, he was responsible for management of major government programs in two areas, and was also President of a wholly-owned subsidiary, Raytheon Europe Electronics Co.

Over the years, he has personally managed a number of key winning proposal efforts which have established his company in areas of business where they were previously not a competitor. His experience covers the gamut from small study programs to team efforts reaching the billion dollar system level.

In 1975, he formed R.N. Close Associates to make this experience generally available to all companies.

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Registration Form

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☐ PLEASE SEND INFORMATION ON THE SEMINAR

☐ NEW YORK
MAY 4-5, 1976
ISLAND INN
WESTBURY, LONG ISLAND
(516) 741-4500

☐ BOSTON
MAY 16-19, 1976
HOLIDAY INN, WALTHAM
ROUTE 128, EXIT 48E
(617) 890-3000

☐ PHILADELPHIA
JUNE 2-3, 1976
HOLIDAY INN, BRISTOL, PA.
JCT. PENNA. & N.J. TPKE.
(215) 946-1100

☐ WASHINGTON
JUNE 15-16, 1976
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What actions would you recommend that this Newsletter take to improve the social, economic and political position of engineers in N. J.?

In what practical ways could engineers themselves better serve their neighbors and community?

sunday	monday	tuesday	wednesday	thursday	friday	saturday
	FUTURE MEETINGS: See inside this issue for full information on this month's and any future meetings already announced.			1	2	3
4	5	6	7	8	9	10
11 <i>Palm Sunday</i>	12	13 RIVERS TALK GEMB MEET	14	15 <i>Jewish Passover</i>	16 <i>Good Friday</i>	17
18 <i>Easter Sunday</i>	19	20 MICRO- PROCESSORS	21 MAGNETIC BUBBLES	22 AIRPORT TOUR	23	24
25	26	27 DECNET	28 NJ MTT/AP MEETING	29 WINE TASTING	30	

FEEDBACK ANALYSIS

The January issue of the Newsletter reprinted a letter sent by Section Chairman Dr. R. E. McMillan to Governor Byrne, seeking support for additional funding for technological programs in New Jersey. The Feedback Card for that month solicited members' comments on the letter. Although the total response was far from overwhelming, those who did return cards were extremely adamant in their comments. The opinions expressed in those 19 cards can be roughly divided as follows:

Completely agree with the Section Chairman letter 5
Disagree with the tone of the letter. 8
Disagree with the idea that our institutions require additional funds to educate more new engineers. 6
Some excerpts from members' comments follow:
"Great letter — only thing I would add is that he can do these things without his favorite income tax."

"Your letter was dumb. Why didn't you poll members before sending letter, not afterwards: Most of your proposals were for federal action (over which Byrne has limited control). For example, why did Byrne appoint Burt Ross (a bond salesman) as Energy Commissioner, instead of an engineer? Why has he proposed abolition of auto inspections (perhaps he never read your letter)? There's much that Byrne could do that he hasn't done."

"Your letter was silent on Gov. Byrne's elimination of the engineering and safety section of the Dept. of Labor (elimination of many engineering jobs) and the governor's continued opposition and interference (with our money) in development or exploration of more immediate energy sources. Gov. Byrne has continually sacrificed engineers in order to improve his standing with the labor unions."

Amorphous Films
For Magnetic Bubbles

The Princeton Section of the IEEE Magnetics Chapter will sponsor a talk on "Amorphous Films for Magnetic Bubbles" by Dr. P. Chaudhari, of IBM, Yorktown Heights, N. Y., on Wednesday, April 21, 1976. The meeting will be held at Allied Chemical Corp., Morristown, N. J.

For further information, call M. A. Gilleo at (201) 455-4575, or D. H. Smith at (201) 582-6937.

CAT Workshop

A full-day workshop/symposium on Computerized Axial Tomography will be sponsored on May 15, 1976 at Mt. Sinai Medical Center, N. Y. C., in cooperation with the IEEE Computer Society.

For registration information, write: Daniel R. McGlynn, 86-45 St. James Ave., Elmhurst, N. Y. 11373.

Date: May 15, 1976.
Place: Mt. Sinai Medical Center, N. Y. C.

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FEEDBACK CARD

Please briefly describe those items you wish to sell or purchase via the Newsletter's upcoming "For Sale" column. (Name item and price.)

Name _____ Phone _____