



The IEEE

Newsletter

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

NOVEMBER, 1986
Volume 33, Number 5

Publication No: USPS 580-500
"The IEEE Newsletter" is published monthly except June by the North Jersey Section of The Institute of Electrical and Electronics Engineers, Inc., a nonprofit scientific society dedicated to the advancement of electrical and electronic engineering and the allied arts and sciences. Headquarters: 345 E. 47 Street, New York, N.Y. 10017. Sent automatically and without additional cost to each member of the North Jersey Section. Printed in U.S.A. Second-class postage paid at New York, N.Y. and at additional mailing offices.

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.

Subscription: \$0.75 per year through dues for members: \$1.50 per year for non-members.

REPORT ALL ADDRESS CHANGES TO:
IEEE Service Center
445 Hoes Lane
Piscataway, N. J. 08854
(201) 981-0060

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
Chairman Richard Tax 391-9075
Vice Chairman-1 John Van Savage 544-2503/2334
Vice Chairman-2 Charles Coulomb 455-8547
Treasurer Robert Sinusas 288-2000, X-4358
Secretary Howard Leach, Jr. 885-3530
Member-At-Large John Baka
Member-At-Large George Graul
Member-At-Large Frank Kuhl
Jr. Past Chairman Eugene Niemiec

Photonic Switching

"Photonic Switching" is the subject of the November 12, 1986 meeting held by the North Jersey Section IEEE. Rich Thompson of Bell Labs, Murray Hill, N.J. will be the speaker.

About The Talk

Photonic Switching Research is the investigation of architectures, techniques, and technologies for the direct switching of information in photonic form. While the long-term goal is a sensible architecture for a photonic switching system, this is deferred until a reasonable set of piec-parts are designed and characterized and system requirements are agreed upon. The talk consists of three parts: an introduction/tutorial, a description and evaluation of some photonic piecparts and a philosophical discussion of requirements.

In the first part, we will provide motivation for the problem and briefly review the characteristics of optical fibers, semiconductor sources and detectors, and photonic switches and amplifiers. In the second part, we describe a photonic time-slot interchanger, in which time-multiplexed data has its time-slot assignment switched from input fiber to output fiber.

The third part is a system-level philosophy including data-rate limits; switching in the space, time, and wavelength divisions; a recommended transmission format for improved switching synergy; a proposed two-tiered national photonic network using the existing national network control; and applications.

About The Speaker

Richard A. Thompson received the BS in EE from Lafayette College in 1964, the MS in EE from Columbia in 1966, and the PhD in CS from the University of Connecticut in 1971. Rich has been with Bell Labs since 1963, with absences for schooling and as an EE professor at VPI from 1971-77. Rich is a Senior

Member of the IEEE and is active in its Computer and Communications Societies.

ALL ARE WELCOME! Refreshments will be served.

Time: 7:30 PM, Wednesday, November 12, 1986.

Place: AT&T Bell Laboratories, 600 Mountain Ave., Murray Hill, N.J.

Further Information: John A. Baka (201) 455-8534.

Managing Pain

At the November 12, 1986 meeting of the Metropolitan Chapter of the Engineering in Medicine and Biology Society, "New Therapies for Pain Management: TENS — Transcutaneous Electrical Nerve Stimulation" will be discussed by Theresa Catalano, Northeast Sales Representative of the Codman Corporation, a subsidiary of Johnson and Johnson, Co.

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

Time: 7:30 PM, Wednesday, November 12, 1986.

Place: Rockefeller University, Tower Building, Room 305, York Ave. at 66th Street, NYC.

Pre-Meeting Dinner: 6:30 PM, Tower Cafeteria.

Further Information: Mark Restivo (718) 836-6600, ext. 318 or ext. 160; Ben Caref (718) 270-1568.

TIME TO UPGRADE!

Many IEEE Members and Associate Members are eligible for Senior Member grade. Are you? Get information on advancing by contacting Don Weinstein, Kulite Semiconductor, 1039 Hoyt Avenue, Ridgefield, N.J. 07657, (201) 945-3000, Ext. 238.

RAYMOND W. SEARS, JR. - Member-At-Large

Dr. Sears received the BEE degree from Cornell University in 1958, and the MSE and PhD degrees from the Johns Hopkins University in 1963 and 1967 respectively.

After serving on active duty with the U.S. Naval Security Group from 1958 through 1961, he was employed by the Department of Defense in development of high-speed computer systems, pattern recognition systems, and signal processing systems. In 1964 he received a fellowship from the Department of Defense to pursue graduate studies at Johns Hopkins.

In 1967 Dr. Sears joined AT&T Bell Laboratories Ocean Systems Division where he performed ocean acoustic research and sonar systems engineering. In 1975 he transferred to the Business Information Systems Division and was responsible for systems and application engineering of large software systems. In 1981 he joined the Government Systems Area to form a Reliability/Maintainability Engineering Organization for government and military projects. He is currently responsible for Reliability and Maintainability programs for Transmission and Communications programs. He is a representative to the AT&T Reliability Forum, the AT&T Integrated Circuits Selection Committee, and represents AT&T on the EIA G-43 Quality Committee.

Dr. Sears has published articles on high-speed computer circuits, pattern recognition, system optimization, ocean acoustics, and sonar system design.

Dr. Sears joined IEEE in 1958 and was elected Senior Member in 1985. He assumed the chairmanship of the Reliability Chapter of the North Jersey Section in 1985, and was responsible for reactivating the chapter. During its first year of reactivation, the Reliability Chapter conducted seven successful technical programs, and planned for a vigorous technical program in 1986-1987.

RICHARD V. SNYDER - Member-At-Large

Dr. Richard V. Snyder is President of RS Microwave Co. Inc., Prior to founding RS Microwave, he was Chief Engineering or Division Manager for several microwave companies, including Premier Microwave Corp., Frequency Engineering Labs, Lorch Electronics and Merrimac. He is well known in the filter and IF components business, having authored and presented numerous papers.

He holds seven patents in microwave devices and systems.

Serving the IEEE in several capacities, he is currently chairman of the North Jersey MTT Society and a member of International MTT-S Committees and Microwave Production Techniques.

TO
VOTE
FOR SECTION
OFFICERS
USE
THIS BALLOT
BE SURE TO SIGN ON
OTHER SIDE BEFORE
MAILING BY
NOVEMBER 28, 1986

Chairman

☐ John Van Savage

Vice Chairman 1

☐ Robert Sinusas

Vice Chairman 2

☐ Alan Stolpen

Treasurer

☐ Howard Leach

Secretary

☐ George Graul

Member-At-Large

(Vote for three only)

☐ John Baka
☐ Allan Berlinsky
☐ Ray Sears
☐ Richard Snyder
☐
☐
☐

All grades of membership, except students, should vote for one candidate for each office (except members-at-large).

NJ Section Ballot
1987

Please sign on other side in space indicated.

Free!

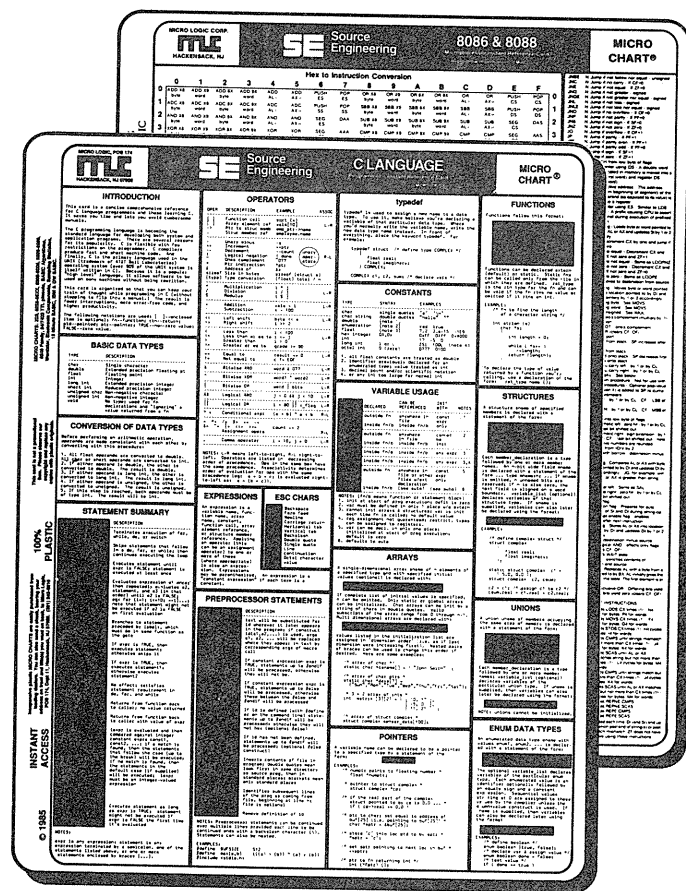
8086/8088 Microprocessor or C Language Instant Reference Cards for Design and Development Engineers

Are you designing or developing microprocessor-based hardware or software or developing computer systems or applications programs and would like quick, easy-to-use reference material?

Then these free Micro Chart® cards could be indispensable tools for you. On two sides, they're packed with time-saving instructional data: the 8086/8088 card includes full instructional set, ASCII, hex and decimal conversion, flag codes, cycle times, interrupt structure, disassembly tables, key memory locations, register map and more. The C Language card contains UNIX cc commands, lint commands, processor statements and more. The cards are plastic laminated and won't peel so you can use them for a lifetime.

We're offering these "instant data" tools, free to engineers as a part of our commitment to foster excellence in engineering. Since we have a limited supply, only one card per engineer is available. To get your free Micro Chart, be sure to call early this week.

Source Engineering is a leading recruitment firm that specializes exclusively in the engineering profession. Every member of our professional staff—here and around the nation—is a degreed, experienced engineer. If you are seeking career opportunities in digital, analog, software, test, manufacturing, engineering sales or marketing, we currently represent hundreds of firms that are seeking degreed engineers.



Call this week for your free Micro Chart®

Call the office nearest you from 8am-6pm early this week to request your card. There's no cost or obligation.

Wayne: 201/628-7220
Paramus: 201/587-1771

Edison: 201/246-0480
Princeton: 609/799-7229

Source Engineering®
Personnel Services

1044 Route 23, Suite 208, Wayne, NJ 07470
Client companies assume our charges. Micro Chart® is a registered trademark of Micro Logic Corp.

JOHN BAKA - Member-At-Large

John Baka is a Senior Engineer at Jersey Central Power and Light Company in Morristown, New Jersey. He is assigned to the Planning Department and is responsible for the Distribution Planning and Project Management Activities for the Northern Area.

John is presently a Member-At-Large of the North Jersey Section. He has served as Secretary, Program Chairman, Vice-Chairman and Chairman for the Power Engineering Society of the the North Jersey Section IEEE. He was also active in administering review courses for preparation for the Engineer in Training and Professional Engineering Exams and a seminar on distribution systems transients.

He serves his community of Hanover Township as a member of both the Planning Board and Environmental Commission. He is also Treasurer of St. Gregory's Episcopal Church in Parsippany-Troy Hills Township and serves as a Panel Manager on the Planning and Allocations Division of the United Way of Morris County.

John graduated from Newark College of Engineering with a BS in Electrical Engineering. He received an MBA from Wright State University in Dayton, Ohio.

ALLAN M. BERLINSKY - Member-At-Large

Allan Berlinsky is a Member of Technical Staff in the Signal Processor Laboratory at Bell Labs, Whippany. Since joining Bell Labs in 1983, he has been involved in a variety of systems engineering activities related to the Enhanced Modular Signal Processor (EMSP) Project. These tasks have included quantitative analysis, the definition of signal-processing requirements and algorithms, their implementation and simulation.

Allan previously worked as a systems engineer for Raytheon Company in the Submarine Signal Division. There he designed and developed engineering methods, mathematical models, computer software and simulations to analyze signal processing techniques and predict system performance. Allan has worked in the areas of acoustic signal processing, beamforming, stability, digital power amplification and feedback control, magnetics and reverberation analysis.

Mr. Berlinsky is the inventor of a digital signal-processing technique called Interpolation Pulse Duration Modulation (IPDM) and holds several patents related to this process. He is also the author of a number of papers related to underwater signal processing and computer simulation.

Allan received his BSEE and MSEE degrees from the University of Rhode Island. He is a member of Tau Beta Pi, Eta Kappa Nu and Phi Kappa Phi. Allan also is a Senior Member of the IEEE and has been a prior Officer and EXECOM Member of the Providence Section. He is currently on the Executive Committee of the IEEE North Jersey/New York Management Society. Aside from professional activities, his interests include playing the piano, car and home repair, and travel.

RETURN
THIS
CARD
BY
NOVEMBER 28, 1986

Ballot Signature

Fold along this line

Cut along this line

NORTH JERSEY SECTION IEEE
c/o GIRARD ASSOCIATES
BOX 455
MT. ARLINGTON, N.J. 07856

1987 SECTION OFFICERS NOMINATIONS

JOHN VAN SAVAGE - Chairman

Mr. John F. Van Savage is associated with the United States Army Communications and Electronics Command (CECOM) as a senior electronics engineer in its Center for Communications and Automatic Data Processing (COMM/ADP) Center. He is a graduate of Fairleigh Dickinson University and is listed in Who’s Who in the East.

Mr. Van Savage, a Senior Member in IEEE, was the recipient of the North Jersey Section Meritorious Service Award in 1981 and the IEEE CENTENNIAL MEDAL in 1984. He was the chairman of the Control Systems Society (1981) and the Chairman of the New York/North Jersey Section Engineering Management Societies (1983). He was also a Member-At-Large North Jersey Section 1982-83. He was active in the Educational Committee (1981) and coordinated the CEMOS and MOS Circuit Design courses with RCA engineers who worked in the state-of-the-art discipline.

Mr. Van Savage has served on the Admissions and Advancements Committee, IEEE, and the North Jersey Section, Fellows and Awards Committee since 1979. He is currently a North Jersey Section Vice Chairman. He has held various other officer positions in the North Jersey Section and was its Fellows and Awards Banquet Chairman in 1986. He served on the IEEE ELECTRO 79 Industry Reception Committee and played a major role in obtaining the 1/50th scale model of the Apollo Space Shuttle from Rockwell International.

He is a member of the New York Academy of Science, the American Physical Society and SIGMA XI, the Scientific Research Society of North America.

ROBERT SINUSAS - Vice Chairman - 1

Robert Sinusas has been involved with the Executive Committee of the North Jersey Section of the IEEE since 1975. During 1975-1976 he was the Chairperson of the Socio-Economics Committee. He has held the position of Group Coordinator, Secretary of the Section, and is currently the Treasurer.

For his undergraduate studies he attended Drexel University in Philadelphia, Pa. He continued his graduate studies at the New Jersey Institute of Technology in Newark. He has worked and consulted for a number of companies in the North Jersey area; Fairchild, Monsanto, Dumont Labs, Weston and Bendix. He is currently associated with Allied Bendix Aerospace Guidance System Division.

Dr. Sinusas is a Senior Member of the IEEE and is licensed Professional Engineer (NJ).

ALAN H. STOLPEN - Vice Chairman - 2

Alan H. Stolpen is presently a Contract Engineer with T.P. Consultants, and is assigned to AT&T Bell Laboratories, in Whippany, working on State-of-the-Art military power supplies. Prior to this assignment, Alan was a Senior Project Engineer with Weston Instruments. While at Weston he was responsible for the design of hand held digital multimeters, custom digital instrumentation, and display technology research.

Prior to joining Weston, Alan spent nine years as a Designer and Project Leader for Computer Power Supplies and associated control circuitry for Conrac, Digital Computer Controls, Singer-Kearfott, and Burroughs. His diverse background also includes six years in quality assurance and reliability, component engineering, and applications engineering.

Alan Stolpen is the co-holder of four patents, and has earned his BSEE (1966) and MSEE (1970) from NJIT.

Alan’s IEEE activities in the North Jersey Section started in 1964, as a Student Branch Officer. In 1966 he joined the Newsletter staff as Student Affairs Editor, and progressed to Editor, and then Publications Chairman. He has held offices as Groups Coordinator, New Projects Administrator, Treasurer, Secretary, Vice Chairman, and then Chairman of the Section. He is presently Group Coordinator and Program Chairman for the Section.

HOWARD H. LEACH, JR. - Treasurer

Howard H. Leach, Jr., currently serving as Section Secretary, is a Senior Member of the IEEE. He has been active on the Computer/Communications Chapter executive committee serving as chairman and vice chairman. His Section posts include a term as Member-At-Large.

Mr. Leach holds a BSEE degree from RPI, a MSEE degree from Union College, Schenectady, N.Y., as well as a PE license in N.J. Mr. Leach is an Advisory Systems Engineer with IBM in the N.J. Communications South branch office, Piscataway, N.J.

GEORGE GRAUL - Secretary

In addition to serving as a Member-At-Large for the North Jersey Section, George D. Graul is Chairman of the Student Activities Committee of the North Jersey Section and Chairman of the NY Chapter of the Vehicular Technology Society. He has also served as Chairman of PACE for the New York Section.

A Senior Member of the IEEE, Mr. Graul’s other professional memberships include the Radio Club of America and NARTE. He has taught at RETS in Nutley, N.J. and TCI in NYC.

Presently retired, he has served as Chief Engineer of 800 Cellular; Assistant Director of Training at W.H.T.

“Should Cost” Analysis

“Should Cost” Analysis will be discussed by Philip Johnson at the November 25, 1986 meeting of the IEEE Management Society Metro-New York/North Jersey Chapter.

About The Talk

“Should Cost” Analysis, what it means, how it impacts contractors and how it can be used to reduce costs will be explained. The methodology will be demonstrated via the use and misuse of learning curves. Dollar impact will be illustrated by actual example.

About The Speaker

Mr. Philip Johnson is a senior management official in the Communications Electronics Command of the U.S. Army at Fort Monmouth, New Jersey. His background includes engineering management positions with the General Electric Company, Hughes Aircraft and RCA.

Mr. Johnson is the author of a management oriented textbook published by McGraw Hill on the Ada Programming Language, the new computer language sponsored by the Department of Defense.

EVERYONE INVITED

Admission is free to members and non-members. Everyone is invited!

Time: 7:30 PM, Tuesday, November 25, 1986.

Place: ITT Auditorium, 500 Washington Ave., Nutley, N.J. (Call for directions.)

Information/Reservations: Marty Izaak (212) 397-7438, Allan Berlinsky (201) 386-4614, Al Stolpen (201) 386-3703.

Comparing 32-Bit Microprocessors

“Comparative Analysis Of 32-Bit Microprocessors” will be the title of a talk by Abroo Shah at the November 19, 1986 meeting of the North Jersey Joint Chapter of the Computer and Communications Societies.

About The Talk

Selecting a 32-bit microprocessor most suitable for an application is not a simple task. Currently there are a number of 32-bit microprocessors available in the market. System designers can choose from a variety of manufacturers which include AT&T, Intel, Motorola, and National.

About The Speaker

Abroo Shah is the Vice President of Kamputech, Inc., a New Jersey based

computer consulting company. He has extensive experience working with 16/32-bit microprocessors. He has published articles and conducted seminars on the subject.

Before joining Kamputech, he was with AT&T Bell Laboratories, where he worked with their 32-bit chipset.

All Welcome

All are welcome to attend the talk which will be held at 8 PM in the AT&T Bell Laboratory auditorium, Mountain Avenue, Summit, N.J. A pre-meeting dinner will be held.

Time: 8 PM, Wednesday, November 19, 1986. (Dinner starting at 6 PM.)

Place: AT&T Bell Laboratory auditorium, Mountain Avenue, Murray Hill, N.J.

Information/Dinner Reservations: Mathew Reeves (201) 946-3800 or David Perry (201) 949-0224, after 7 PM call (201) 325-3769.

ASSP Society Sets Planning Session

The IEEE Acoustics Speech and Signal Processing Society will meet on November 17, 1986. A general business meeting, planning session and technical presentation is planned.

The newly elected chapter officers and ASSP members will jointly meet to plan and schedule future events. Refreshments will be served. We urge members and non-members alike to actively participate in forging the future course of the North Jersey chapter of the ASSP.

Time: 7:30 PM, Thursday, November 17, 1986.

Place: Jersey Central Power & Light Co., Madison Ave. (Rt. 24) at Punch Bowl Rd., Morristown, N.J.

Further Information: Marc Beacken (W) (201) 386-3757; John Namovic (W) (201) 386-5490; Greg Mackintosh (W) (201) 386-4560.

Awards Committee Outlines Program

The IEEE North Jersey Section Awards Committee is a standing committee of the North Jersey Section. The Awards Committee is responsible for identifying Section members who should be submitted for Fellow awards or other IEEE national, regional, or sectional awards.

The Awards Committee also reviews nominees for Fellow Awards submitted by individuals, makes suggestions to nominators on improving their submissions, and can endorse candidates, depending on the merits of the case. Section endorsement is optional, but can serve to strengthen a nomination.

The North Jersey Section Awards Committee typically begins its working year in October by soliciting nominations for Fellows. The Committee meets on a monthly basis from December through April. Committee members are assigned various candidates and work with the nominators to obtain the strongest Fellow submission consistent with IEEE requirements. The progress of all cases is followed, and final drafts are submitted prior to the April Awards Committee meeting. The Awards Committee then reviews all final drafts and determines whether or not the Section will endorse the case. A calendar of the Awards Committee’s schedule is shown below.

Dr. Eugene I. Gordon, a member of the North Jersey Section Awards Committee, has written an excellent essay on how to prepare a Fellow case. This essay appeared in the Section newsletter last year and is printed again in this issue of the newsletter. The information in this essay should be very helpful to all nominators who will prepare Fellow submissions.

The current members of the IEEE North Jersey Section Awards Committee and their phone numbers are listed below:

- Dr. George S. Eager, Jr. (201) 783-7281
- Dr. Eugene I. Gordon (201) 685-2000
- Prof. Gerald J. Herskowitz (201) 420-5605
- Mr. Stephen A. Mallard (201) 430-6776
- Mr. Robert L. Mattingly (201) 538-7493
- Dr. Jerry B. Minter (201) 627-0290
- Me. Frank Relotto (201) 634-3460
- Mr. Christopher O. Riddleberger (201) 299-3428
- Mr. John Van Savage (201) 544-2334
- Dr. Joseph J. Suozzi, Chairman (201) 299-3060

If anyone wishes to submit a Fellow nomination, contact any member of the Committee or the Chairman.

Innovative Teleport Communications

The November 25, 1986 meeting of the Computer & Communications Societies of North Jersey Joint Chapter will highlight "Teleport Communications: The Innovative Option." The speaker will be Howard W. Bruhnke of Teleport Communications.

About The Talk

The all-fiber, all-digital network of Teleport Communications provides unlimited bandwidth; it spans more than 150 miles in the NY/NJ area. The network is utilized for building-to-building communications, direct access to long-distance carriers, and ultra-high-speed data access to The Teleport, where both domestic and international satellite service is available. Broadcast quality video is provided to the major networks for up and down link satellite service. Data transmission is guaranteed error rates better than 1 in a billion at speeds of 560 Mb.

The network provides full redundancy of electronics and totally diverse routing on the backbone network; this assures virtually no service interruptions. Teleport quickly connects its customers to the network by constructing optical fiber links from strategically located nodes. Starting with a brief tutorial, the talk will discuss service advantages and applications, hardware, and future marketing trends.

About The Speaker

Howard Bruhnke joined Teleport Communications in August 1984 as Vice President, Engineering and Operations. His management responsibilities include the Teleport site and the numerous antennas on Staten Island as well as the fiber optic network interconnecting key cities in N.J.

Prior to joining Teleport, Bruhnke had worked for New York Telephone and NYNEX for 36 years, with responsibility for marketing and implementing the tariffs on the new technologies of fiber optics and digital services. Earlier, he served in the US Army. He holds an EE degree from Brooklyn Polytechnic Institute.

IEEE membership is not a requirement for attendance at the meeting. Refreshments will be served.

Time: 8 PM, Tuesday, November 25, 1986.
Place: ITT Auditorium, 500 Washington Ave., Nutley, N.J.
Travel Directions or Dinner Reservations: Jim Morgan (201) 766-0969 or Fran Stork (201) 884-6042.

Extending Life Of Generation Plants

The IEEE North Jersey Section Power Engineering Society Chapter will feature a presentation on "Generation Life Extension Programs" on November 19, 1986. The speaker will be Mr. Robert Weiner of MPR Associates.

About The Talk

During the past decade, a number of significant events affecting the utility industry have drastically altered the retirement plans for existing older power plants. Consequently, the industry has initiated an effort to address the significant technical problems involved in extending the lives of these plants. These efforts include material condition evaluations, plant upgrades, maintenance program upgrades, and condition monitoring programs. The approach being used to carry out these programs will be discussed.

About The Speaker

Mr. Weiner has had 28 years of experience in power plant engineering. He graduated from the University of Notre Dame in 1957 and has a Master of Science degree from the University of Maryland. After graduation, Mr. Weiner worked for 8 years in the naval reactors program, where he was responsible to Admiral Rickover for the development of equipment and fluid systems for naval nuclear propulsion plants. Since 1965, he has been with MPR Associates. He presently leads a group of engineers involved in the design and evaluation of components and systems for fossil and nuclear power plants. For the past several years this work has included a major effort on plant life extension and upgrading.

Time: 7:30 PM, Wednesday, November 19, 1986.
Place: Jersey Central Power & Light Co., Punch Bowl Room, Madison Ave., and Punch Bowl Road, Morristown, N.J.
Further Information: Augie Franzoni (201) 926-6923.

DOD Warranties

The NJ Reliability Chapter will meet November 18, 1986 to hear a talk on "DOD Warranties." The speaker will be Dr. Richard Kowalski, a Senior Project Leader with ARINC Research Corporation.

About The Talk

The use of warranties in the procurement of DOD weapon systems is mandated by recent public laws. Dr. Richard Kowalski will review the evolution of DOD warranty policy over the past decade; summarize the provisions and requirements of the latest warranty legislation; and discuss the impact of this legislation on reliability and maintainability design efforts.

About The Speaker

Dr. Kowalski is a Senior Project Leader with ARINC Research Corporation. He is responsible for planning and directing projects to support system procurement methods. His warranty experience includes support to the Navy's cruise missile program; the Army's AN/ASN-128 Doppler and AN/ARN-123 VOR/ILS; and the Air Force's F-16, JTIDS and MILSTAR. Dr. Kowalski has been a member of the IEEE Reliability Society's Administrative Committee, was Chairman of the Maintainability Committee, and is currently Editor of the IEEE Transactions on Reliability.

ELECTIONS

Reliability Chapter elections for Chairman, Vice-Chairman, Treasurer, and Secretary will also be held at the November meeting. These positions are effective for 1987. Anyone interested in running for any of these positions should contact John Wronka, 386-7360. Holding one of these positions is both rewarding and enjoyable. The IEEE provides training for new officers to help them easily perform their functions.

Free Buffet

A free buffet will be provided on a first-come-first-served basis.

Time: 7 PM, Tuesday, November 18, 1986. (Buffet starting at 6 PM, Elections starting 6:45.)
Place: ITT Auditorium, 500 Washington Ave., Nutley, N.J.
Further Information: Mallik Arjunan (201) 284-3475.

companies do while still expecting the United States Marines to protect their interests. We need to use the excellent talent which the United States has to win this economic war and not waste our engineering talents because managers take the easy way out and make employment decisions on the basis of age but not performance.

TO PROBE FURTHER

The IEEE/USAB Age Discrimination Committee suggests the following IEEE/USAB publications to those wishing to learn more about the Age Discrimination Law:

IEEE Catalog Number	Title
UHO 173-5	The Aging Workforce: The Challenge of Utilization
UHO 138-8	Age Discrimination Digest
UHO 132-1	The Engineer at Mid-Career: Utilization or Discrimination
UHO 153-7	PACE Guide to Age Discrimination
UHO 132-1	Aging in the American Society
UHO 131-3	You and Age Discrimination

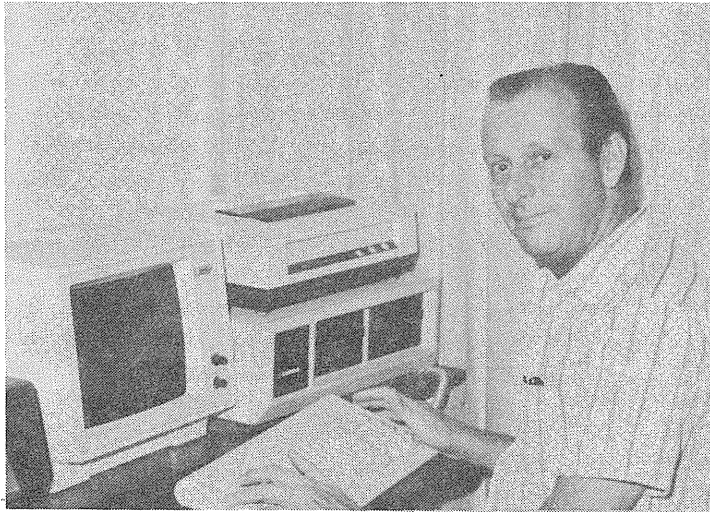
These and other publications by the IEEE/USAB Age Discrimination Committee members may be obtained from IEEE/USAB, Suite 608, 1111-19th St., N.W., Washington, DC 20036.

A PERSONAL THANK YOU

The IEEE/USAB Age Discrimination Committee wishes to thank Mr. Eugene I. Gordon for the time which he has spent in considering the subject of age discrimination in employment. Such thoughtful study is bound to benefit all engineers.

WALTER R. NIAL, P.E.

Former Chairman and CEO, Aero Vac Corp.



CHAIRMAN'S CORNER

YOUR EXECUTIVE COMMITTEE

This month I would like to focus attention on the members of your Executive Committee. The Executive Committee consists of: the past two Section Chairmen, eight officers elected by our membership, and chapter and society chairmen elected by members attending the chapters and society meetings. There are also the chairmen of approximately 14 standing committees appointed by the Section Chairman.

Since this is an election month, visibility is provided for our eight elected officers via their resume and a ballot.

Other than the current Section officers listed on the masthead "The IEEE Newsletter" - November, 1986 - Page 9

of this publication and those listed on the ballot, the remaining active Executive Committee members remain invisible to you unless you attend meetings or read this Newsletter. Still, it is important to you to know these people. One way to do this is by reading our meeting notices and noting the names and telephone numbers of the members conducting these meetings. You may be familiar with some of the names or find, by their telephone numbers, that they work for the same company and are only a telephone extension away. Give them a call. By doing this, your circle of IEEE friends will begin to grow. By speaking to them your knowledge about IEEE will increase and you will begin to build a stronger Section. Remember, we can't reach you, it's up to you to reach us.

WHY VOTE?

This is an election month for our North Jersey Section. When you read the Ballot you may note that the election is virtually one of a no contest. You may consider your vote to be unimportant. So, why vote? You're off the hook and you saved 22 cents in postage. On the other hand, your one vote represents almost 2 percent of the ballots returned in past elections. Quite significant?

Why vote? For 22 cents and a few minutes of your time you get to tell our Executive Committee that you are interested, you are watching, and you are concerned. This is important.

I believe we have a strong Executive Committee that will maintain high standards and further, will act on all issues in your behalf. They will be even stronger knowing they have your support and your interest.

Now, why do we have only one contest (for Member-at-Large) in this election? This is a question often asked and seldom answered! The answer is simple and quite understandable. Our Nominating Committee selected a slate from officers and members that they believe are qualified to lead our Section. Volunteers are hard to find. Our slate consists of volunteers that have consistently worked for our Section and our membership. So, why turn this into a contest? All we can try to do is give you the best that we have.

AGE DISCRIMINATION

This month we have another article by Walter Nial discussing Age Discrimination. Walter's article is a response to Eugene Gordon's "Lets Blow Away The Smokescreen" in our August issue. Please note that we present all views in North Jersey to clear the air and in hope of providing a solution to a problem. I hope that providing visibility for problems such as Age Discrimination will prevent them from occurring in our Section. However, if problems do occur, we will be better prepared to address them.

ENGINEERING LAYOFFS

During the 1970's we had the longest and worst High Tech recession in over 25 years. Some believe we are entering still another devastating period. The High Tech layoff and slowdowns have been occurring for the past two years. Other layoffs are pending.

We in North Jersey will address Engineering Layoffs on November 13, 1986. If you are concerned or out of work or know some engineers that are facing these problems, invite them to the meeting on "Engineering Layoffs."

Please look for the meeting announcement in this Newsletter.

Have a Happy Thanksgiving.
RICHARD TAX, North Jersey Section Chairman

basis of age. The following examples are representative but not all inclusive:

A young engineer makes a brilliant invention which deserves a \$100,000 bonus but management decides that the engineer is too young to be given such a large bonus. So the young engineer gets nothing.

A 31-year old engineer has proven that he is top management material but is shunted aside because the cut-off age for the fast track is age 30.

A 39-year old engineer is fired because at age 40 he would come under the protection of the age discrimination law.

A 41-year old with outstanding management skills is not promoted to a management position because company policy requires promotion into management prior to age 40.

All salesmen age 45 and above are fired either because they are (a) making too much money or (b) they are burned-out.

All engineers age 50 and above will not receive a raise this year.

All engineers above age 55 will be asked to retire.
All officers of the corporation will be required to sign a voluntary agreement that they will retire at age 60. This agreement must be signed before they are appointed as officers of the corporation.

These are all examples of employment decisions made on the basis of age and they are all illegal in the State of New Jersey. Those examples involving ages 40 and above are illegal nationwide. None of the examples are fictional. Or as Mr. Gordon likes to write "anecdotal." and you will note that all of the employment decision examples are based on age as the sole criteria.

Mr. Gordon has also been helpful in once again reminding engineers that they must be loyal to their employer, and work extra hours without immediate dollar compensation for those hours. Further, Mr. Gordon reminds engineers that they must retain their "technical vitality." Mr. Gordon actually uses the word "obsolete" in referring to older engineers. Professionals in the field recognize that machines become obsolete but human beings become untrained. "Technical Vitality" is the current buzz word. Use of the word "obsolete" is obsolete. On the matter of "Technical Vitality," Mr. Gordon will be happy to learn that IEEE/USAB spends about 99% of its budget on motivating and training engineers to improve their capabilities and only 1% of its budget on educating employers and IEEE members on the age discrimination law. In fact, the monies spent by IEEE/USAB in motivating and training engineers should really be reimbursed by employers since this is a much neglected employer responsibility.

Mr. Gordon's "Smokescreen" has all the characteristics of a conversation which the IEEE/USAB had with a former Vice President of a major corporation. This former Vice President had been forced to retire at age 60 and had been replaced by a man in his forties. The former Vice President then stated that he was all in favor of age discrimination and using himself as the example went on to describe five of his work characteristics, such as lazy, no ambition, confused thinking etc., which justified his replacement. At the conclusion of his recitation of all his bad work characteristics, the Age Discrimination Committee agreed with him that, yes, he should have been retired but that he probably should have been fired prior to age 60. All of the characteristics which the former Vice President had described about himself were performance related and had nothing to do

with age. He certainly did not develop those poor performance qualities immediately upon attaining age 60. Therefore, age 60 should not have been the criterion; but age 60 was the corporate decision point because it was convenient for the corporation to use age rather than performance.

So, we return to the basics of the age discrimination law--employment decisions made on the basis of age are illegal. Employment decisions made on the basis of performance are not illegal. There is no record of an employee winning an age discrimination lawsuit where the employment decision was made on the basis of performance.

Mr. Gordon assumes that the Age Discrimination Committee "dismisses the realities and the plight of the typical manager under pressure to meet budget and nose count constraints and schedules." On the contrary the Age Discrimination Committee pleads with employers to rid the engineering profession of incompetents whether they be "recent graduates" who cannot add, subtract, divide, speak, or write (as described by a college professor), whether they be graduates with 10 years of employment but only one year of experience, or whether they be 30 year employees who don't measure up. But be sure that you, Mr. Employer, have a good and adequate measuring system and don't take the easy way out and use age as the reason for making an employment decision.

The IEEE/USAB Age Discrimination Committee at the request of employers has held more than a dozen tutorial sessions (on corporate property at corporate expense) on the age discrimination law. Attendance at those sessions included design engineers and managers and occasionally a corporate officer. The reception of the Age Discrimination Committee's presentations by the corporations has been excellent. The program is educational not adversarial. As evidence of this, the Age Discrimination Committee cites the following companies which have a good record of employing older workers:

Mutual of Omaha	Polaroid
Atlantic Richfield	ASC America, Inc.
The Aerospace Corporation	The Travelers Company
McDonald's Corporation	Bankers Life and Casualty
Union Carbide	The Grumman Corporation
Evans Products	Texas Refinery
Kuempel Chime Clock Works	Monsanto

This list is representative but not all inclusive. The Age Discrimination Committee hopes that additional corporations will imitate the above listed companies.

AN OFFER TO EUGENE GORDON

The IEEE/USAB Age Discrimination Committee offers to conduct an audit and evaluation of Lytel, Inc. of which Eugene I. Gordon is Chairman & CEO to examine the record of Lytel, Inc. in complying with the age discrimination law and in employing older workers. Based on the results of that audit and evaluation, Lytel, Inc. will be publicly acknowledged as a company with a good record of employing older workers or Mr. Eugene Gordon will be informed privately of areas in which improvement in complying with the age discrimination law should be made. The audit and evaluation will be done at no cost to Lytel, Inc. No offer could be more generous than this. Lytel, Inc. has everything to gain and nothing to lose.

A PLEA FOR UNITY

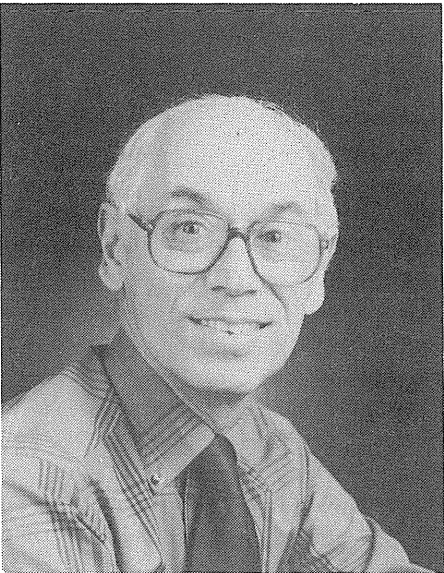
This country is in a very serious economic war. We need to pull together for the common good--not run offshore like so many

**IEEE And Engineering Layoffs
Subject Of Section/PACE Meeting**

The meeting on Thursday, November 13, 1986 will be a two-part program dedicated to PACE and Section issues. Part 1 will be a talk by Robert Bruce entitled "Mobilizing IEEE To Work For The Practicing Engineer." Part 2 will be "Engineering Layoffs And The Economic Health Of U.S. Industry." Robert Sinusas, North Jersey's Treasurer and Richard Tax, Section Chairman, will address this second issue.

MOBILIZING IEEE TO WORK FOR THE PRACTICING ENGINEER

For five years prior to 1972 (when IEEE amended its Constitution to include professional activities), Bob Bruce wrote a letter to the president of IEEE. Each year the letter was the same and it stated that Bob would not join IEEE until it engaged in activi-



ties to support the careers of working EE's. In 1972, the IEEE amended its Constitution and added professional activities to its technical and educational interests.

Bob joined IEEE in 1973 and has been an active member ever since.

Bob immediately joined Long Island's Professional Activities Committee for Engineers and became their PACE Chairman. For eight years he served as an active member of the USAB's Career Maintenance Committee and as the Long Island Section--USAB Liaison. With Bob's supervision Long Island's PACE made their Section one of the leaders in the battle for professional issues. Bob was the principal initiator of three proposed IEEE Constitutional Amendments to shift more control of IEEE to the voting membership. He has been an active participant in 10 National PACE Conferences and he takes advantage of every opportunity to promote professional issues for engineers.

Bob Bruce is the recipient of the USAB Citation of Honor and

three USAB Certificates of Appreciation to honor him for his active leadership in the advancement of professional activities.

Bob is the author of six technical articles in solid-state electronics and 50 articles about engineering careers and professional issues. He has a BA in English and an MSEE. He has been employed at AIL Division of Eaton Corp. for the past 16 years as a company-wide consultant specializing in power electronics.

Bob's talk will address the career problems faced by working engineers, and the power structure of IEEE. He will discuss the methods of mobilizing IEEE to address and solve these professional problems and how engineers must reorient their thinking in order to effectively pursue their career interests.

ENGINEERING LAYOFFS & ECONOMIC HEALTH OF U.S. INDUSTRY

Engineering layoffs, the slow down of student recruiting, the two-year decline of the DS&E High Tech Recruitment Index, spending cuts and economic policies indicate that we may be about to witness another high tech recession of the 1970s.

This issue is already of paramount importance to our members and local engineers that have already been caught in the layoffs and will be important to those engineers in areas that are facing cutbacks and slowdowns.

Robert Sinusas served as our Section's PACE Chairman during the last recession. In that capacity Bob was in contact with many unemployed engineers in our Section. He knows, quite well, the hardships faced by our members during that period. Bob will review the conditions that existed then and how they affected our members. He will cite some of the conditions that influence engineering employment.

Richard Tax, has been involved with PACE since 1976 and is a member of USAB's Manpower Committee. Richard, presently North Jersey's Chairman, is heading a Region 1 Ad Hoc Committee designated to address the subject of Engineering Layoffs. He will review some of the conditions influencing the layoffs and propose a course of action. One of his primary concerns is about the desperation of the individual unemployed engineer. Alone they can do very little. Together, he believes, we can all do so much more.

The subject of this meeting is relevant to engineers that are out of work or underemployed and recent graduates that have not found employment that calls upon their engineering skills. This is also important to corporate level managers, CEO's and individuals concerned about the immediate future of their companies.

The purpose of this meeting is to develop enough interest to combine resources of IEEE, engineers and corporate members to face this challenge head on and together to have a positive influence on the economic health of our profession and our industries.

Time: 7:30 PM, Thursday, November 13, 1986.
Place: ITT Auditorium, 500 Washington Ave., Nutley, N.J.
Further Information: Dr. Robert Sinusas (201) 393-2829.

Nominating IEEE Fellows

By: Eugene I. Gordon, IEEE Fellow
North Jersey Section Awards Committee

Recognition by peers is one of the important reasons for the existence of IEEE. Elevation to the grade of IEEE Fellow is the focus of much of the awards activity. A successful nomination requires two elements:

- (1) a qualified candidate, and
- (2) a well-prepared nomination form.

Assuming the (1) is satisfied, this document is designed to help produce a nomination form that will enhance the possibility of success.

A successful nomination is a tribute to the skills and efforts of the nominator as well as to the candidate. It represents considerable effort. Often the successful nominator experiences an unheralded victory, accompanied by a sense of quiet satisfaction for a tough job well done.

A key preliminary is a careful reading of the IEEE Guide for Fellow Grade Nominations. It is well written and complete, and is ignored only with great risk to potential success. Make sure that the Guide and nomination form are up to date; an out-of-date form is deathnium. Give yourself ample time to prepare a proper form, including in the schedule a review by the North Jersey Section Awards Committee. In particular, don't impose on your references by making a last minute request for their support. A good reference is usually a busy individual with several such requests. When you do receive assent and send the appropriate material, include a draft version of the nomination. Additional background information can be helpful since it allows the reference to buttress the case.

Recognition by elevation to Fellow signifies demonstrated, outstanding effort in one case. Many good efforts do not replace one outstanding work. Many good efforts, added to one outstanding work, do not enhance a nomination. Indeed, a laundry list of outstanding efforts reduces the opportunity to make a convincing case for the validity of one. Absent the demonstration and the nomination becomes worthless.

Therefore, the key decision in establishing the strategy for a successful nomination is the choice of a single outstanding effort which can be demonstrated convincingly. There is an opportunity to list other outstanding efforts, but they have little value unless they have some credibility.

Items 1* and 2 on the form require no comment. Item 3 (proposed citation) is the most important. Although 30 words are allowed in the citation, a short, concise citation based on the one outstanding effort is more effective. Avoid the temptation to list more than the one outstanding effort you have chosen to focus on.

Item 4 (nominator information) requires no comment. Item 5 is simply the work history. Do not use it to add to the list of accomplishments or embellish the story. Keep to the point; position held by title and responsibilities. These may include number of people reporting to the candidate, mission of the organization, courses taught, nature of the courses, etc.

Item 6A is your chance to tell about the one outstanding accomplishment of your candidate. ONLY ONE. Describe it. Don't expect the evaluation committee to be familiar with the area. Don't use jargon. Explain, and keep it simple. Use the space provided. This section also allows you to explain why the outstanding accomplishment is significant, and why it indicates individual performance substantially better than the average senior member.

This is where you make the case. You win or lose here.

Item 6B (other contributions) is icing on the cake. But keep in mind, Item 6A is the cake. In both sections you should cross reference to tangible items listed in Item 7.

Item 7 requires TANGIBLE and VERIFIABLE evidence of the technical accomplishments listed in Item 6. If you can't fill out this section as requested, give up. The most effective and easiest exhibits involve books, publications in peer-reviewed journals, talks at meetings with published proceedings, and patents. Describe the engineering significance and cross reference to Item 6. In the case of multiple authorship, describe the specific contribution of the candidate. The absence of books, papers, talks, or patents to support the case poses a challenge but is hardly a fatal flaw. Tangible evidence includes archived reports, presentations to august bodies, published standards, minutes, designs, etc. It is important that the existence of these be verifiable. The maximum number of items is 18. These should be numbered in sequence for the sake of reference.

Item 10 (references) is important. Finding suitable references who are genuinely familiar with the work of the nominee, who are Fellows of the IEEE, and who work for organizations other than that of the candidate is such a demanding requirement that it provides credible indication of stature. However, references can also help to provide credible support for the basic case. For this reason, providing the reference with a draft copy of the nomination form is essential.

In summary, many of the mechanicals can be found in the nomination guide. Careful study is a must. The key to success is to prove a case of outstanding performance. Best of luck!

*The item numbers in the essay refer to the item numbers on the Fellow Grade Nomination Form B-27.

CALENDAR
NORTH JERSEY SECTION AWARDS COMMITTEE
1986-1987 AWARDS YEAR

November 1986	Committee Members solicit Fellow nominees from various sources.
December 5, 1986	First Awards Committee meeting: AT&T Bell Labs, Parsippany, N.J.
February 5, 1987	Awards Committee Meeting
March 13, 1987	Awards Committee meeting--Review all drafts and send recommendations to nominators.
April 3, 1987	Deadline--Final Drafts of all Fellow Nominees to Committee
April 10, 1987	Last Awards Committee meeting--Final vote on endorsement.
April 17, 1987	Letters of endorsement sent to IEEE Fellow Secretary.
May 1987	Final report of Awards Committee sent to Section Executive Committee by Awards Committee Chairman.

PACE
NEWS

Professional
Activities
Committee for
Engineers

"WHO'S SMOKING WHAT?"

Eugene I. Gordon, Chairman & CEO, Lytel Inc., has been very helpful in enlightening engineers on corporate age discrimination in his letter to the editor printed in the August 1986 newsletter. he has been very helpful in noting that:

"Sure, there is age discrimination and it is ethically wrong, illegal, and bad for the country.."

"In the absence of illness the older person can be more productive and valuable than a younger person."

"Individuals and companies can negotiate settlements without EEOC approval."

In general Mr. Gordon recited a number of reasons why an employee should be fired, demoted, or not given a raise. And this is where the Gordon smokescreen originates. Too many managers do not understand the age discrimination law and assume that the law protects incompetence or poor performance. Further, those same managers assume that the IEEE/USAB Age Discrimination Committee is trying to protect poor performers. Nothing could be farther from the facts. In simple language the age discrimination law says do not make employment decisions on the basis of age. This is the simple message which the IEEE/USAB Age Discrimination Committee is trying to instill in IEEE/USAB members and employers. In discussions with employers the IEEE/USAB Discrimination Committee asks employers to fire poor performers--drive them out of the profession. But, Mr. Employer, don't make your decision on the basis of age!

To clarify this emphasis on age it is often helpful to give a few examples of employment decisions which are made solely on the

JONATHAN ROYCE INTERNATIONAL
The Human Resource Company

EXECUTIVE SEARCH
A SELECT GROUP OF HIGH TECH GROWTH COMPANIES HAVE RETAINED OUR ORGANIZATION TO IDENTIFY ENGINEERS FOR VERY UNIQUE OPPORTUNITIES.

SYSTEMS	SOFTWARE	MANUFACTURING
ANALOG & DIGITAL	COMPONENT	PRODUCTION
RELIABILITY	MECHNICAL	POWER SUPPLY
QUALITY ASSURANCE	BUSINESS DEVELOPMENT	RF/MW

INTERMEDIATE ENGINEERS TO DIRECTORS LEVEL

OPPORTUNITY TO USE FULL CREATIVE TALENTS IN LATEST STATE-OF-THE-ART ENVIRONMENTS. EXCELLENT SALARIES WITH LEADERS IN THE FIELD.

Wanted
Job Shoppers

LONG AND SHORT TERM ASSIGNMENTS AVAILABLE
\$\$ TOP DOLLARS \$\$

TECHNICIANS	ELECTRICAL ENGINEERS	CHEMICAL ENGINEERS
DRAFTSMEN	MECHANICAL ENGINEERS	SOFTWARE ENGINEERS
DESIGNERS		CIVIL ENGINEERS



JONATHAN ROYCE INTERNATIONAL
Raratin Plaza 1, 4th Floor, Raratin Center
Edison, N.J. 08837
(201) 636-5100