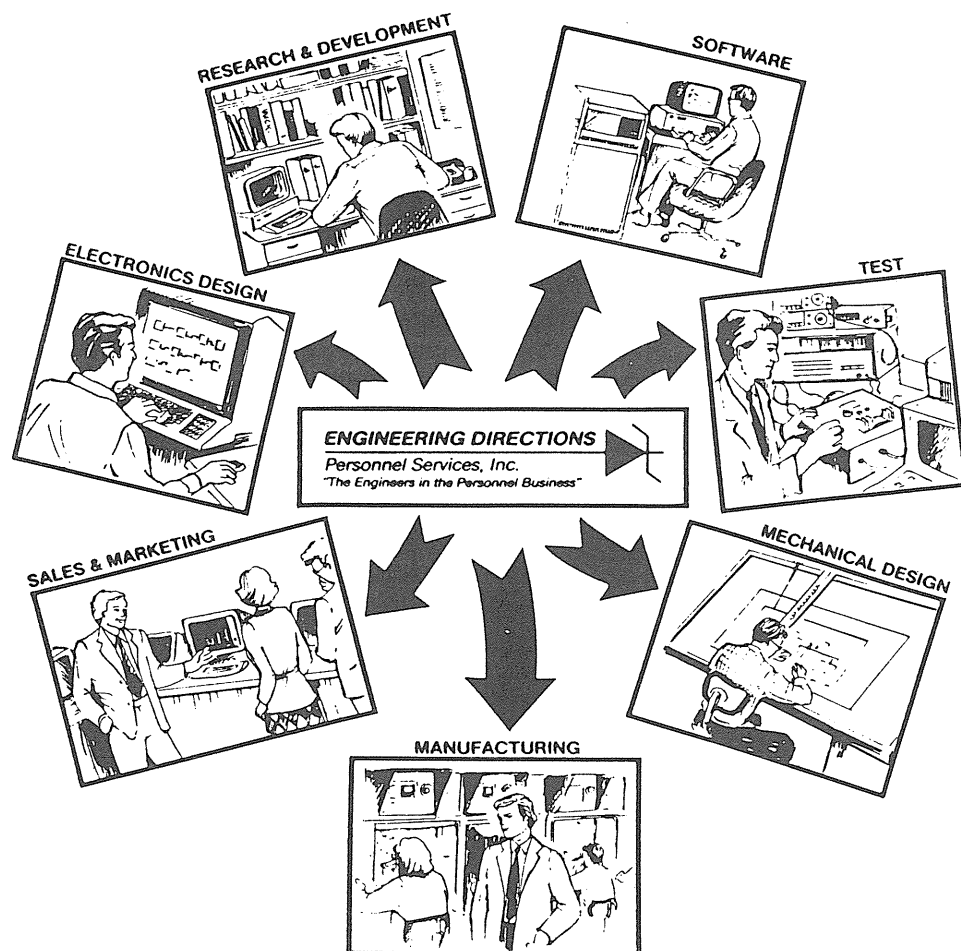


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The IEEE

# Newsletter

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

**OCTOBER, 1986  
Volume 33, Number 4**

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#### NEWSLETTER STAFF

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

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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

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Member-At-Large ..... Frank Kuhl  
Jr. Past Chairman ..... Eugene Niemiec

## Clinical Engineering

At the October 8, 1986 meeting of the Metropolitan Chapter of the Engineering in Medicine and Biology Society, "Clinical Engineering: An Emerging Discipline" will be discussed by Mark S. Brody. Mr. Brody is Chief of the Biomedical Engineering Section, Veterans Administration Medical Center, Northport, N.Y.

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

Time: 7:30 PM, Wednesday, October 8, 1986.

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

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

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

## Low Data Rate Speech Processing

Jim Mosko of ITT Defense Communications Division will be the featured speaker at the October 23, 1986 meeting of the NJ Chapter of the Acoustics, Speech, and Signal Processing Society. He will present a discussion of the potential role of speech knowledge in future

approaches to low data rate speech processing.

#### About The Talk

The talk will explore the use of speech knowledge, as represented by formalized attribute grammars, in developing alternate models of speech perception for coding purposes and the potential applications of these models for vocoded speech.

#### About The Speaker

Jim Mosko holds MS and PhD degrees in speech and hearing science from Purdue University. Since joining ITTDCD in late 1985, he has worked in the area of very low data rate compressed speech and as the Technical Coordinator of ITTDCD's Secure Information Systems IR&D Program. He is currently doing research in prosodic coding schemes for narrowband vocoders.

#### Elections Slated

Elections of chapter officers will be held in a brief business meeting preceding the talk. We urge members and non-members alike to actively participate in the North Jersey ASSP chapter, and join us in what will surely be an exciting evening!

Time: 7:30 PM, Thursday, October 23, 1986.

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

Further Information: Greg Mackintosh (201) 386-4560, Marc Beacken (201) 386-3757, John Namovic (201) 386-5490.  
Pre-Meeting Dinner Reservations: 5:30 PM, Greg Mackintosh, Marc Beacken, or John Namovic



CALENDAR OF EVENTS

October 8, 1986--"Clinical Engineering: An Emerging Discipline"--Metro-politan Chapter Engineering in Medicine And Biology Society, 7:30 PM, Rockefeller University, York Ave. at 66th St., NYC. Mark Restivo (718) 836-6600, ext. 318 or 160.

October 15--"Seminar: Applications Of Knowledge-Based Expert Systems"--NY Chapter Computer Society, 9 AM-4 PM, United Engineering Center, 345 E. 47th St., NYC. FEE REQUIRED. See Last Month's Issue. Jim Barbera (212) 395-8765.

October 15--"Student Professional Awareness Conference"--NY Section Student Activities Committee, New York City Technical College. Sal Rotella (718) 946-5125.

October 16--"Consultants' Network Meeting"--New York Section PACE, 6:30 PM, New York Coliseum, New York Power Authority 17th Floor Conference Room, 10 Columbus Circle, NYC. James Wetterau (212) 321-1999.

October 20--"New IBM Compatibles"--Joint NY & LI Chapter Consumer Electronics Society & NY Chapter Computer Society, 6 PM, Gibbs & Hill Room 17A, 11 Penn Plaza, NYC. Antenor Brutus (212) 613-5400, ext. 218.

October 20--"Manufacturing Automation: MAP/TOP State-Of-The-Art"--NJ Chapter Computer & Communications Societies, 7 PM, AT&T Murray Hill Auditorium, Mountain Ave., Berkeley Heights, N.J. Norman Joehlin (201) 785-6574.

October 21--"Reliability Prediction Procedures"--NJ Chapter Reliability Society, 7 PM, ITT Auditorium, 500 Washington Ave., Nutley, N.J. Mallik Arjunan (201) 284-3475.

October 21--"Analysis Of Harmonic Distortion On The Power System"--NJ Chapter of the PES Society, 7:30 PM, JCP&L, Madison Ave., and Punch Bowl Rd., Morristown, N.J. Joseph L. Kane (201) 455-8456.

October 23--"Low Data Rate Speech Processing"--NJ Chapter of the Acoustics, Speech And Signal Processing Society, 7:30 PM, JCP&L, Madison Ave. and Punch Bowl Road, Morristown, N.J. Greg Mackintosh (201) 386-4560.

October 28--"Technological Obsolescence: The Avoidable Problem"--NY/NJ Chapter of the Engineering Management Society, 8 PM, NY Academy of Sciences, 2 East 63rd St., NYC. Al Bottani (212) 319-7444.

October 29--"MICROWAVE SYMPOSIUM & MINI-SHOW"--NJ Chapter MTT/AP, 1:15 PM to 9:30 PM, ITT, River Rd., Nutley, N.J. Free, including buffet. Dick Snyder (201) 492-1207.

October 29--"LAN Architectures And The IBM Implementation Of The Token Ring"--NJ Joint Chapter Computer/Communications Societies, 8 PM, ITT, 500 Washington Ave., Nutley, N.J. Howard Leach (201) 855-3530.

\*\*\*\*\*  
The North Jersey Section Executive Committee meets the first Wednesday (except holidays) of each month. These meetings (held at ITT, 500 Washington Ave., Nutley, N.J.) are open to all members. Information on each meeting agenda is available from Howard Leach, Section Secretary at (201) 885-3530.  
Elected Section Officers are listed on page 1.  
\*\*\*\*\*

MANAGEMENT & MAINTENANCE  
OF  
COMMUNICATIONS NETWORKS

Thursday, December 4, 1986, 9 AM to 5 PM  
UNITED ENGINEERING CENTER  
345 East 47th Street, New York, N.Y.

Sponsored by:  
IEEE Communications Society, New York Section

Keynote Speaker	Dr. Larry Bernstein Bell Laboratories
Management & Control of Data Communications Network	B.J. Occhiogrosso, VP DVI Communications
Information Network Systems (INS) and Network Operations in Japan	Masato Chiba Deputy Exec. Mgr., NTT
Rich Corporation	Dr. Joseph Nadan Sr. VP., Corp. Mgmt.
Harris	H.B. Shannon Director of Marketing
Hewlett Packard	David deS. Couch
Centralized Control - Key to Effective User Network Management	E.J. Clark VP GEICO
Maintenance & Control of the Communications Network. The Human Element	Robert Gawthorne Research VP Citibank
Mountain Bell	Arthur A. Knapp
T-Bar	Mike Ushka VP - Marketing
New York Telephone	Theodore Gold

Fee: \$125 for non-members, \$95 for members, and \$10 discount toward early registration before November 4, 1986. (Fee includes lunch, coffee breaks and seminar proceedings.)

Registration for "Management and Maintenance of Communications Network"

TO: Mr. Robert Puttre NYNEX Corp., 70 W. Red Oak Lane, Room 224B, White Plains, New York 10604. For further information call Mr. G. Stricker (212) 649-1351 or Mr. M. Madrigal (212) 649-1393.

Name \_\_\_\_\_ IEEE No. \_\_\_\_\_  
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Please enclose required fee made payable to: NY IEEE COMSOC.

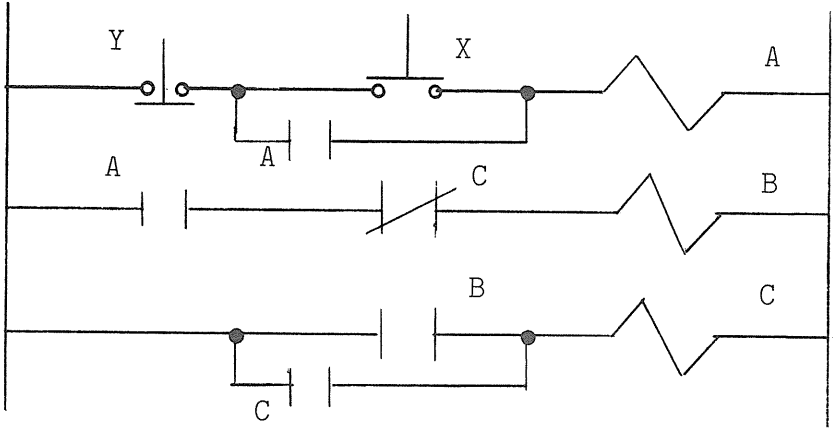
Systems Division of the Grumman Corporation, Bethpage, New York, where he has been employed for the last twenty-four years. His responsibilities include directing efforts in the design and development of intermediate level support equipment for video display systems on support automatic test equipment (ATE). Major tasks include system functional analysis, test philosophy and design, system interface design, test and integration. Prior to this, he has been responsible for the design, development and test of electro-optical state-of-the-art systems on projects such



as F-14, A6-C, LM and OAO. He has authored several papers on display and electro-optical calibration systems. Mr. Luceri is a senior member of IEEE. On the local level, he is a Past Chairman of the Long Island Section (1982-1983), and is presently a member of the Executive Committee as Symposium Chairman for Autotestcon '85. He is Past Treasurer of Region 1 Executive Committee, and presently holds the position of Area B Chairman. He has been a member of the Administrative Committee (ADCOM) of the Instrumentation and Measurement Society for the last four years, and is presently the Membership Development and Service Chairman. He was named to the Regional Activities Board (RAB) Nominations and Appointments Committee in 1985. He has also served as a Committee Officer for ELECTRO/85 and '86. Lou has been a major supporter of student professional development. Additionally, he is currently drafting major operational changes which will impact Institute affairs throughout the northeast United States.

**CAREER TIP OF THE MONTH**  
Get to know the company that will interview you: particularly which products or projects you would like to work on.

QUICKY CONTEST



We have received responses to last month's puzzle from **Gene Daly, Lawrence Desouza, R.E. Franklin, Raghuwanshi Pravin, George Gross, Maxim Klavansky, and Stuart Landau.**

The explanation of September's Quicky Contest is as follows:

**PBX is depressed**

Relay A picks up and seals itself in. Relay B is picked up through the relay A N.O. contacts. What happens now is wholly dependent upon the relative operating speeds of relays B and C.

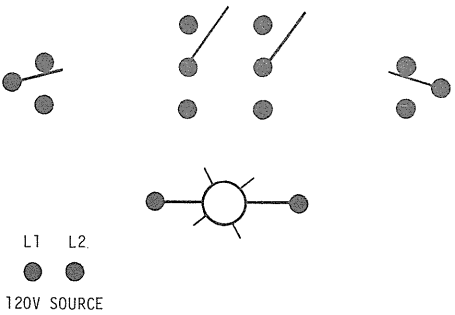
As relay C is energized through the closure of the relay B N.O. contacts, its travel begins. The relay C N.C. contacts permitting relay B to be maintained opens. Relay B is now de-energized and opens its N.O. contacts. In this small time period relays B and C are both de-energized. Consequently, an undesirable chattering sequence will likely take place.

To avoid this occurrence relay B must be a slow release type relay, or one with definite time delay on drop-out characteristics.

**PBY is depressed**

Assuming relays A and C were energized, only relay A would drop-out when PBY is depressed. Relay C would remain picked-up. If the circuit were properly designed, relay C would have been de-energized through the opening of the N.O. relay A contacts in the relay B branch of the circuit.

This month's QUICKY CONTEST is as follows:



Connect the components shown so that the lamp may be turned on and off from each switch location regardless of the relative position of the other switches.

Note: a four-way switch is not on hand for use at the middle location--a double pole double throw (D.P.D.T.) has been substituted.

**CORRECTION**

Septembers' Quicky Contest was submitted by Edward Farkas and not Tom DeGenaro as was indicated in previous issue. Mr. DeGenaro has submitted this month's contest.

\*\*\*\*\*  
**Your Student Activities Editor is anxious to publish news about your Student Branch. Please send all information to Mr. Edward B. Farkas, Port Authority of NY & NJ, One World Trade Center, Engineering Dept., (B3), New York, N.Y. 10048 or call (718) 297-7498.**

Obsolescence: An Avoidable Problem

"Technological Obsolescence: The Avoidable Problem" is the subject of the October 28, 1986 meeting of the New York/North Jersey Chapter of the Engineering Management Society. Dr. Jay Gilbert of Stevens Institute of Technology will be the featured speaker.

**About The Talk**

Highly successful engineering professionals and long-term productive performers maintain their technological competence by developing a personal strategy built on their own strengths that works for them. This strategy permits them to develop and capitalize on habits of individual continuing learning that in turn keep them from becoming obsolescent. When engineering managers support the individual efforts of their technical professionals within the workplace by serving as mentors, these habits and patterns of learning can be encouraged and/or developed in the general engineering population. This presentation will discuss individualized continuing professional development, and will focus especially on the crucial role of the manager in helping professionals remain up-to-date.

**About The Speaker**

Dr. Jay Gilbert is a metallurgical engineer, materials scientist and technical educator. He is currently Director of Continuing Engineering Education at Stevens Institute of Technology, and is an industrial consultant with his own firm in Hastings-on-Hudson, New York. Dr. Gilbert specializes in helping engineers and technical professionals keep themselves up-to-date and avoid technological obsolescence.

Everyone is welcome. and no reservations are necessary for the meeting.

**Time:** 8 PM, Tuesday, October 28, 1986.  
**Place:** New York Academy of Sciences, 2 East 63rd Street, NYC. (212) 838-0230.  
**Further Information:** Al Bottani (212) 319-7444; Alan Berlinsky (201) 386-4614; Vern Casper (914) 666-3353.

IBM Compatibles

The combined Long Island and NY Section Chapters of the Consumer Electronics Society and the New York Chapter of the Computer Society, will hold a technical update on Monday, October 20, "The IEEE Newsletter" - October, 1986 - Page 3

from 6 PM to 8 PM, in the offices of Gibbs & Hill, Inc.

The speakers will be Mr. John Marchetti and Ms. Barbara Tongue of Tandy Computers. They will discuss the new IBM PC compatibles - Tandy models 1000 SX and 1000 EX; the IBM XT compatible - Tandy model 3000 HL; and the Tandy 3000, a PC/AT compatible.

All interested parties are urged to attend. There is no admission charge.

**Time:** 6-8 PM, Monday, October 20, 1986.  
**Place:** Gibbs & Hill, Inc., Rm. 17A, 17th Floor, 11 Penn Plaza, 7th Ave., between 31st St., and 32nd St., Manhattan.  
**Further Information:** Antenor Brutus (212) 613-5400, Ext. 218.

Manufacturing Automation Update

Manufacturing automation is the subject of an October 20, 1986 joint meeting of the North Jersey Chapter of the Computer & Communications Societies of the IEEE and Computer and Automation Systems Association of the Society of Manufacturing Engineering in N.J. Lew Weigle of AT&T will discuss "Manufacturing Automation: MAP/TOP State-of-the-Art."

Cost effective and integrated factory automation depends upon establishing good communications and data compatibility between computers and other intelligent devices. Currently communication tools provided are specific to a single computer or device vendor. MAP/TOP are nonproprietary peer to peer communication standards which cover both hardware and software. They are based on national and international protocol standards, to be agreed to and used by all vendors of computers and intelligent devices for the factory floor, office and engineering areas. They can meet the need for faster and more cost effective methods of communicating in information among the factory floor, office and engineering areas.

A short video tape MAP/TOP (1985 Version) from General Motors will be shown. Lew Weigle, AT&T representative to the MAP/TOP Users Group, will discuss protocol definitions and applications aspects of using and interfacing to MAP/TOP. Testing and performance measurement issues will be discussed by a second speaker.

IEEE membership is not a requirement for attendance. All are welcome

**Time:** 7 PM, Monday, October 20, 1986.  
**Place:** AT&T Murray Hill Facility auditorium on Mountain Avenue, Berkeley Hgts., N.J., off Rt. 78 (Glenside Road Exit).  
**Further Information:** Norman Joehein, IEEE (201) 785-6574; Cassandra Davis, SME (201) 785-5656.

New Reliability Prediction Procedures

The NJ Reliability Chapter will meet October 21, 1986 to hear a talk on "Reliability Prediction Procedures."

**About The Talk**

Reliability Predictions for complex electronic equipment are typically done using Military Handbook 217D. Recently, Bell Communications Research (Bellcore) has developed alternative models for predicting Integrated Circuit failure rates. John Healy, Richard Fagerstrom, and John Kitchin, all of Bellcore, will describe a prediction approach based on data from several manufacturers of telecommunications equipment and from several companies which provide telecommunications service.

**About The Speakers**

John Healy is currently District Manager of Quality Surveillance and Analysis Methods and has a PhD in Statistics from Purdue University. Richard Fagerstrom has a PhD in Statistics from Florida State University and is a Member of Technical Staff where he is currently working on refining prediction procedures based on new field data. John Kitchin is currently District Manager of Reliability and Maintainability Methods and has a PhD in Statistics from Florida State University.

**Free Buffet**

A free buffet will be provided on a first-come-first-served basis. The dinner/meeting will be held at the ITT Auditorium, 500 Washington Ave., Nutley, N.J. on Tuesday, October 21, 1986. The buffet will be available at 6 PM, while the talk will begin at 7 PM.

**Time:** 7 PM, Tuesday, October 21, 1986. (Buffet starting at 6 PM.)  
**Place:** ITT Auditorium, 500 Washington Ave., Nutley, N.J.  
**Further Information:** Mallik Arjunan (201) 284-3475.



## 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.

## IBM Token Ring LAN

“LAN Architectures And The IBM Implementation Of The Token Ring” is the subject of the October 29, 1986 meeting of the North Jersey Joint Chapter of the Computer & Communications Societies.

Speaker will be Wesley C. Rolley of IBM.

### About The Talk

LAN architectures entail a choice of media (baseband, broadband, twisted pair, coax), topology (ring, bus, star-wired), and IEEE standard (CSMA/CD, token bus, token ring). The initial discussion will establish an understanding of the choices available in the marketplace today, and the advantages and the disadvantages of each option.

The second part of the talk will use the IBM Token Ring LAN to demonstrate how the selection of each option (baseband, star-wiring, token passing ring) contributes to a coherent architecture for local areal networking.

### About The Speaker

Mr. Rolley is a Consulting Systems Engineer with IBM’s Telecommunications Marketing Branch Office in Paramus, N.J. He joined IBM in 1967 to work on the Pan American Airlines Reservations System. He was responsible for the design and implementation planning for a number of major airline systems. More recently he spent several years as a Systems Engineering Manager and as Manager of Network Design for IBM’s Corporate Consolidated Data Network (CCDN). Mr. Rolley has been in his present position since August 1985.

### ALL WELCOME

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

**Time:** 8 PM, Wednesday, October 29, 1986.  
**Place:** ITT Auditorium, 500 Washington Ave., Nutley, N.J.  
**Directions or Dinner Reservations:** Howard Leach (201) 885-3530 or Fran Stork (201) 884-6042.

fessional jobs to foreign workers coming into this country. This is particularly true in the field of engineering, where foreign engineers are willing to work for a fraction of the wages paid to American workers just to stay in this country.”

The strongest criticism offered at the hearing came from Reed, whose organization was founded (in 1979) “on the premise that U.S. citizens should have preference for jobs created and existing in the U.S.” Reed charged that conniving employers and inattentive Labor officials allow foreign workers to move into jobs at below-market rates of pay. He said the “whole system of both immigration and labor cerification is based on the work of those with the most to gain by allowing this worker to enter the country--specifically, the work of the alien and the word of the employer.” The fact that three Federal agencies--State, Justice, and Labor--share responsibilities for enforcement and implementation of the labor laws means that no one is in charge. The problems are compounded when these agencies neglect or refuse to share information with each other.

IEEE’s views were presented by James F. Fairman, Jr., Chairman of USAB’s Manpower Committee. Fairman is con-

# Student Activities

By Edward B. Farkas

### NEW YORK CITY TECHNICAL COLLEGE SPONSORS MODEL STUDENT PROFESSIONAL AWARENESS CONFERENCE

New York City Technical College of The City University of New York has been selected by the Regional Student Activities Committee Chairman Colonel Frederick Nohmer, Area Chairman Louis A. Luceri and the New York Section Student Activities Committee as the site for a Model SPAC which will take place on October 15, 1986.

This special student conference will feature Michael Whitelaw of Northeast

Utilities and Director of Region One who will address the topic of Career Opportunities in the 80’s. Professor Stephen Unger of Columbia University President of the Society on the Social Implications of Technology will speak about Professional Ethics, Edward B. Farkas of the Port Authority of New York and New Jersey, Regional Publications Committee Chairman will explore the theme of Planning Your Career—A Successful Job Search, along with various other nationally prominent speakers and panelists.

All electrical engineering and electrical engineering technology students in New York, North Jersey, Long Island, Connecticut, Princeton and the Jersey Coast are urged to attend! It will be well worth the time.

The IEEE will pay for two representatives from about 50 colleges, institutes and universities in the area to travel and attend this important conference designed expressly by and for students.

If you are a student or recent graduate looking for up-to-date information that will help you determine opportunities, find a job and continue to develop professionally, this conference is for you!

If you would like more detailed infor-

cerned that many foreign students are permitted to adjust their status upon completion of their studies despite prior assurances that admission was to be temporary and contingent on their stated intention to return home. Fairman said IEEE is also concerned that Labor Certifications are based on faulty or inadequate assessments of prevailing wages and the availability of qualified citizen candidates for advertised openings. “In addition, the definition of criteria used to assess whether or not applicants for H-1 (exceptional ability) visas possess specialized knowledge which contributes to America’s economic health and national security need to be clarified and made more objective,” he added.

Fairman also recommended that prospective employers of foreign nationals be required to post vacancies internally and to advertise nationally to insure that qualified American engineers are given ample opportunity to apply for such positions. If the advertised positions call for exceptional ability, the salaries offered should exceed the prevailing rate for comparable positions.

*REPRINTED FROM “LEGISLATIVE REPORT”*

*August 31, 1986, Vol. IX., No. 6*

mation call Mr. Sal Rotella Chairman of the Conference who can be reached at (718) 946-5125.

The IEEE looks forward to meeting you.

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### QUOTABLE QUOTE

**32.4916% of all statistics are worthless.**

---

### TECHNICAL CAREER INSTITUTE WINS AWARD

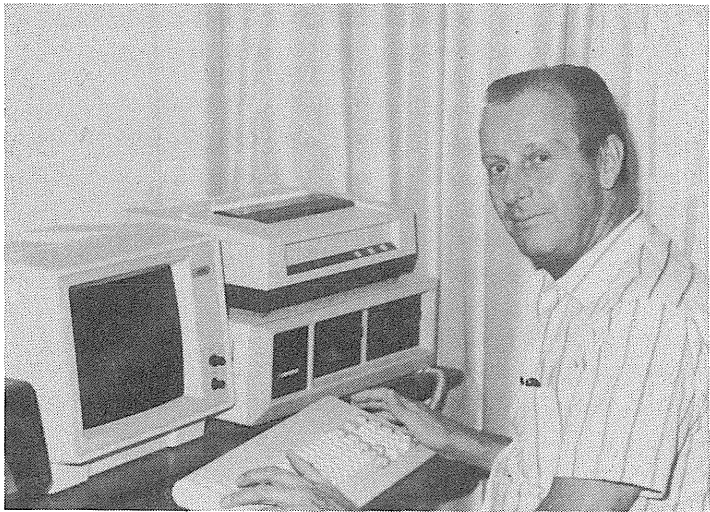
The Regional Activities Board of the IEEE has chosen the Technical Career Institute Student Branch as the recipient of its Annual Membership Development Award for Region One.

As there are eight states and over 90 Colleges, Institutes and Universities in the running, Technical Career Institute is to be congratulated for a job well done!

### PROFILE

This month the MONITOR will profile **LOUIS A. LUCERI.**

Louis A. Luceri received the BEE degree from Manhattan College in 1958 and completed his graduate studies in applied physics at Adelphi University in 1964. He presently holds the position of Technical Specialist at the Electronics



## CHAIRMAN'S CORNER

Our North Jersey Section is one of the largest sections in the IEEE. We have more than 5400 members and an annual budget of over \$45,000.

A primary function of our Executive Committee is to provide our members with the services necessary to enhance their engineering careers. Some of these services include engineering level courses provided by our Education Committee, technical lectures and discussions provided by our Technical Societies

# PACE NEWS

Professional Activities Committee for Engineers

## Charges Lax Enforcement Of Foreign Workers Law

*This legislative report is prepared for the information of IEEE officers and selected staff and should not be construed as representing the position of the IEEE or any entity. It is written to provide the recipients insight into current Congressional activities of interest to the IEEE.*

### Lax Enforcement Charged: Foreign Workers Allowed to Displace U.S. Citizens

A Massachusetts Congressman has recently held the first in a series of hearings to examine the process by which the Labor Department determines that U.S. employers may fill engineering

and Chapters, professional lectures and discussions provided by our Professional Activities Committee for Engineers (PACE) and Section Socials, with free food and refreshments, that provide us with the opportunity to meet, relax and converse with our associates.

Did you know that all of these functions are included with your \$67 annual membership fee? This is a trivial \$67 investment in your engineering career and you can't get the equivalent anywhere else.

I must confess, the officers and committee chairmen of our Executive Committee do have a better deal. Once each month we meet at our Executive Committee meeting to conduct the business of the Section. I realize the business meetings turn engineers off and perhaps put them in a zero state, but these business meetings make all of our other technical meetings, services and functions possible. So, you see, we do have a better deal because we get to enjoy the experience of making things happen in North Jersey's IEEE.

As a member of our Section, read through our Newsletter and see what's happening. Pass this Newsletter on to a friend. You should be able to find some meeting, discussion or subject of interest. Now, if you can't find anything of interest or you believe there are issues that we should address, then it's up to you to let us know. Think about it. Are you getting your \$67 worth from IEEE? Do you want more or just something different? Are you satisfied with your profession and the North Jersey Section? In any case, let us know. Call me or any Section officer listed in this publication or join us at our Executive Committee meetings. After all, why should the Executive Committee have all the fun. It's time we shared these opportunities with the rest of you.

jobs with foreign workers. Rep. Barney Frank, who heads a House panel on employment, represents the 4th Congressional District of Massachusetts, a center of engineering and computer plants and industries. A large number of IEEE members in the district keep Frank informed of engineering employment trends.

The initial hearings, held July 31, featured testimony from John Densler, a Massachusetts IEEE member; Billy Reed, president of the American Engineering Association; James F. Fairman Jr., Chairman of USAB's Manpower Committee; and representatives of the Labor Department.

Frank said the Employment Subcommittee will determine how effective the Labor Department has been in keeping jobs in this country from going to foreign workers when qualified Americans are available. "With so many of our manufacturing jobs moving overseas," he said, "we can ill afford to lose pro-

## Nominators Offer Section Officer Slate

The following slate is proposed by the nominating committee for the 1987 North Jersey Section Executive Committee:

Chairman: John Van Savage  
Vice Chairman 1: Robert Sinusas  
Vice Chairman 2: Alan Stolpen  
Treasurer: Howard Leach  
Secretary: George Graul  
Members-at-Large (3): John Baka  
Allan Berlinsky  
Ray Sears  
Richard Snyder

Any member of the Section may have their name placed on the ballot by submitting a petition signed by at least 25 North Jersey Section members. In addition to their signature, the petition must include each member's IEEE number and printed name. Petitions must be mailed to Anne Giedlinski, JCP&L, 600 Mt.

Pleasant Ave., Dover, N.J. 07801 no later than October 22, 1986.

The petition must be accompanied by a statement from the candidate confirming their agreement to serve, if elected, address and phone number, and a short biography which will be published in the Newsletter.

Any questions may be directed to Anne Giedlinski at 989-2306.

## Harmonic Distortion

The October meeting of the North Jersey Section, IEEE Power Engineering Society, will feature a presentation on "Harmonic Distortion" by Mr. Mark F. McGranahan, Supervisor of Engineering Studies for McGraw-Edison Power Systems.

Harmonic distortion is a growing concern on power systems due to the increasing use of power electronics in system loads and devices. Also, the increasing use of shunt capacitor banks for power

factor correction create the potential for magnification of harmonic levels due to resonant conditions.

The presentation will include a description of harmonic sources on the power system and methods for analyzing the system response to these sources. New simulation tools and measurement tools based on personal computers have been developed to help solve harmonic problems. These will be described and a general harmonic analysis procedure will be presented.

Mr. McGranahan is active in a number of IEEE working groups and is co-author of six IEEE papers.

**Time:** 7:30 PM, Tuesday, October 21, 1986.  
**Place:** Test Room, Jersey Central Power & Light Co., Madison Ave., and Punch Bowl Rd., Morristown, N.J.  
**Additional Information:** Joseph L. Kane, Jr., (201) 455-8456.

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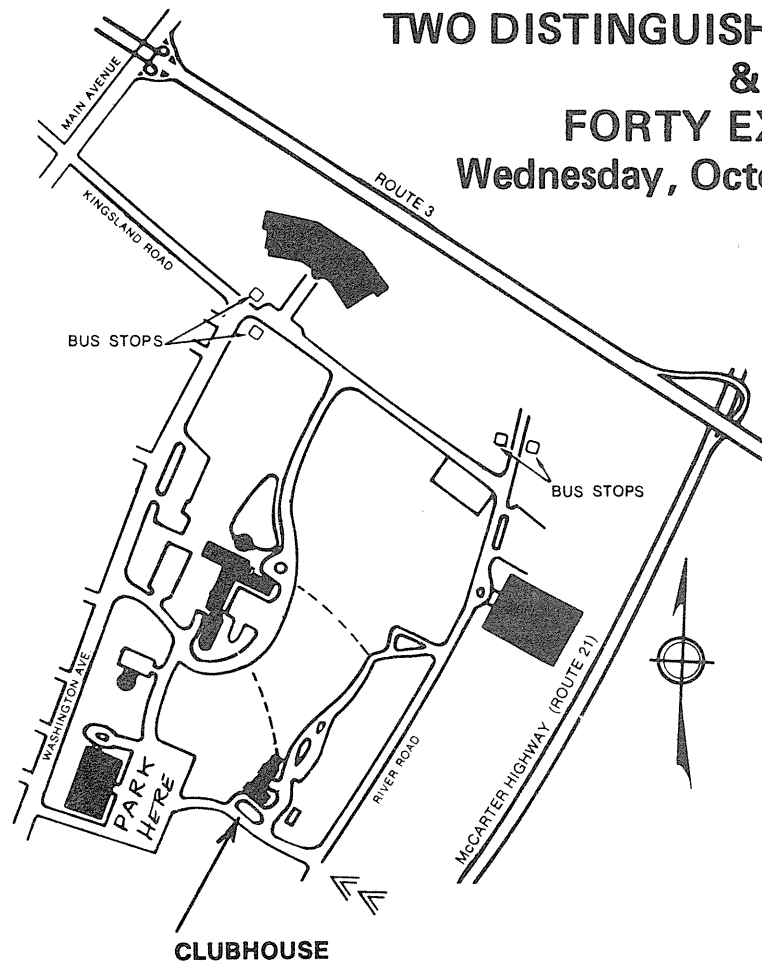
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## SYMPOSIUM AND MINI-SHOW: TWO DISTINGUISHED LECTURERS & FORTY EXHIBITS Wednesday, October 29, 1986



### TWO IEEE-MTT DISTINGUISHED LECTURERS

"Lightwave Local Area Networks"  
Dr. Reinhard Knerr, AT&T Bell  
Laboratories, Allentown, Pa.

"The First Century Of Microwaves 1886-1986"  
Dr. John Bryant, University of  
Michigan, Ann Arbor

**MICROWAVE MINI-SHOW**  
MINI-SHOW Of Forty Booths  
Staffed By Microwave Companies  
And Electronics Representatives

At: Tower & Clubhouse  
ITT-Avionics  
River Road, Nutley, N.J.

- 1:15 — 2:30 PM — Free Lecture By Dr. Reinhard Knerr
- 2:30 — 7:00 PM — Free MINI-SHOW, Refreshments, Beer, Soda, etc.
- 6:45-7:45 PM — Free Buffet Dinner
- 8:15 — 9:30 PM — Free Lecture By Dr. John Bryant

For information call:

Dick Snyder (201) 492-1207  
W. Schmidt (201) 284-2255

### "LIGHTWAVE LOCAL AREA NETWORKS"

Dr. Reinhard H. Knerr, of AT&T Bell Laboratories, Allentown, Pa. will "enlighten" us on the up and coming competitor to microwave communication—lightwave networks.

Dr. Knerr is not only an international expert on lightwave communication, but is the current President of the MTT-S Administrative Committee.

### "THE FIRST CENTURY OF MICROWAVES - 1886 to 1986: A Historical Perspective of Microwave Devices and Their Uses"

The first century of microwaves began with the historic experiments of Hertz, in 1886, using what we now call microwave circuits and techniques. His remarkably thorough investigations validated Maxwell's theory of electromagnetic spectrum between DC and light for scientific and practical uses. Even so, his was a step-by-step learning process, alternating between experiments and analytical work.

Hertz' immediate successors, more than 20 in number in at least nine countries, made major advances in techniques and technology, scaling their apparatus to shorter (millimeter) wavelengths in scientific investigations. Replicas of some of the apparatus used are shown for illustration.

The start of systems applications, which centered in communications and early radar experiments, was stimulated by the advent of CW microwave signal sources, Barkhausen-Kurz tubes (1920) and magnetrons (1928). Examples of ensuing advances are drawn from a search

of historical records, and personal correspondence and interviews, with some pioneers in microwave devices and applications.

### About Dr. Bryant

John H. Bryant is currently an Adjunct Research Scientist in the Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor. His career in the microwave field got an early start after he received his BSEE., was commissioned a Second Lieutenant in the U.S. Army Signal Corps in 1942, and was sent to England for radar school and operational training. From 1943 to 1945 he served with the American forces in operational radar and communications.

Following graduate work at the University of Illinois, Dr. Bryant worked from 1949 to 1955 at ITT Laboratories in New Jersey in microwave electron tubes. From 1955 to 1962 he was with Bendix Research Laboratories in Michigan, working on microwave components and missile guidance systems. In 1962 he was a founder of Omni Spectra, Inc., and served as its President and Chief Executive Officer. Omni Spectra microwave components and OSM coaxial connectors opened up the upper half (above 10 GHz) of the microwave frequency range to coax and planar circuit construction, and accelerated the move from waveguide to compact, TEM-type designs. After the company became a part of M/A-COM, Inc., in 1980 he served as consultant to that firm until 1985. Dr. Bryant is a Fellow of IEEE and past chairman of MTT-S AdCom and the S.E. Michigan Section of IEEE. He holds 14 U.S. patents, and is a member of Sigma Xi, Tau Beta Pi, Eta Kappa Nu, and the American Physical Society.

## Consultants' Network Slates Oct. 16 Meeting

The next meeting of the IEEE New York Consultants' Network will be held on Thursday, October 16, 1986 at 6:30 PM.

At this meeting two speakers will address subjects of relevance to consultants. A speaker from the IEEE Administrators office for insurance will speak about insurance plans for consultants. The speaker from Smith-Sternau brings a wealth of information about insurance needs of engineers in consulting roles and how the IEEE can help meet those needs.

Mr. Charles Alexander, of the Federal Emergency Management Agency, (FEMA) will speak on the role of the federal government in disaster planning and how consultants are used by the government to aid in this important function.

Come hear these two speakers address topics of great interest to the consulting community. In addition, plans for the future of the New York Consultants' Network will be presented as well as updates on our Consultants' Network data base.

**Time:** 6:30 PM, Thursday, October 16, 1986.

**Place:** New York Coliseum, New York Power Authority, 17th floor conference room, 10 Columbus Circle, NYC.

## Pace University Computer Conference

Pace University's Second Annual Computer Applications Conference will highlight "Telecommunications, The Computer Connection." The conference will be held October 30-31, 1986 at White Plains Hotel, South Broadway, White Plains, New York.

Sponsored by Pace University's School of Computer Science and Information Systems the conference will examine current issues and trends in telecommunications emphasizing creation of computer based information networks.

Keynote speaker is Prof. Mischa Schwartz, Director of the Center for Telecommunications Research, Columbia University.

For registration information call (914) 763-8829.