IEEE North Jersey Section Seminar
PROGRAMMING IN THE LANGUAGE C

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

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

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

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

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

The instructor is Mr. Tran Q. Nguyen, a Systems Engineer at Jersey Central Power and Light Company.

(9) September 7 - Introduction to C: Why learn C? Why QuickC? Hardware Requirements; Knowledge Requirements; Convention and Style; Directories and Files Used by QuickC; Setting up QuickC; Starting QuickC; Getting Help; Fixing Errors; QuickC Editor and Environment.

(10) September 14 - Functions and Function Calls; Functions and Program Design; Declaring and Defining a Function; Local and Automatic Variables; Register Variables; Passing Information to a Function; Functions with Many Parameters; Functions that Return Information; Reursion; Nonroutine Functions; Function Prototypes.

(11) September 21 - Arrays: How Arrays Are Stored in Memory; How to Declare Arrays; Referencing and Using Array Items; Bounds Checking Arrays in Your Own Programs; How to Initialize Arrays; Arrays and Functions; How Array Offsets Advance; Multidimensional Arrays; Advanced Topics and Tricks; The Effwice Operators, Tiny Arrays.

(12) September 28 - Addressers and Pointers: Addressers Reviewed; What Is a Pointer? Accessing Variables with Pointers; Pointers and Arrays; Pointer Arithmetic; The interchangeability of 'items' and 'items' (!) Table vs. array.

(13) November 2 - Advanced Pointers: Type Casting Pointers and Addressers; For Pointers; Functions that return addressers; Dynamic Arrays; Advanced Pointer techniques.

(14) November 9 - Strings: Declaring and Initializing Strings; The String Pool and String Addressers; Pointers and Initialized Strings; Formulating strings with printf(); String Input and Output; String Manipulation Routines; Arrays and Strings; The arguments to malloc() and free(); Character Classification and Transformation.

(15) November 16 - Managing Files: Top-level I/O; Mid-level (Unbuffered) File I/O; The File System; Advanced Error Handling.

(16) November 23 - Advanced Data Types: Structure - An Array of Different Types; Union - Multiple Types in the Same Space; Enumerated Data with enum; Bit Fields; Advanced typedef.

(17) December 7 - Large Project: Advanced C Programming; Using QuickC for Large Projects.

(18) December 14 - C and the National Institute of Keypad input functions; Reading Non-ASCII Keys; Console I/O Functions; Keyboard Control with ANSI SYS; Using QuickC to Access BIOS, Cursor and Screen Control with BIOS Calls.

Chairman Size will be limited to a maximum of 25 with a minimum registration of 15. Early registration is recommended. Phone Reservations will not be accepted. Reservations accepted after September 1, 1989 will require an additional late fee of $25. Where: Jersey Central Power & Light Co., Madison Avenue & Punch Bowl Rd., Morristown, N.J.

When: Fourteen sessions, Thursday evenings, starting September 7, 1989 from 6:30 PM to 9:00 PM.

What: Text Books and QuickC compiler, IBM Members $200; non-IBM Members $205

Who: Text Books only, IBM Members $150; Non-IBM Members $225

Contact: Mr. John A. Baka at (201) 455-6534 (Business)

Registration Programming In The Language C
To: Mr. John Baka, Distribution Engineering, JCP&L Company, Madison Avenue at Punch Bowl Rd., Morristown, N.J. 07960
Name_ 
Affiliation_ 
Phone No_ 
Address_ 
Check if QuickC Compiler is needed or not Yes [ ] No [ ]
Enclose required fee made payable to "North Jersey Section IEEE"
Signature_ 

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PACE Meeting: IMPROVING COMMUNICATIONS SKILLS

The North Jersey Section’s Professional Activities Committee for Engineers will meet on Thursday, July 13, 1989. The meeting will feature a presentation entitled “Developing and Delivering An Effective Technical Presentation.” Our guest speaker, Deborah Flaherty Kizer, will address issues such as planning, organization, structure and substance of a presentation and the use of visual aids, and how to handle the question and answer session.

This subject is a must for anyone interested in improving their communication skills in or out of the office.

Deborah Flaherty Kizer is an International Market Planning Manager with AT&T International in Basking Ridge, New Jersey. She holds an MS in Technical Writing from Rensselaer Polytechnic University and an MBA in International Business/Marketing from New York University. Ms. Flaherty Kizer is a member of the N1994 chapter of the IEEE’s Engineering Management Society’s N1994 chapter Administrative Committee, a member of the IEEE Professional Communication Society’s (PCS) Administrative Committee, and the editor of the IEEE Professional Communication Society’s “Newsletter.” She is the author of “How To Develop And Deliver An Effective Technical Presentation,” a booklet in the IEEE-PCG Communique series, which will be published this summer.

All IEEE members and guests are encouraged to attend. Refreshments will be served.

Place: ITT Auditorium, 500 Washingan Ave., Nutley, N.J.
Further Information: Richard Tax (201) 684-0803.

Congratulations New Senior Members
Sankar Basu
John C. Bean
Dana J. Binar
Thomas J. De Gennaro
Arthur Freund
J.J. Harrington
Lawrence F. Hogrobe
Ming-Yee Lal
Krishnan N. Nagaraj
Kwok K. Ng
Krishan K. Sabnani
Joseph J. Salmo
Joseph W. Timko
Won-Tian Tsang

You may qualify for Senior Member grade. Get the information and application form by contacting Don Weinstein, KUllle Semiconducto, One Willow Tree Road, Leonia, N.J. 07605 (201) 451-0900, ext. 238.

was very positive and Dick Tax deserves a lot of credit for organizing the conference and for presenting the High Tech Recruitment Icebreaker forecast during the conference.

Our annual banquet, held on May 3rd, was a big success with about 190 attending including sponsors, banquest committee, Chairman and his committee. Twelve new fellows were recognized for their contributions to electro-technology. Recognizing twelve new fellows at our annual banquet has to be an all time high for our Section. Also, the recognition of Fellow Pratihag Agrawal was significant as there are only about 14 women Fellows in the IEEE.

Recognition of Bob Sinusius, Past Chairman, and George Graul, Vice Chairman, with Region 1 awards was well deserved for their significant contributions not only at the Section level, but at other levels within the IEEE.

The Awards committee under Professor R. K. Hershkowitz deserve a lot of credit for the detailed work they did to endorse worthy candidates to the Fellow Member grade. This year, as of April 10th, the committee had endorsed five nominees for the Fellow grade.

Finally, on May 5th, Ken Okaie, Past Chairman, on behalf of the Executive Committee of our Section, presented savings bond awards to three winners in the Student Exposition on Energy Resources held in Morristown, N.J. Although I could not be there, I wish to extend congratulations to James Bellamere, of Asbury, N.J., Brian Sullivan of Hopton, N.J., and Kristen Campbell Berrian of Morristown, N.J. We wish them continued success with their studies and energy resources.

HOWARD LEACH
North Jersey Section Chairman
ENGINEERING EMPLOYMENT

On Saturday, April 29, 1969 the North Jersey Section convened a Careers Conference sponsored by all members of IEEE’s Region 1. Unfortunately, it was a resounding success reflecting the need to give this issue more attention. It is also unfortunate that engineers, as highly educated professionals, should have need for such a conference. Can you imagine the American Medical Association holding a careers conference for its members?

The Region 1 Executive Committee, chaired by Victor Zouralis, recognized that layoffs and a severe unemployment problem exists for its members. It was by the direction of Vic Zouralis that the Conference was made possible. The excellent response to this conference indicates that the problem is real.

We had a total of 111 pre-registered. There were 86 engineers and 25 students. Of the 96 engineers, 20 were unemployed. The remaining were probably dissatisfied with their present position or currently about that future. Many must be driven to try to increase their chances to increase anyone with these figures, but to emphasize the magnitude of the problem.

One electrical engineer, educated off shore, has been here for more than 10 years. Now, employed for more than a year, this engineer’s salary at the last place of employment was $20,000 per year. IEEE supports the premise that foreign engineers should be offered the same salary levels as American engineers and engineers should not be imported to drive down engineering salaries. This low salary reflects on oversupply of engineers and the abuse of our engineering workforce.

Another electrical engineering student, graduated 2 years ago from NIT, is employed as a sales counter in a clothing store. I know of another E.E., graduate of the Deans list of Rutgers University, class of ’88, issuing sheet rock for a building contractor. Indeed, there are many more unfortunate experiences to relate. Again, I tell you this not to belittle these people, but to emphasize the magnitude of the problem.

Is being an unemployed electrical engineer your fault? Is being an unemployed new graduate with an electrical engineering degree your fault? Is being unemployed or underutilized your fault? Well, I don’t believe it.

The following is a list of some of IEEE’s, United States Activities Board, committees:

- Employment Assistance
- Pensions, Intellectual Property
- Manpower, Women and Minorities
-_discrimination
- Ethics, Career Maintenance and Development
- Study Professional Awareness
- Some of the relevant subjects are:
- salary conditions
- unemployment of engineers
- underutilization of engineers
- All of these committees and subject addresses handshands for the importance of electronics engineering community and are indicative of an unbalance in the manpower supply/demand ratio.
- in fact, they all reflect conditions indicative of a High Supply and Low Demand for E.E.s or an engineering manpower surplus.
- Surely, if there were a true shortage of electrical engineers we would not have needed a Careers Conference and the USAB committees listed above would not be necessary. The mere existence of these committees suggests a severe problem for our members. We should note that USAB was formed in 1974 during the last large recession and the last recession in electrical engineering.

In reviewing some of our engineering manpower history we cite a paper by Milton Alpern entitled “Quantity Instead of Quality: A Subsidyage of Engineering and Its Education by ‘Engineer Shortage Propaganda’?” Mr. Alpern refers to our economic insecurity, shortened career span and professional impotence brought about by the “engineering oversupply syndrome.” He blames Engineering Shortage Propaganda (ESP) as the direct cause of the oversupply. Mr. Alpern refers to the analysis by Robert Rivers and the Deutsch, Shea and Evans, High Technology Recruitment Index (HTRI). Rivers’ comments are included on the HTRI curve. He defines periods of economic insecurity (unemployment) whenever the Index is below the 150 reference line. The Index plots demand history for the last 28 years and is based on a monthly count of recruitment ads directed to degreed engineers and scientists.

However, since most engineering graduates are not getting jobs and more engineers are being underutilized the original projections by Rivers may now be shifted by the influence of a greater supply of electrical engineers. This increased supply is derived from the induction of foreign students to U.S. engineering schools and the importation of foreign engineers. Both sources have been promoted by the use of false reports and erroneous mathematical models that project engineering manpower shortages. We know who is responsible!

While our students are having difficulty finding engineering jobs, local state and federal job markets with taxpayer dollars colleges are recruiting students from other countries. These students then stay here and take the jobs our graduates need. Meanwhile, the foreign student pays only the tuition or about 20 percent of the actual cost of the education. Our tax dollars pay for the other 80 percent of the cost. This over-paying is a shame!

If you are an unemployed engineer or recent engineering graduate it may not be your fault. It may be your time to jump in with the deck stacked against you. If you or your friends are suffering from these career problems call me at 664-6954 and try to attend our IEEE meetings.

WORK NEEDED

If you have a job that needs to be done by members with engineering background or education please call. Even temporary assignments may be helpful to some of our members. Call:

(201) 654-6954

I refer to: Richard Tax, 630 Mountview Place, River Vale, NJ 07675.

NEER, GEER, PEER, SEER

IEEE-USA is adding the Non-Employed Engineers Registry to its family of manpower database services. NEER will be operated as a non-confidential database available to IEEE members and all employers free-of-charge. Thus, employers can reach individuals listed in the NEER database by going to them directly.

NEER supplements three other IEEE-USA employment database services: the Graduating Engineers Employment Registry (GEER), established in 1984, the Self-Employed Engineers Registry (SEER), begun in 1987, and the Professional Employment Management Employment Registry (PEER), initiated in 1984. Like NEER, GEER and SEER are non-confidential services. PEER, however, is a confidential service, i.e., prospective employers’ and employers’ names are not included in the registry requiring job-seekers to authorize the release of information to prospective employers. All four services are operated under contract with Career Technologies Corp. (CTC). Registration forms can be obtained from CTC, 138 Old River Road, Andover, MA 01810, or call (508) 663-0098.

PACE Committee Meets Monthly

The PACE Committee meets on the second Thursday of every month at the ITT Auditorium, 500 Washington Avenue, Nutley, N.J. (near the ITT Tower) at 7:30 PM. Our Section Executive Committee meets there on the first Wednesday of every month (except in December) at 7:00 PM. Any questions or concerns will be well received. Contact Richard Tax at (201) 654-0803 (after 7:00 PM) or write to R. Tax, 600 Mountview Place, River Vale, NJ 07675.