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NEWSLETTER STAFF

Editor . . . . . Sidney Bell
Managing Editor . . . . . B. Blair
Business Manager . . . . . M. M. Perugini

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

You And Professional Activities

In the interest of increasing our capabilities in the professional arena, we will present Joel Snyder as our guest speaker at the November 15 PAC meeting. His subjects will include "licensure and registration of engineers" and USAB/PAC projects that will effect your future in engineering.

As always we will provide you with the opportunity to ask questions and give your opinion. Mr. Snyder has an extensive history of active leadership and support for IEEE activities. He is currently a Member-At-Large of the USAB and served as its Controller during 1976. Mr. Snyder had complete fiscal responsibilities for USAB and acts as a consultant for several USAB projects. He also served as Region I Professional Activities Committee Coordinator.

Mr. Snyder was chairman of USAB's ethics and employment practices committee and was instrumental in formulating the IEEE code of ethics and the resolution for filing of an Amicus Curiae Brief in the BART case. He currently chairs the Professional Activities Committee of Region I.

Since early 1963, Mr. Snyder has been a consulting engineer specializing in digital techniques and signal processing. His expertise includes data acquisition, data transmission, computer circuitry, and logic and computer application.

Prior to entering private practice Mr. Snyder was an applications engineer and senior project engineer at Harman Kardon, Inc., an electrical engineer for Airborne Instruments Laboratory, and a mathematician and programmer at IBM.

Mr. Snyder holds BEE and MSEE degrees from PINY, 1956 and 1964, respectively, and is a licensed Professional Engineer. He is a senior member of IEEE and is active in local and national affairs.

All EEs and Section members are invited to attend and participate in the discussion. Coffee and refreshments will be served. Contact Richard Tax, PAC Chairman at (201) 391-9075 for further information.

Time: 7:30 PM, Wednesday, November 15, 1978.
Place: ITT Conference Center, 500 Washington Avenue (at the foot of the tower), Nutley, N.J.
For Further Information: Richard Tax, (201) 391-9075.

Our next PAC meeting will be on Wednesday, December 13, 1978, at the same place and time.

EKG Electrodes

The Metropolitan New York Chapter of the IEEE Engineering in Medicine and Biology Society announces its program, Technical Aspects of EKG Electrodes, will be held on Wednesday, December 6, 1978 at 7:30 PM, at Rockefeller University. The speaker will be Mr. Carl Hays, Technical and Clinical Evaluation Director for NDM Corp.

Time: 7:30 PM, Wednesday, Dec. 6, 1978.
Place: Rockefeller University, Bronk Laboratory, Room 216, 66th St. and York Ave., N.Y.C.
Pre-Meeting Dinner: 6:00 PM, Tower Cafeteria, 64th St. and York Ave., N.Y.C.
Further Information: Al Wald, (212) 694-2575 (Columbia-Presbyterian Medical Center).

Holistic Approach To Computer System Design

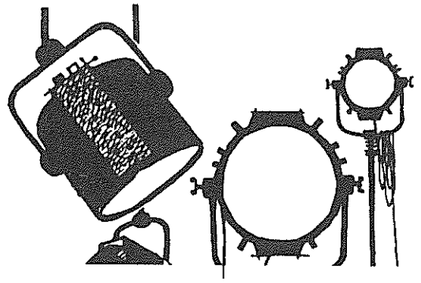
On November 16, the N. J. Computer Society will feature a talk by Mr. David J. Waks, illustrating the problems of the piecemeal method of computer system design, and describing several specific systems developed with a holistic approach.

The disciplines of information technology have become highly interrelated and substantially interchangeable. Hardware/software trade-offs must be evaluated in planning any new system. Data communications is used with virtually every system, large or small. System and applications programs must be developed in parallel. Mini- and micro-computers are in applications once thought to be the province of large computers. Word processors and data processors are converging.

Most people in the computer industry are trained as specialists – in hardware, systems software, applications software, voice or data communications, large or small computers. Yet most information systems architectures make far from optimum use of current technology. Mr. Waks believes this often results from taking a piecemeal approach to system architecture and analysis. A holistic ("emphasizing the . . . functional relation between parts and wholes") approach is needed to take optimum advantage of converging technology.

President of Systems Dynamics, Inc., in Morristown, Mr. Waks has an A.B. in Mathematics from Cornell University and has done graduate work at New York University. He has more than twenty years of broad-based technical and managerial experience in information technology, especially in the development of computer hardware and software.

Time: 7:30 PM, Thursday, November 16, 1978.
Place: ITT Conference Room, 500 Washington Avenue, Nutley, N. J.
Pre-Meeting Dinner: 6:00 PM, Sandlewood Restaurant & Lounge, 265 State Highway No. 3 (next to ITT, eastbound lane).
For Further Information: Frank Kruglinski, (201) 447-3663.



SPOTLITE ON NORTH JERSEY

The intention of this article is to describe to the Section membership the structure and purpose of the student branches located within the Section. (Do you remember when you were a student ?)

Student members are by no means a negligible constituency since they make up about 14% of total Institute membership. In fact, most of the entire IEEE membership (about 60%) were affiliated with a student branch while they were attending college. Much more important than this is the fact that today's student will become tomorrow's engineer, and instilling professional pride and responsibility in these individuals is of utmost importance.

In general, an IEEE Student Branch may be authorized at a "school of recognized standing", which may be an accredited university, college, junior or community college, or technical institute. The North Jersey Section currently has four Student Branches located at County College of Morris (Dover), Fairleigh-Dickinson University (Teaneck), New Jersey Institute of Technology (formerly Newark College of Engineering) (Newark), and Stevens Institute of Technology (Hoboken). There are approximately 400 active student members in these branches at the current time.

Each Student Branch is administered by an executive committee elected from the student membership, and regular meetings are held. The operations of the local branch are overseen by an appointed Faculty Counselor who provides advice and suggestions to the branch executive committee. This dedicated individual also serves to provide continuity and stability to branch operations. Student branches each operate a program tailored to fit the specialized needs and interests of the branch. Typical activities include the administration of the branch, recruitment of new members, planning of plant trips, athletic events, the invitation of guest speakers and the scheduling of panel discussions.

To an undergraduate student, IEEE student branch membership offers many possible attractions. To some, it is simply an opportunity to participate in branch activities. To others, it is a source of professional publications such as IEEE Spectrum and the IEEE Student Newsletter which better prepare him for entry into the profession. To still others, it is an excellent opportunity to develop organizational and leadership abilities. But regardless of motivation, the result is a certain sense of enthusiasm for and association with the electrical engineering profession.

Moving up the structural hierarchy, the operations of the student branches located within a Section are coordinated by a Section Student Activities Committee. The SAC Chairman is the link between the branches and their parent Section, and he helps in planning programs, including organization of Section-sponsored Student Prize Paper Contests. Following recent revision in the North Jersey Section Bylaws, one student member from a branch within the Section is a voting member of the Section Executive Committee. This provides direct student input in the planning of Section sponsored events. Organization above the Section level includes a Regional and an Institute SAC.

Student membership actually is beneficial to us all. It benefits students while in college by providing reasonably cheap dues, receipt of publications, access to branch sponsored activities, and a sense of belonging and affiliation with their chosen profession. To the rest of us, student branches provide the all important breeding grounds where the seeds of tomorrow's professional are sown.

Bob DeLucia, Chairman, Section Student Activities Committee

I'm glad you feel that way. It is a healthy sign; it represents human qualities of which you can be proud.

But what can you do about it? In the public arena, the name of the game is always power. People will deny this, of course, but then when two sailboats are going in the same direction at the same time, they will also deny that they are racing!

People want power for lots of different reasons, not all of them bad. They want to become effective and influence public events. Their reasons may be noble and selfless or base and selfish; but whatever their reasons, they cannot exert influence without affecting the power structure. And, of course, with power goes responsibility. And in the struggle for power, someone will be displaced. This means conflict–a central characteristic of events in the public arena. To contribute in the midst of conflict, the name of the game is winning.

When you are able to exert power, it is only because you have established a basis for it. As far as I can see, there are only five or so bases. For example:

1. You can be elected by the people.
2. You can be appointed by someone else who has been elected.
3. You can develop a constituency that will mobilize when you tell them to–as, for example, Mr. Nader has done.
4. You can head an organization that has a large membership–i.e., a big union or the American Legion.
5. You can have the facts and be a recognized authority, but this is the weakest position of all.

Nevertheless, most engineers opt for the last. And unless they are connected to a strong organization (or at least one with a good public relations officer), they are unable to get the public's attention or the ears of the officials of Government.

Yet it is surprising what engineers can do if they put their minds to it. The Rochester Engineering Society decided that as engineers they ought to play a larger role in the affairs of their city. Today, they operate a Technology Transfer Program for the City of Rochester and provide technical assistance to the local governments on a volunteer basis. One of their members became the chairman of the Pure Waters Rate Review Task Force, which proposed the presently used rate structure to the legislature, as well as organizational changes in the water systems of surrounding areas. They have become involved in the study of the transportation system and the approach the city uses to obtain consultation. They have helped the community establish policies regarding resource recovery. And it all started with a few engineers sitting around a table.

If you are willing to pick out something in your community that interests you and to which you can make a contribution, you can probably work your way into the system in such a way as to influence outcomes. You will do well to study the power structure of your community–and decide with whom you wish to join and with whom you wish to fight. If you go to work on something technical, you will have a great advantage–for you will not only know what the issues are, but you will be able to spot how little your opponents know about them. Don't hesitate to exploit that advantage. Your weakness will be in the list of things I outlined earlier. But you can learn to overcome these weaknesses a lot better than nontechnical people can learn to understand what you know."

To summarize, I believe the above relates directly to you, our USAB, and our Professional Activities. Foremost, is the plea in the opening quotation. It is clearly directed to our membership. It can be heard from concerned and involved PAC members from across our nation. Your participation is absolutely necessary. Nothing can replace your attendance at our meetings. It shows others that we have your support, your strength, and that you are concerned and have an interest in our/your success. PAC meetings provide you with a place to discuss openly your exploitation and the exploitation of your colleagues. It may sound absurd to only discuss when we should be doing something, but this is the way you begin. Only a few members have even reached this stage. We are ready to do something but we need your help. We are too few.

Our members, that's you, have been cultured by an engineering education, engineering training, and years of engineering experience. Now, using your knowledge and experience, you can identify and select the problems that you want to solve. If you have been fortunate to run any engineering projects you already know that problems always arise. You have learned to anticipate them and you prepare to deal with them before they happen. If you have any doubts about a problem's solution you take a parallel path. You prepare a project outline, a schedule and you work with others to assure project success. When a problem does arrive, you just push harder and you solve it.

Social problems and professional problems are, in reality, not much different than technical problems. It takes team work and effort to solve them. In that light, you see, you already have experience in selecting the problems to be solved. You can identify problems and the order of their importance. What you lack primarily, is the teamwork and not the ability. As an individual, you can do only so much, but as a team you can and will accomplish much more.

A PAC provides you with a place to meet, a forum for discussion and for action. It is presently, the most effective tool available to you. PAC is your team. All you must do is use it. The "C" in PAC means committee. Without members, there is no committee and without a committee there is no ACTION.

When we generalize and assume engineers are all from the same mold, we know that there are those among us that differ. Some engineers must believe they are on top and not on tap or at least they would like to be. They will lead our efforts. Those that believe they are on tap and not on top, may join our efforts. Something is bound to rub off and they too will also profit by this activity.

Let's use this article by Myron Tribus as a reminder of our weak points. We do not have to re-invent the wheel or discover fire. All we must do is, as an athlete does, concentrate on toning up our soft spots. We must use our existing components, tools, experience, knowledge and methods to make accessable the levers necessary to move objects, be they mountains or men. These levers are available. Some of us already know what and where they are, and we have used them successfully. Others, I am sure are available.

Isn't it about time engineers became the leaders instead of the led? Wouldn't you prefer to be the kicker instead of the one being kicked? Where do you want your profession - on tap or on top?