BRIDGE

Larry Dwon
Philadelphia...

OYEE AWARD DINNER

by Irving Engelson
Chairman Award Organization Committee

1987 marked the 52nd anniversary of the Outstanding Young Electrical Engineer Award. The awards banquet was held at the Union League in Philadelphia. William E. Murray, a member of the Award Organization Committee, was Master of Ceremonies. The keynote address was presented by Emerson W. Pugh, 1988 President-Elect of the Institute of Electrical and Electronics Engineers, Inc. (IEEE). Dr. Pugh’s address, titled “Proud to be an Engineer,” stressed the importance of technological currency and continuing education to engineers. He asserted that “the rapid pace of technology has forced engineers to expand their knowledge or to lose out to more recent graduates. International technological competition has made the market for technologically current engineers more attractive and in some cases made the opportunities for less current engineers less attractive.” He also emphasized the significant role engineers must play in public policy issues as he said, “as engineers we are uniquely qualified to understand these issues. As citizens we have an obligation to participate in social activities and public forums to help correct these problems. I am optimistic that we can and will. My optimism stems in part from the enthusiasm, dedication, engineering excellence, and breadth of interest exhibited by so many young people who are entering the engineering profession. Exemplary among these are the young electrical engineers who are being honored today.”

The Outstanding Young Electrical Engineer Award for 1987 went to James G. Frohlich, account development representative at IBM Corporation in Seattle, Washington. Mr. Frohlich was recognized for his contributions in manufacturing technologies, his accomplishments in music and his contributions to meeting human needs.” Honorable Mentions were awarded to Dr. Nader Mehravari for his contributions to the field of communications and his participation in church activities and professional societies and Mr. Stefan A. Siegel for his “achievements in electronics, his involvement in the arts, and his contributions to human welfare.” Five engineers were recognized as Finalists: Mary C. Bertrand, Daytona Beach, Florida; Charles B. Dieterich, Princeton, New Jersey; Kenneth B. Donovan, Daytona Beach, Florida; Patrick R. Trischitta, Holmdel, New Jersey; and Matthew R. Wordeman, Yorktown Heights, New York.

The awards were presented by Dr. Harold K. Knudsen, 1988 President of Eta Kappa Nu, Mr. Howard H. Sheppard, Past President of Eta Kappa Nu, and as photographer for the event. Mr. Sheppard has demonstrated his excellent photographic talents during many past banquets. The banquet was expertly planned by the Recognition Dinner Committee under the Chairmanship of Michael R. Hajny.

Other members of the audience were composed of the Eta Kappa Nu Board of Directors, leaders from industry and academic, and members and friends of Eta Kappa Nu. Included in the audience was Mrs. Ethel Williams, HKN staff member at its past Headquarters in Urbana Illinois and Mrs. Trudy Hudson, wife of the late Eta Kappa Nu Executive Secretary, Paul K. Hudson. Mrs. Hudson was presented with a certificate in honor of her late husband’s contributions to Eta Kappa Nu in particular, the Outstanding Young Electrical Engineer of the Year Award.

At Top: Winner, James G. Frohlich is shown at the podium
At Bottom: Mr. Frohlich and wife hold the inscribed silver bowl upon which his name has now been placed with those of previous winners
The Photo above shows Philadelphia’s historic Union League which served as the site of the 1987 OYEE Award Program.

At the top of page 5, HKN President Harold K. Knudsen congratulates Winner, James G. Frohlich while Eminent Member William Murray, Master of Ceremonies, applauds.

At bottom of page 5, Mrs. Gertrude H. Hudson receives IEEE Certificate of Appreciation honoring her late husband, Paul K. Hudson, who served as Executive Secretary, Eta Kappa Nu, from 1958 until 1988. The certificate is being presented by Eminent Member Donald Christiansen, Editor and Publisher, IEEE Spectrum.
Photos on this page show Finalists receiving certificates from President Knudsen. At top left, Mary C. Bertrand. At top right, Charles B. Dieterich. At center left is Kenneth B. Donovan, and at center right Patrick R. Trischitta. At bottom right Dr. V. Sadagopan receives recognition certificate for Matthew R. Wordeman.

Photos on page 6 show President Harold K. Knudsen with Honorable Mention Winners. At top, Mr. Stefan A. Siegel and at bottom, Dr. Nader Mehravari.

Photos on page 8 show a variety of scenes which illustrate the atmosphere of good cheer which permeated the entire OYEE event.
LARRY DWON . . . 
VOLUNTEER

by
J. Robert Betten

Editor's Note: This article has been written as a SALUTEd to a man who has been one of the strongest volunteer workers for this Association that Eta Kappa Nu has known during the past fifty years and one of the most prolific contributors of articles appropriate to the BRIDGE. It is simply common knowledge, that if you need help or if you want something done that requires that extra-mile effort, there is definitely a man "out there" that you can count on. If you ask him, he will do it, and if he does it, he will give it his best. His name is Larry Dwon.

INTRODUCTION

Larry Dwon has dedicated his life to the service of others. Much, but not all, of this service has been through the workplace, the professional societies, such as IEEE, and through the honor societies, principally Eta Kappa Nu.

He has chosen to personally undertake a mission to improve the working environment of engineers, whom he describes as the nation's special class of knowledge workers. He has been pursuing this mission as a working technician, engineer, manager, teacher and consultant and also as a volunteer in many organizations. There is little doubt that Larry is widely known for both his written and spoken word.

For his long and dedicated efforts in behalf of his fellow engineers, it was announced in December 1988 by the IEEE United States Activity Board, USAB, that Larry had been selected as the first recipient of the new "Literary Award Furthering Engineering Professionalism." The citation states that he was chosen for his "Substantive literary contributions to power and utility-oriented publications as well as to IEEE, honorary society and other publications destined to be read by the engineering work force and students. His lifelong concern for engineering professionalism is reflected in his writing."

When the BRIDGE was made aware of this recent honor, it was decided that a feature article about Larry was in order. Although a touching earlier tribute to Larry was voiced in BRIDGE by Roger J. Wilkinson, the Founder of the Outstanding Young Electrical Engineer Award (OYEE), that article was printed over thirty years ago, when Larry was serving as Vice-President of Eta Kappa Nu. Some of the material here was gathered from Mr. Wilkinson's story about Larry, and some from Larry, himself.

If you ask Larry, he will describe himself as a maverick and a waveraker in a world that would like to avoid waves, and he freely confesses that there are those who view him as a trouble-maker ... to which those who know and love him smilingly reply in today's vernacular, "Nahah!

In the pursuit of life and careers within its span, there have been many ethical and professional issues that have captured his interest and corresponding support. Few engineers have been as concerned about these issues as has Larry. He has taken interest in a historical statement by Thomas Payne who in 1776 wrote, "A long habit of not thinking a thing wrong often gives it the superficial appearance of being right." Rather than adopting an apathetic attitude or conforming to practices which he sincerely believes to be in error, Larry has chosen to take a stand and fight for what he believes is right, particularly in the area of career-affecting practices.

Larry says that through experience, he has learned that fighting issues is a two-edged sword: consequences and rewards. The consequences arise immediately, recognition comes much later. Successful waverakers also gain wisdom with age. They learn that a decision can be controlled, but the consequences of that decision are neither predictable nor controllable. Therefore, they must fight unpopular issues persistently and always from a solid factual base.
He believes that while it may be true that nonconformists fighting issues in a bureaucratic environment will not be loved by the hierarchy, actually there are more living persons in a hierarchy than those who may not be pleased, and who may be temporarily in control. The chances may be high that a waveraker would be ostracized by the “in-group” in some environment, and all of them. Larry’s experiences prove the point.

Larry believes that one never loses an honest fight unless he quits. He believes that right always overcomes wrong, and that in the long run awards for such efforts include public esteem and peer recognition, which are very satisfying personally and have long-lasting benefits.

Larry Dow was a great man. He held a Ph.D. degree from Stanford University in 1965 and a Bachelor of Science degree from the University of California in 1938.

EDUCATION BASIC TO SUCCESS

Roger L. Wilkinson, the highly respected member of HKN mentioned earlier, began his HHIDGE biography of Larry Dow, this way: “There is a well-established character which will make itself known in any environment. Some students of sociology hold that in the process of socialization, individuals learn to develop the traits of the group, even more determined and dedicated leaders are created. These are the East-Side of New York City produced George Gershwin, and upper East-Side’s Yorkeville gave us Louis Gehrke, the important product of Yorkville, home of the Dead End Kids, is Larry Dow.”

Born in 1913 of immigrant Polish-Ukrainian parents, Larry Dow graduated from Stuyvesant High School. He pursued the scientific course which he had been interested in since he was a child. He had a passion for physics and mathematics, and he excelled in these subjects. He was elected to the Aristocratic Society, displaying a predisposition for involvement, he was elected to the Class Class of 1935. He was co-editor of the school’s math survey and member of the Algebra Team which competed with other high schools throughout the city. After school he played basketball with the Normans, a team that competed among the city’s many neighborhood settlement houses. He also was a very skilled street single-wall handball player.

Larry was admitted to Cooper Union, a free college in the New York City, known for its high admission requirements. He chose instead to enter Cornell University. He received a four-year tuition-free scholarship and a New York State Board of Regents scholarship. Working as a janitor for one year, he was able to graduate with a Degree of Electrical Engineering, in 1935. Again, as in high school, scholarship and extracurricular activities were not my priority objectives in college. Kaipa Kappa of Eta Kappa Nu initiated him in 1934. He also was Chairman of the AIEE Student Branch and a member of some student professional organizations.

At Cornell, Larry also was in charge of the Engineering Show in his junior year. He participated in stage lighting activities in the Cornell Dramatic Society for four years, and was made Master of Lighting in the senior year. Very few engineering students ever participated in this Liberal Arts-dominated activity.

Upon graduation, thre at Cornell, he was offered a position at Cornell, but he declined. In 1942, he attended an advanced Electronics Program at Harvard. In 1946, he completed an evening MBA program at New York University Graduate School of Business Administration. In 1952, he attended a summer program in Executive Training at the University of Michigan. His latest studies include computers, word processing and desktop publishing.

BROAD WORK EXPERIENCE

Upon graduation, three years at Cornell, he was offered a position at Cornell, but he declined. In 1942, he attended an advanced Electronics Program at Harvard. In 1946, he completed an evening MBA program at New York University Graduate School of Business Administration. In 1952, he attended a summer program in Executive Training at the University of Michigan. His latest studies include computers, word processing and desktop publishing.

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Therefore, the time arrived which required drastic measures toward engineering education, he spontaneously turned to Larry.

Between graduation and AEP Service Corporation, Larry worked with Diehl Manufacturing Company designing electric motors and Holophane Lighting Inc. designing lighting equipment and systems. During World War II, he was on leave of absence, under contract with the Office of Science and Research Development, ORSD, first at Harvard Radio Research Laboratories, Cambridge, Massachusetts, and then at Bell Telephone Laboratories in New York City.

To supplement income in the era when employers were really underpaying engineers, Larry taught electrical engineering at Pratt Institute and Polytechnic Institute of Brooklyn in their evening programs. As a matter of fact, teaching is Larry Dow’s profession. He has done so in industry and educational institutions. Today he still teaches in the Industrial Extension Service of the Engineering College at North Carolina State University. His title is Consulting Instructor.

Larry recalls that in the 40 years with AEP, he was able to perform successfully as an electrical and illuminating engineer. He was one of three engineers selected by Philip Sporn to hold a management position, conference chairman of AIEE and titled Operating Sponsor. After three years, Larry personally was responsible for getting this position abolished. Later, Larry was appointed Associate Director of AIEE Summer Meeting in 1965 and selected Executive Vice-President when the former (Larry’s best boss ever) person retired. Two years later, Larry again convincingly the new Executive Vice-President, Operations, that the administrative assistant position should be used as a training position rather than a permanent dead-end career stopper.

He believes that the timing was then right for his and the board’s satisfaction at AEP. As he viewed it, much of the engineering leadership was going down the science-analysis and mathematical manipulations tube and away from practice and synthesis. Philip Sporn became the second president and he received the credit the they perceived had been done to electric power education by an educator-dominated system. After making some attempts to halt the trend, he turned to Larry, when he concluded that a very important issue for Larry to address was AEP, and said, "Larry! You have to do something!"

Mr. Sporn liked Larry’s proposal and signed it. With that stroke, all matters concerning engineering, technologists and technicians dealing with college relations, recruiting, training and development, including salary and manpower utilization studies, were transferred from the personnel to the engineering departments. This was a very important issue for which Larry had fought for a long time. Under his super-

union, he was named Engineering Manager. In 1978, the Assistant Vice-President, Public Affairs, began a retirement article this way: “Larry Dow retired April 20 after 40 years of service with AEP Service Corporation. But he’ll not be forgotten. He left behind an engrossing legacy that will continue to be felt for years to come, wherever electric power engineering is taught or practiced.

As a management engineer, Larry Dow was an electric powerhouse for the AEP for the past 22 years, the first and only holder of that assignment. Dow looked past the end result—the attraction of literally hundreds of newly graduated engineers who chose to make their professional lot with AEP—and saw the bigger picture. His crusade, since 1955, was to change the direction of engineering education in the nation’s universities, to get them away from their love affair with overspecs, electronics and computers and into something solid, like electric power.
In Eta Kappa Nu, he continues to serve responsibly on the Outstanding Young Electrical Engineers’ Committee. He is a historian and a contributing editor of the BRIDGE.

VOLUNTARY INVOLVEMENT
Superintendent positioned as an external reader of American Power Systems and Apparatus; and the latter was published in the BRIDGE. Both papers were published with the help of their respective educational community and support to the society the articles were based on, the results being methods in AIEE/IEEE, EKN, HKN, ECPD, ASEK EK, EIC, and other organizations. He served on numerous committees, and was a chairperson of many of them. In the process, Larry conceived new activities that have been implemented, for instance:

- Power Engineering Education Committee of the Power Engineering Society
- Edison Electric Institute’s Power Engineering Educator Award
- EIEE-AIEE Educator-Industry Annual Dinner
- Hickernell Student Award of the Power Engineering Society
- IEEE Student Branch Counselors’ Award
- Eta Kappa Nu Regional Visit Program
- Eta Kappa Nu Distinguished Service Award

As part of this involvement, Larry has had published over 300 articles and papers in various journals and magazines. An overview of Larry’s major activities and involvements follows:

Pre-college Engineering Guidance—For over 20 years, Larry participated in guidance programs of New York and New Jersey Engineers’ Guidance Committees. His approach, contrary to others’ views, was to give students factual information and not as a recruiting mission. Many published papers resulted from this effort. The report that went to the heart of this issue was titled, “Engineering and Engineering Technology Guidance: Critical Needs, Program, and Position.”

Engineering and Technology Education and Accreditation—For many years, Larry was an outspoken critic of the trend in engineering education that followed World War II. He disputed the beginning the wrong reasons given for the creation of the Technology programs, but especially incorporating in its name the term engineering. He considers this to have been an unethical and unprofessional act without proper industry guidance.

When he was told, at an annual ASEE meeting, to keep quiet because he didn’t know what he was talking about regarding accreditation matters, he spent one solid year researching the facts as far back as the beginning of ECPD, in 1952. This effort produced two detailed papers: “Power Systems Education and Accreditation: An ASEE-ECPD Educator Dominated System” and “Some Truths About Engineering Technology Education and Accreditation.” Neither paper would ASEK publish, so the former became a Trans- action paper in Power Systems and Apparatus; and the latter was published in the BRIDGE. Both papers were published with the help of their respective education community and support to the society the articles were based on, the results being methods in AIEE/IEEE, EKN, HKN, ECPD, ASEK EK, EIC, and other organizations. He served on numerous committees, and was a chairperson of many of them. In the process, Larry conceived new activities that have been implemented, for instance:

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Drifting Around the Kingdom
Part Two
A Lovely Old Romance

by
Paul K. Hudson

EDITOR'S NOTE: This article was prepared by Paul Hudson just before his death. We felt it appropriate to include it in this issue. Other articles prepared by Paul for future issues of the Bridge are on file in the Bridge Office and will be used at later times.

The Viking Hotel in York is the only four-star hotel in town. It is plain in some ways—the lobby is small and not very elegant. However, the dining rooms and sleeping rooms leave nothing to be desired. But over and above all of that was the fact that we were treated like royalty. It was not until we were there a couple of days that we discovered the reason.

The hotel has 185 rooms. A hotel employee explained to me that in the summer time 180 of them are assigned to the "tour people" and the other five are for the "privates." I asked, "Who are the privates?" and was told, "You are one of them. Privates are people who are not on a guided tour. You are the only one that we have had in a long time that stayed with us so long. Most of the privates stay only one night or two." So we were getting the royal treatment because we were going to stay long enough to see, enjoy and appreciate their town. They respected someone who would do that, especially since they were so rare.

The tour people are mainly Americans who have bought guided tours around Great Britain. They arrive at the hotel in tour buses in the late afternoon, have dinner, sleep a little, and then present themselves in the lobby at 7:00 AM the next morning to ride on the bus all day another day, seeing things as they drive by if they bother to look. They are a sorry lot—going around dead tired and half asleep most of the time. They are led into the dining room in single-file and seated at single-file tables like prisoners, which in a way, they are. They sit there looking down at their plates without saying anything until the meal is over, and then drift back to their rooms. They do not give the hotel any trouble but I could see that the hotel employees did not think much of them. One day a porter said to me. "What do you think of these tour people?" I replied, "They are good people—they have worked hard all their lives and saved a little money—they just wanted to take a nice trip before they died but felt too insecure to do it on their own so they got suckered in on one of these stupid guided tours. The brochure of the guided tour told them that they would stay all night at the lovely Viking Hotel in York, visit the York Minster Cathedral, the National Railway Museum, browse in the shops of the Shambles, walk on the walls of the town, and enjoy dozens of other interesting things." The Porter laughed. He knew
their time was too short for them to do any of those things. Even if they had bothered to walk into town after dinner they would have found the York Minster, the Railroad Museum, the shops in the Shambles, and the dozens of other interesting things closed for the day. When they got back to America they likely told all their friends that they had seen the historic city of York, whereas, in fact, they had not seen anything except a dining room and a bed room.

For me, the most important attraction in York after the Minster is the National Railway Museum. It is really something special and I doubt if there is another one anywhere in the world of equal importance. The reason, of course, is because Great Britain is a railroad country. It is my guess that 90 percent or more of all commercial domestic travel is by rail. Trains leave about every hour from any city to any other city, and the long-haul trains are very fast. We rode one from London to York—a distance of close to 200 miles—and the ride lasted exactly two hours. Since we had to go slow in London, York and other places where the track was not so good, it is easy to see that the normal speed was about 125 miles per hour. When the train entered a tunnel it was just like a piston in a cylinder. The instant build-up of air pressure was so great I thought my ears were being blown out.

On one occasion the train stopped in the middle of a tunnel. I presumed it had been stopped by the block signals and that it would start again very soon, but I still had a moment of panic anyway. I am not afraid to die—everyone must do it—but I just do not want to go that way. The greatest disaster in the history of railroading occurred when a train stopped too long in the middle of a tunnel. All of the several hundred people on board were killed in a matter of a few minutes by the carbon monoxide from the engine stack. Just as I was about to dash for the door, the train started again.

Railroads have been one of the great and lasting loves of my life. I feel like Edna St. Vincent Millay when she wrote:

There isn't a train I wouldn't take
No matter where it was going.

My father was a railroad man all his life and so I grew up riding trains free on passes. He was the Foreman of a small engine yard. It was the yard that was small, not the engines. When I was just a little boy he allowed me to play on the engines. One day when I was about 14 years old he said to me, "Would you like to run this engine down to the engine pit?" I just stood there dumbfounded. It was like the Saviour saying, "Would you like to go to Heaven?" No one can ever know the joy that went through the mind and soul of that 14 year old boy when, for the first time in his life, he pulled the throttle back on a steam locomotive and then felt the giant tremble and start to move under his feet.

It was not long after that that I became overconfident and my father pulled the rug out from under me. I knew how these engines worked and I could run them. I was something very, very special. But one day we were together in a cab and he started pounding on the engine with a small sledge hammer. "What are you doing?" I asked. He replied, "This steam injector is stuck open and I am trying to get it shut off." I was struck with terror by the thought that I might be alone on an engine, start to put water in the boiler, and the injector would stick open. What in the world would I do. I did not know how and where to hit it with a sledge hammer. From that day on my respect for my father became very great. He was a real man's man with a great talent, well liked and respected by his co-workers.

When I was about 20, I had the opportunity to reciprocate, but was not successful. One day a very large engine came in and people were discussing what its horsepower might be. I said, "If you really want to know, I will calculate it for you." Quickly I checked the cylinders, length of stroke, pressure, etc.
The picture above shows the royal dining room as converted in 1842 with loose chairs. Until this date, this end too was furnished in like manner to the view on page 19. The former fixed-seat positions are marked by plain wood panels on the sides and the ends.

and with an equation I had learned in a Heat Engine course at college, I told them the approximate horse-power. They just stared at me without saying anything. It was clear they did not believe me. I didn’t think anytime after that to tell my father that I really had calculated the engine. He died sometime later so the matter is closed.

In their early days, railroads captured the imagination of the people just as airplanes did later. Many songs were written about trains and the people who ran them. Most lasting I suppose was Casey Jones:

Come all you rounders if you want to hear
The story about a brave engineer
Casey Jones was the rounder’s name
On a six-eight wheeler boys he won his fame
etc, etc.

Then there was the one called Mountain Railroad.
Life is like a mountain railroad
With an engineer that’s brave
You must make the run successful
From the cradle to the grave.
etc, etc.

Sounds corny now but those were different times and mountain railroading was a very dangerous business. I thought about that several years ago when I was on the San Francisco Chief, going over the Donner Pass between Sacramento and Reno. That area is a real mountain wilderness. Near the top of the pass we started going through huge snow sheds one after another. I had never before seen anything like them. I was told that in the wintertime auxiliary engines, all heated up and ready to go, are stationed there to be used to rescue trains that become stranded in the mountains.

Finally, there was the song about the wreck of the Royal Palm and the Ponce de Leon, two luxury trains that smashed into each other down South somewhere. Years later I had the pleasure of riding on the Royal Palm but by then it was not the class train it once was. Even today trains are still named as well as numbered, and I always thought it beautiful when a train was named for a person. One day I was standing on the platform of Central Station in Chicago when the train announcer’s voice came over the loud speakers, “Attention please, train number twelve, the James Whitcomb Riley is now arriving on track one.” I said to myself, “There can be no other honor and joy in the world as great as having a crack passenger train named for you. Like Faust, I might be willing to sell my soul to the Devil for that honor.” I would be glad if they named a freight train with six flat wheels and a hot-box for me.

I have been on quite a few trains that hit things but have never been on one that left the rails. In railroad parlance that is called “putting the city on the ground.” However, I have been on two trains that broke in two during the run. The first one was the Broadway Limited. I woke up in the middle of the night and noticed that the train was much too quiet. Among other things, the ventilator fan in my room was turned
off. I went out into the hall and asked the porter what was wrong. He replied,
"They done left us."
"Who done left us?"
"The engine and first five cars. They will miss us pretty soon and come back and get us. I turned off your ventilator so your room would not get cold."
"Is the block system working?"
"Yes, of course."

"Have flames been set out?"
"Yes, don't worry, we will not get hit by another train."
I went back to bed and went to sleep.

The wonderful railroads that we once knew were not destroyed by the airplanes but by powerful, irresistible and regrettable human forces. Still, the love affair—the romance—that I have had with them, which began when I was a little boy, will continue undiminished until I am finally gone.

These memories and many others were in my thoughts as I walked through the great railroad museum at York. I knew about most of the ancient engines on display, but many of the cars were completely new to me.

I had several thoughtful moments about one passenger car. It was a third-class car and was nothing more than an open flat-car with three-foot sides, and benches for people to sit on. They must have been really miserable out in the open wind and with cinders and smoke from the engine smoke-stack blowing in their faces. But for me the most interesting cars were the ones that were built for the English Kings and Queens—especially the one for Victoria. They were real palaces on wheels. I have seen several private cars in America but none were in the class of the royal cars of England. I suppose one of the reasons is that each of the railroads in England builds a royal train and there is competition in seeing who can build the best one. (See also, photos on pages 22-24.)
Photo above:
Victoria Regina, and no doubt about it—the principal day compartment of the Queen's saloon, furnished entirely to the Queen's choosing and exactly as she last used it in 1900.

Photo page 22:
Expanded view of Queen's writing-table, located at the left corner of the Queen's day compartment.
Latter-day simplicity — the King’s and Queen’s day compartments and the Queen’s bedroom of the 1941-built LMS saloons 798, 799.