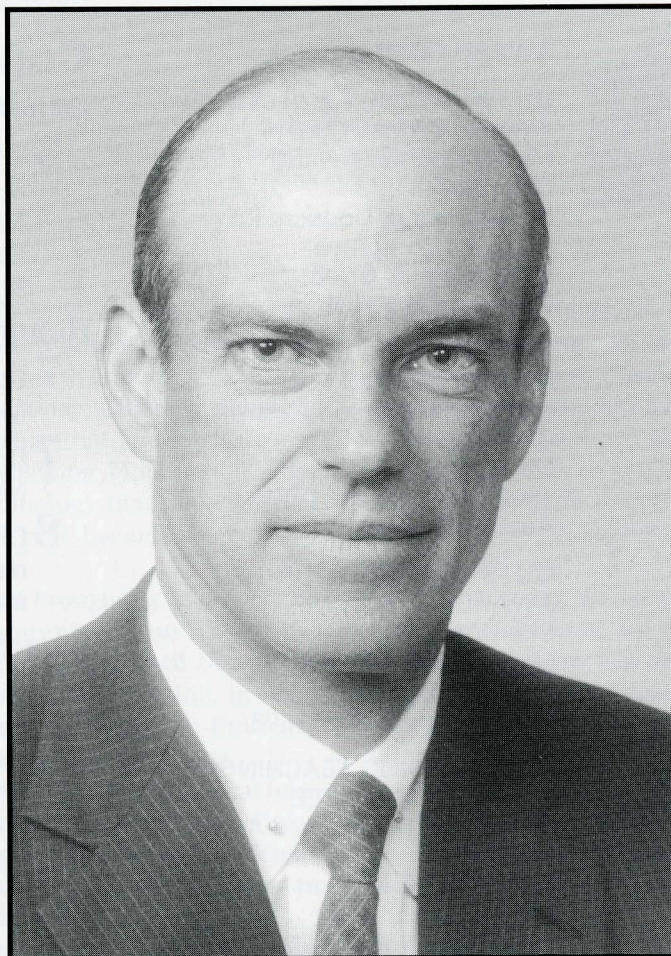
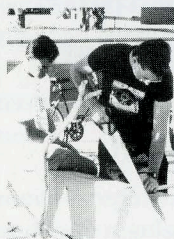


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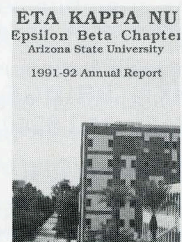
**William T. Esrey, Chairman and CEO, Sprint**  
**FEATURE ARTICLE: 'Information Highway' (See page 3)**



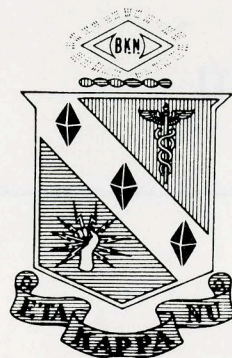
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**New Mexico State's Honorable  
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**Contributing Editors**  
**William T. Esrey**  
**Alan Lefkow**



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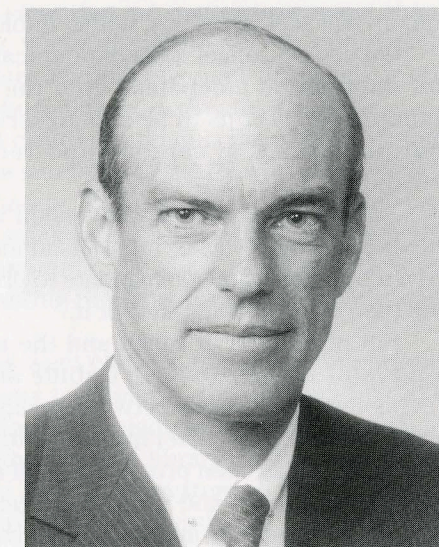
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**Many thanks to each chapter.**

# **INDUSTRY PERSPECTIVES**

## **"Information Highway: Misconception and Reality"**

by  
**William T. Esrey**  
**Chairman and CEO, Sprint**



*Editor's Note: This paper is a complete transcript of the talk entitled "Information Highway: Misconception and Reality" presented by Mr. Esrey at the Information Industry Luncheon, National Communications Forum (NCF '93), held in Chicago, Illinois on September 27, 1993 and sponsored by the National Engineering Consortium, NEC. It is printed here with the permission of Sprint and the NEC.*

Thank you and good afternoon. I appreciate the chance to talk to you this afternoon and I thank Tom Farmer from Sprint for asking me to attend.

As I began to prepare for today, I thought about all the different types of technology that you in this room have played a vital role in developing. More importantly, I began to consider how technology that once seemed so fascinating, so new, so different, became so everyday so quickly.

It is technology which has brought us to where we are today in the development of our industry. Technology, and its application, has until this point defined how companies view themselves and, in turn, how they are viewed by customers, by the financial community, by the competition and by the media.

Today, you are a member of the team at a local telephone company—a long distance company—a cellular carrier—a cable television programmer or broadcaster—or a computer manufacturer. Each, a business which has always been defined by its technology.

But how long will we be able to cling to those old labels? Let's take a look at just a few of our industry's headlines from the last few months.

AT&T expands into wireless with the acquisition of McCaw Cellular.

U.S. West acquires 25 percent of Time Warner's entertainment division to enter the multimedia field.

TCI, the nation's largest cable television operator, will invest \$2 billion to build a fiber optic infrastructure that can carry voice, video and data.

British Telecom will buy 20 percent of MCI and assume management control of MCI's international business.

Pacific Telesis splits its company into two components—regulated and unregulated—to better compete and ease regulatory burdens.

Southwestern Bell and Bell Atlantic are entering the

cable television business.

And, at Sprint, we merged with Centel, expanding our local exchange business and becoming a large participant in the cellular business.

In just the past two years alone, announced mergers and acquisitions in the telecommunications industry amounted to more than \$45 billion. That's more than all the mergers—put together—in the previous 70 years in our industry.

It's clear that we, as an industry, are at a crossroads. Looking backwards, we can clearly see the definitions of what a company was and who a company served.

Today, increased demands from customers, non-traditional competition, opportunities for domestic and international alliances and partnerships, and the ever-present march of technology represent our present.

**But, how will we be defined in our future?**

Our industry is evolving at an accelerating pace. For example, just last week, the FCC allocated spectrum for PCS—responding to customer demand for more wireless spectrum.

The wave of partnering and forming alliances taking place adds further evidence that we are fundamentally changing. As our industry takes those first few steps not only into partnerships, but partnerships outside our traditional lines of business, the rest of the world must be sitting back and saying, "What are they doing?"

What we are doing is redefining our industry—either because our customers are demanding it, or because we as an industry are anticipating future customer's needs. The rhetoric of being "customer driven" must now be matched by evidence of that dedication—with new products, new services, and new arrangements that clearly show the customer we understand his business, not just ours.

The labels which identified a company by the technology it offered have no place in a future in which cus-



tomers will seek solutions, not technology.

We are no longer telecommunications companies, but information companies. And the customer of the future will expect us to be able to serve all of his information gathering, sending and receiving needs—whether by voice, data or video.

Nobody is saying this conversion will be an easy or inexpensive one. This is, after all, an industry which was driven by a monopolistic mandate to produce technology and then go make a market for it.

But our world of today and the needs of the customers of tomorrow won't abide such a paradigm. Technology differences between companies will continue to narrow. And listening to customers, something this industry has been promising itself it will do more of, will become more and more important for companies who want to not only survive, but thrive.

In his book, *Future Edge*, Joel Barker describes how the Swiss watch industry went from number one in the world to a near also ran in the relatively short space of 12 years.

Barker reports that in 1968, the Swiss watch industry sold 65 percent of the world's watches, and employed 62,000 watchmakers. About that time, the research institute in New SHAT el, Switzerland invented the electronic quartz movement found in today's digital watches.

Here was a watch that didn't have a mainspring, didn't need bearings, required almost no gears, was battery-powered **and** it was electronic.

The Swiss watchmakers rejected the idea. It couldn't possibly be the watch of the future.

In an ironic twist, they were so sure of their conclusion that they let these same researchers showcase this "useless" invention at the World Watch Congress that year. One of those attending the Congress was a company called Seiko. I think you can guess the rest of the story.

By 1980, twelve years later, Switzerland's market share had dropped to less than 10 percent; 50,000 of those 62,000 watchmakers lost their jobs. The Swiss watch industry clearly thought it knew more than the watch-wearing public. That industry placed a higher value on the processes and mechanics required to make the watch, while the customer placed a higher value on the purpose of that watch.

Fundamentally, businesses must raise and answer the question, "What business are we in?" No doubt I would be sharing a different anecdote today had the Swiss carefully answered the question, "Are we watchmakers or timetellers?"

Sony—a company whose success with products like the Walkman, is the stuff of legends sprinkled throughout books about businesses who "do it right"—had one of the most legendary flops in electronics when its Beta Video Cassette Recorder was quickly passed and soon lapped numerous times by JVC's VHS system.

Sony's Beta systems produced the kind of picture quality which made the company's televisions the gold standard in the industry. But the marketplace was willing to concede a little picture quality for the ability to record an entire baseball game—or, perhaps, *The Sound of Music*—on one tape. Sony had misread the needs of the marketplace.

When the company announced in 1988 that it was going to unveil a line of VHS videocassette recorders, the president of the company's American Consumer Video Products division said, "We would like to continue to be a technology company, offering products that create new markets."

"But we cannot ignore the desires of the existing market."

That's a good lesson for us as well. While Sony was focused on its technological superiority, the marketplace was seeking something different.

#### **And what of our customers?**

Customers want to be able to turn to one communications partner for all their needs worldwide; be they voice, data or video.

Much as we, a traditionally-individualistic industry, would like to believe we could handle it alone, it is becoming clear that we must embrace and champion the value of teamwork to meet this identified customer need.

The right alliances offer insight, knowledge, skills and, yes, technology, that simply can't be developed independently. And the right alliances also offer synergistic cost savings as well as avoiding duplication of capital expenditures.

Partners can offer understanding and guidance about local customs and regulations. And, as we continue to see more and more integration within the information industry, alliance partners offer skills in industries which we know are important to our customers but fall outside of the skills we bring to work each day.

Alliances that fail—and the landscape is littered with them—all seem to share one thing in common. They are an alliance in name only. Each company continues to "do its own thing" while the new and exciting solutions that the marketplace had hoped for never materialize. Failed alliances are those where the partners can't shake the labels they grew up with.

Successful alliances are those in which the partners go in with a goal in mind to which they can both actively contribute.

At Sprint, we have always thought that Motorola was a company who knew the marketplace extremely well. They were, after all, the company that first introduced the idea of putting a radio into the automobile. Many in the automobile industry scoffed. The driving public—the only audience who really mattered—thought it was a marvelous concept.

Motorola's Iridium project is also such a concept. Sprint is a partner in this initiative which will establish

by 1998 a global satellite communications system that will allow customers to call or be called anywhere on earth, any time. The system will use hand-held, wireless telephones that communicate directly through a network of 66 low-earth-orbit satellites and gateway earth stations interconnected with the public telephone network.

We expect this alliance to be successful because each partner is bringing unique, necessary skills into the relationship. And, most importantly, it is an alliance born of a marketplace need.

Customers also want immediate access to enough information to fill a street lined with libraries. And they want to be able to get that information without the traditional trip to the library.

We are all part of a society which is undergoing a mass digitization of content in the libraries of this world. Connecting interested parties to this information is where our industry comes into the picture.

In his recent book *Life After Television*, George Gilder, who can frequently be found in the pages of *The Wall Street Journal* and *Forbes*, says that three inventions—three pieces of technology—have transformed the way information is sent. In the late 1940s, it was the transistor. In the late 50s, the microchip. And in the late 1970s, it was fiber optic cable—something we at Sprint took a nationwide liking to.

It is these developments, Gilder believes, which have shifted the influence away from the outlet sending the information and into the hands of those on the receiving end. As a result, he says, individuals now possess greater control over what information they receive.

Gilder sees a time in the early part of the next century when the majority of North America and Europe will be linked into interactive fiber optic networks that will put more control into the hands of information senders and receivers. The infrastructure of such networks, according to Gilder, will consist of information providers, television and entertainment systems, audio-video telephone service providers and mobile access providers.

Many believe in the same vision as Gilder; a vision which represents more than an expression of imagination, but one which represents a fairly authentic view of the world in which we will someday all reside. But if that vision is to come about, it will take more than the imagination of an author to make it happen.

Our current attempts to address this opportunity to interconnect the users of networks seem to me to be a response driven by our technological skills and regulation, not our marketplace savvy. Nowhere is this more evident than in the cable television industry.

Predictions for the very near future estimate that there will soon be many cable systems offering more than 500 channels to choose from. Many think this is answering an expressed customer desire for more choice.

But, it is also clear that, no matter how many channels are available, you will still be able to only watch one thing at a time. You simply can't drink any more water out of a firehose than you can out of a straw.

I believe what customers want is the ability to come home and flop down in front of the television and watch *Gone with the Wind* at 7:12 p.m., when their dinner is over. Or check a stock price in the middle of the night during a fit of insomnia. Or get a quick golf lesson moments before hitting the links for 18 holes with their boss.

Yes, customers want choices, but—more importantly—they want *access* to choices—not 500, but 500,000! That implies an electronic highway from the individual customer to a huge, digitized library or libraries, and a not yet developed integrated system to hook the two ends together, simply and effortlessly.

Customers also want to deal with companies who respond to their needs. Those companies are ones which hire, train and keep the right people. Our industry has prided itself on creating technology which lessens the need for people.

While maintaining cost competitiveness is important, it cannot be our sole agenda for the future. For it is our **people** that will help customers identify the optimal solution that will best serve their needs now, and ensure that their needs are continuing to be met in the future.

It is clear to me and my associates that Sprint must hire Olympic athletes, not galley slaves. Olympic athletes are individuals who not only understand the company's goals, vision and values, but exude those qualities in everything they do.

It's like a favorite story of mine about a fellow who walked by three bricklayers, hard at work. Approaching the first one, he asked, "What are you doing?" The bricklayer replied, "I'm putting together these bricks with mortar."

A little further on down the wall, he posed the same question to a second man. He replied, "I'm building a wall. And it's going to be a big one."

His curiosity further piqued, he approached yet another man working on the job and asked him what he was doing. The man looked up, beamed with pride and said, "I'm helping to build a great cathedral. It's going to be called Notre Dame and it will be the most magnificent cathedral in all the world. People will come from everywhere just to see this beautiful cathedral."

The latter is the type of employee we want at Sprint. Employees who understand what they are doing and understand that meeting customers' needs is the most important factor in the success of the entire company. That is why one of Sprint's key core values is what we call our "customer first" focus.

Customers want to work with companies which can be innovative, yet dependable; creative, yet hassle-free, even in the face of regulation and rapid technological change.



Our industry has long been defined by how it is regulated. That regulation has truly grown from the technology in place at the time the regulations were enacted.

But today, with the RBOCs unbundling their network services, with the deployment of fiber rings, with wireless beginning to change the face of the local loop and putting downward pressure on access prices, many of today's regulations are made almost meaningless by our industry's advances in technology.

But while we wait and lobby for regulatory modifications which we feel will best suit the needs of our companies and our customers, let us remember that responding to customer needs is something we can do now. And it is something our customers do not want to wait for.

In fact, as the technology becomes more and more complex, it will become increasingly important for us to **help** our customers take advantage of our technological advances or risk losing both the technological advantage and, perhaps, our customers at the same time. The winning company will not only have the best technology, but package it in such a way that its customers only need enjoy the results.

Everyone in this room can think of some piece of technology—universally hailed by those in the know when it was introduced—that hasn't quite lived up to expectations.

Steven Jobs, the man who created Apple computer out of his garage, continues to struggle with his six-year-old company that manufactures a computer called Next. The company's first machine was expensive, slow, didn't have a color display and lacked much packaged software. It didn't even have a built-in floppy disk drive.

Why? Because the company was spending more time than they probably should have developing how the machine would *look*, instead of how it would serve the needs of the marketplace they hoped to reach.

Such an approach has proven to be so unsuccessful that the company recently announced it was abandoning altogether the building of workstations in favor of simply producing software.

And what about the residential picturephone? Long ago, we as an industry began encouraging our business customers to use video conferencing services. Yet the residential market continues to be impossible to penetrate. Why? The technology costs are too high and the quality is significantly less than what people demand.

We are, in fact, standing at a crossroads in our industry. **Are we going to live up to the expectations of our customers?** Our choice is simple. And it is our own.

Rather than insisting that the customer must become comfortable with using our technology—our tools—we are finally as an industry facing the fact that we must understand the customer's needs, wants and desires so that the "tools of the trade" become the cus-

tomers' rather than merely ours.

We will fail if we choose to continue our focus inward and hold onto a paradigm from the monopolistic days of the Bell System when customers had few choices. We will succeed if we use technology when appropriate, but not let technology for technology's sake, drive our industry.

We neither want to apply technology blindly and generically and go the way of a commodities-like industry, nor miss the opportunity of new technology and go the way of the Swiss watchmakers.

We must come to customers not with hardware, but with solutions. When looking for solutions, we will find many wonderful opportunities for expansion, partnerships, or plain old healthy competition—with the customer and his needs at the fulcrum of the entire technological process.

The role you all play in this is absolutely vital to our success. You are the ones to whom we owe a great deal of gratitude—for the technologies you have conceived, invented and implemented for the benefit of our society and the customers we seek to serve. You have helped us shape those technologies to become the most successful and highest quality telecommunications industry in the world—but, our world is changing.

Our world—the world where international boundaries are penetrated by business partnerships and relationships. A world where connecting individuals with individuals and businesses with businesses is becoming an instantaneous imperative. A world where technology means software as much as hardware.

Our world—now more than ever—insists that the technologies we share are not merely born of a desire to make better tools.

They are born, instead, from our intense dedication to listening to and anticipating the customer.

Are we to shape our tools in a manner that simply makes better technology without regard to the needs of the marketplace? Or, are we left with the inescapable conclusion that the tools we create must be first and foremost technologies dedicated to the markets we serve?

I believe, while celebrating our superior technology, we must recognize its superiority is only due to its relevance in the marketplace. In this respect, our industry—each of our companies—very much needs your help.

Help us shape those technologies to better serve those markets. Help us become partners with the customers we serve. Help us learn their business needs, so that we may better lead them to using the wonderful technologies we can offer. And, most of all, help us be an industry that continues to lead the world well into the 21st century.

Thank you for the pleasure of working with you and for the contributions you have made. And, thank you for the privilege of allowing me to share these observations and remarks with you today.

# HONORS AND ACHIEVEMENTS

## DR. IRVING ENGELSON NAMED ENGINEERING MANAGER OF THE YEAR

Dr. Irving Engelson, Director of Corporate Activities for the Institute of Electrical and Electronics Engineers, Inc. (IEEE), has been named Engineering Manager of the Year by the IEEE Engineering Management Society (EMS). According to Dr. Jack Jatlow, EMS Awards Committee Chairman, "Dr. Engelson is being recognized for distinguished management leadership of technical activities worldwide."

In his current position, Dr. Engelson's responsibilities encompass the staff support and coordination of activities of various boards and committees of the Institute including the IEEE Board of Directors, Executive Committee, Awards Board and Fellows Committee as well as a number of other Standing and Ad Hoc committees of the Board. His office is also responsible for working with the IEEE Strategic Planning Committee, and the IEEE Foundation.

Dr. Engelson, who resides in Edison, N.J., previously was Staff Director of IEEE Technical Activities and Secretary of the Technical Activities Board (TAB) for thirteen years.

In addition to his IEEE staff leadership positions, Dr. Engelson has more than 20 years of management experience in education and industry. He has lectured and published on a wide range of topics, including electrical engineering, computer simulation, brain function, technology and education.

As the 1993 IEEE/EMS Engineering Manager of the Year, Dr. Engelson will be honored during the upcoming International Engineering Management Conference in Dayton, Ohio.

## DR. GEORGE H. HEILMEIER JOINS MITRE BOARD OF TRUSTEES

Dr. George H. Heilmeier of Florham Park, New Jersey, has joined the Board of Trustees of the MITRE Corporation, located in Bedford, Massachusetts, and McLean, Virginia. Since 1991, he has been President and CEO of Bellcore, a research and engineering consortium owned by the seven regional Bell operating companies.

MITRE is an independent, not-for-profit systems engineering company engaged in scientific and technical activities for public benefit under contract with a variety of government agencies.

A native of Philadelphia, Dr. Heilmeier holds a B.S. degree in electrical engineering from the University of Pennsylvania and an M.S. and Ph.D. in solid state materials and electronics from Princeton University.

He joined RCA Laboratories in 1958, working on various electronic and electro-optic devices, and became Head of Solid State Device Research in 1966. His work with electro-optic effects in liquid crystals led to the first liquid crystal displays for calculators, watches, and instrumentation. That effort earned him in 1968 the prestigious David Sarnoff Award from the Institute of Electrical and Electronic Engineers (IEEE) and the Eta Kappa Nu Award as the Outstanding Young Electrical Engineer in the U.S.

In 1970, Heilmeier was chosen as a White House Fellow, working on long-range research and development planning and technology assessment as a Special Assistant to the Secretary of Defense. A year later, he was appointed Assistant Director of Defense R&D in charge of all Department of Defense

research in electronics, computer technology, and the physical sciences. He won confirmation in 1975 as Director of the Defense Advanced Research Projects Agency (DARPA), where he initiated major efforts in space-based lasers and reconnaissance systems, infrared technology, stealth aircraft and artificial intelligence. During his tenure with DARPA, he was twice awarded the DOD Distinguished Civilian Service Medal, the highest civilian award given by the department, and one that is rarely given twice.

Heilmeier left government in late 1977 to join Texas Instruments as Vice President responsible for R&D in petroleum exploration, systems technology, micro-electronics, and software for the company's equipment business. In 1978, he was appointed Vice President of Corporate Research, Development, Engineering and Strategic Planning, and was named Senior Vice President and Chief Technical Officer in 1983.

He has received numerous awards, including the prestigious Japan Communications and Computers Prize and three major IEEE awards (the David Sarnoff Award, Founders Award, and the Philips Award). In September 1991, he was awarded the National Medal of Science by President Bush for contributions to national security and competitiveness. He received the National Academy of Engineering Founders Award, the academy's highest honor, in September 1992, and Eta Kappa Nu's Vladimir Karapetoff Eminent Members' Award in April 1993. In May 1993, he received the Industrial Research Institute Medal for outstanding accomplishments in leadership of industrial research.

He is a member of the Defense Science Board, the President's



National Security Telecommunications Advisory Committee, and the National Security Agency's Scientific Advisory Board. He serves on the Board of Directors of TRW and is also a member of the National Academy of Engineering, Massachusetts Institute of Technology Visiting Committee, Princeton University School of Engineering and Applied Science Leadership Council, Board of Overseers of the School of Engineering and Applied Science of the University of Pennsylvania, and a Fellow of the IEEE.

**DR. N.F. SCHNEIDEWIND  
DEVELOPS SOFTWARE  
RELIABILITY MODEL**

Dr. Norman F. Schneidewind is professor of information sciences at the Naval Postgraduate School where he teaches and performs research in software engineering and computer networks. He is also the director of labs in his department. He is the developer of the Schneidewind software reliability model

which is used by IBM-Houston to assist in the prediction of software reliability of the NASA Space Shuttle. This model is one of the models recommended by the American Institute of Aeronautics and Astronautics and the American National Standards Institute "Recommended Practice for Software Reliability." The model is also implemented in the Statistical Modeling and Estimation of Reliability Functions for Software (SMERFS), a software reliability modeling tool developed at the Naval Surface Warfare Center.

Dr. Schneidewind is a Fellow of the IEEE, elected for "contributions to software measurement models in reliability and metrics, and for leadership in advancing the field of software maintenance." He was awarded a certificate for outstanding research achievements in 1992 by the Naval Postgraduate School. He is a member of the Department of Defense Software Engineering Institute Measurement Steering Committee and a member of the Defense Information Systems Agency Executive Panel on Software Metrics. He

was also Chairman of the Working Group that produced the IEEE Standard for a Software Quality Metrics Methodology, which was published in March 1993. In 1993 he was awarded the IEEE Computer Society's Outstanding Contribution Certificate "for work leading to the establishment of IEEE Standard 1061-1992, Standard for a Software Quality Metrics Methodology." He organized the first Conference on Software Maintenance in 1983. Prior to his current position, Dr. Schneidewind had twenty years experience in system and software development management in the private sector.

Dr. Schneidewind has a B.S.E.E., University of California (Berkeley); a M.S.E.E. and a M.S.C.S., San Jose State University; a M.S.O.R. (ENGR) and a doctorate, with a major in O.R., University of Southern California. He is a member of Eta Kappa Nu and Tau Beta Pi engineering honor societies and Sigma Xi research society and holds the Certificate in Data Processing (CDP) from the Institute for Certification of Computer Professionals.

# 1991-92 Chapter Awards

by Alan Lefkow

The Outstanding Chapter Activities Award Program continues to do what it has been doing since 1932, recognizing excellence in college chapters by virtue of service to their students, department, school, and community. For the academic year 1991-92, seven college chapters received awards for having an outstanding program of activities. Beta Chapter of Purdue University topped the National Winner award, the eleventh in its string of wins in as many years. Epsilon Beta of Arizona State University and Gamma Chi of New Mexico State University received Honorable Mention. Four other chapters were cited for their meritorious programs and received Certificates of Merit as up and coming chapters. They were Iota Upsilon of University of Washington, Theta Chi of University of Colorado at Colorado Springs, Zeta Chi of University of Central Florida, and Gamma Mu of Texas A & M University.

The Outstanding Chapter Award program is unique among the award programs of Eta Kappa Nu. One winning award can touch the hearts of a whole chapter. The award plaques themselves have

been made as rich as possible. The National and Honorable Mention winners receive metal plaques engraved in color. The Certificate winners receive their award laminated in walnut.

For 60 years, winning the Outstanding Chapter Award has been a source of pride and distinction. The Chapter Award committee selects the winning chapters on the basis of the annual chapter reports. The reports are received in the fall after the end of the academic year, and the judging occurs in the winter. In the spring the committee announces the winners, and the plaques are presented then.

Any chapter that sends in an annual report is automatically entered into the competition. Winning chapters invariably send in reports of distinction that do justice to their programs of activities. Many of these reports have been published in the pages of BRIDGE as examples to others. A winning report requires hard work, but then so does an outstanding program. In this issue, the Honorable Mention Reports of Gamma Chi and Epsilon Beta are presented.

## ETA KAPPA NU GAMMA CHI CHAPTER ANNUAL REPORT NEW MEXICO STATE UNIVERSITY

Submitted October 1, 1992

PRESIDENT'S LETTER

September 28, 1992

At the beginning of last year the Gamma Chi Chapter of Eta Kappa Nu at New Mexico State University set a very lofty goal: to become the best chapter ever at N.M.S.U. Looking back now, I believe we have accomplished just that.

The chapter has provided many services to the University and Community as well as the E.E. department. In doing so, the students and faculty have become more interactive than ever before. The Gamma Chi Chapter owes most of its success to the unselfish support of the E.E. department and the hard work of its members, which already have a busy academic schedule.

This report highlights all our activities this year with special emphasis on our \$6000.00 study hall renovation project. We expect the enthusiasm and determination shown this past year to continue with new members. It is the services we offer that makes us proud to be members of Eta Kappa Nu.

Sincerely,

*Jason J. Moore*  
Jason J. Moore

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Faculty Advisor

FALL 92

Jason Moore  
Kenneth Adams  
John Loukota  
Sean Pearson  
Mike Newton  
Rocky Ferran  
Dr. Stephen Horan

SPRING 92

President  
Vice-President  
Treasurer  
Recording Sec.  
Corresponding Sec.  
Bridge Correspondent  
Faculty Advisor

John Perry  
Ted Plowman  
John Loukota  
Steve Pearl  
Stephanie Dye  
Jason Moore  
Dr. Stephen Horan

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MEMBERS: GAMMA CHI CHAPTER-ETA KAPPA NU

NEW INITIATES-FALL 92

William Allen  
Richard Blythe  
Michael Doubrava  
Brian Freeman  
Steve Gonzales  
Christopher Hogge  
Wesley Hummel  
James Jones  
David King  
Lori Loftin

NEW INITIATES-SPRING 92

Kenneth Adams  
Michael Anderson  
Aaron Garcia  
Troy Giles  
Sarah Harrison  
John Mick  
Michael Newton  
Sean Pearson  
Timothy Zura

MEMBERS:

Anuradha Aiyer  
Michael Aragon  
Paul Armstrong  
Stanley Atcitty  
Andres Avila  
Michael Baca  
Cynthia Barrett  
Scott Bigelow  
Paul Billings  
James Brewer  
Kevin Campbell  
Coy Christensen  
Paul Claessen  
David Corellis  
Kim Dalton  
Will Dearholt  
Robert De La Garza  
Mark DeYong  
Stan Dixon  
James Dorett  
Scott Dunn  
Abraham Ellis  
Steve Erickson  
Gerald Esch  
Lyndal Frye  
David Garcia  
Georgiou Georgios  
Mark Gray

Kenneth Griego  
Bill Gunderman  
Richard Hamilton  
Charles Harrel  
Rodney Hart  
Michael Highfill  
Randall Hulsey  
Bryan Hunt  
Greg Jean-Baptiste  
Thad Johnson  
Alan Keiser  
Burke Kernen  
Dan Klingler  
Brian Kopp  
Ninfa Korf  
Jamie Lara  
Stephanie Lindsley  
Michael Lopez  
Chris McGuirk  
Ron Meier  
Michael Milyard  
Roy Moore  
John Moser  
Juliette Moser-Akers  
Amy Mueller  
Travis Newton  
Chen Ng

Steve Omick  
Beverly Peters  
Scotty Pignatella  
John Polson  
Kirk Powell  
James Provins  
Terry Randall  
Ted Raymond  
Jeff Roberg  
Robert Rubio  
Jason Sada  
Charlie Salazar  
Gordon Seaman  
Anthony Seward  
Chris Skubis  
Mark Stueven  
Shannon Thompson  
John Van Marter  
Richard Wade  
Kevin Wedeward  
Joel Whittington  
Patricia Wildner  
Ted Wolcott



#### CROSNO STUDY HALL RENOVATION PROJECT

Last semester Eta Kappa Nu and the student branch of IEEE took upon the task of remodeling the Electrical Engineering study hall. Crosno study hall had deteriorated badly from its original condition in 1972. Under the leadership of Jason Moore, Bridge Correspondent at the time, HKN and IEEE raised over \$6000.00 for the renovation.

The project began by taking remodeling suggestions from the E.E. faculty, staff and students. Jason Moore and John Loukota, treasurer, began the extensive procedures of obtaining bids from local businesses and deciding what was necessary as well as what we could afford. After weeks of work, and permission from Ben Woods, the Physical Plant Director, the decision was made to carpet the 169 square yard room and replace all the broken chairs. Other renovations included repairing and repainting all lockers offered to students as well as painting the room.

Due to the extensive costs involved, HKN and IEEE began some major fund raising projects. Letters were sent to fifteen large corporations asking for any amount of donation. In the same manner, requests were made of the EE faculty and staff to fund our project. The results were amazing. Donations from Dow Chemical, Exxon, Chevron, Phillips and the EE faculty and staff totalled \$2885.00. Eta Kappa Nu and IEEE's fund raising projects raised nearly \$400.00.



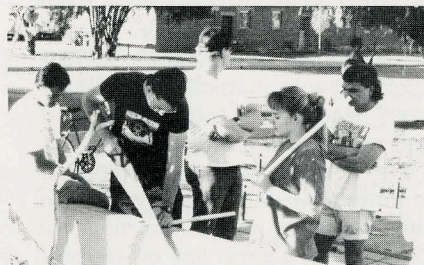
The Electrical Engineering Study Hall before the Renovation. (Note the lack of carpet and the chairs.)

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#### PLEDGING

The Gamma Chi Chapter of Eta Kappa Nu at New Mexico State University is an active chapter which initiates from 10 to 25 new members each semester. Letters of invitation are sent out to those juniors and seniors whose grade point averages are high enough to be considered for membership. A meeting is then held for those who wish to pledge, and the pledge process is then formally underway.

As part of the pledge process, each pledge on "Pledge Saturday" is required to construct a wooden "resistor" to be carried around in plain view during pledge week. This "resistor" is constructed from a large wooden dowel rod. It is spray-painted red, and three strips of blue electrical tape are wrapped at one end to represent the color bands of a real resistor. Wood screw eyelets are then placed at each end, to which short segments of string are attached to resemble the resistor leads. This resistor is carried in plain view on the pledge's person during the daylight hours of pledge week, and it signifies the resistance that an electrical engineering student must go through in order to become an active member of Eta Kappa Nu.



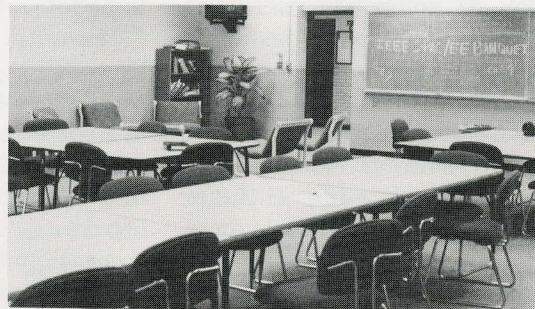
Some initiates learn the importance of making the All-Important Resistor on Pledge Saturday.

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With almost \$3285.00 raised, the organizations approached ASNMSU (the student government at New Mexico State) for appropriations to fund the rest. After two weeks of trying to convince the student government that what we were doing would benefit a large majority of students, our bill was put to a vote. That night we had 65 students and our department head attend the senate meeting to show our support. Our hard work and determination paid off. ASNMSU funded our project with nearly \$3000.00.

Although the money had been received the work still had to be done. At the beginning of the summer, many students stayed at school a week longer to see the project through. The study hall was cleaned, the lockers were fixed and everything got a new coat of paint. A local business laid the carpet with the help of a few students and 44 new chairs were brought in to replace the old broken ones. Other small projects included: remodeling seven lounge chairs donated by the EE faculty, posting an HKN and IEEE activities calendar, provided a refrigerator (donated by Professor Pollard) and microwave for faculty and student use.

Thankfully, the project was a success. The renovation did more than just provide an aesthetically pleasing environment that is conducive to studying, it also brought the students and faculty together as a whole.



A View of the Study Hall after the Renovation. It is a much quieter place in which to study.

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After constructing their resistors on Pledge Saturday, the pledges are issued pledge books which contain the names of all of the pledges, all of the active members, and all of the faculty and staff that work in the Electrical Engineering Department. They are then required to complete a pledge project which requires approximately 4 man-hours of work per pledge. The most recent pledge project was to repaint and remodel the HKN/IEEE student office. Past pledge projects include updating the HKN membership board in our Crosno Study Hall, and various community service projects such as: repainting a home for abused wives, packaging food at Casa de Peregrinos (a center for distributing food to the needy), participating in a bowl-a-thon for Big Brothers/Big Sisters, and sponsoring a carnival/fair for underprivileged children.



Here are some Initiates hard at work on last semester's Pledge Project -- The painting of the Office.

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The week following Pledge Saturday is called Pledge Week. During this week, the pledges must carry their pledge books and their resistors in plain view during the daylight hours. They must acquire at least two-thirds of the signatures of the people listed in the pledge book, in addition to the signatures of all of the officers, faculty advisors, Electrical Engineering Department Head, and the Dean of Engineering. This semester, this amounted to 98 signatures! They must also get the signature of Professor Elden Heiden, who has his own page in the pledge book called "The Heiden Page." He gives each pledge a quiz with questions regarding facts about HKN and other various topics. Each pledge must pass this quiz in order to obtain his signature.

During Pledge Week, the pledges are invited to attend the Smoker (an informal get-together for actives and pledges) where food and beverages are provided. This is an opportunity for the pledges and active members to socialize, and for the pledges to get a large number of their required signatures.

At the conclusion of Pledge Week, each pledge must submit a letter to the active members stating why they wish to become members of HKN. These letters are meant to be on a more humorous note, and are the last tasks required of the pledges before the formal initiation. The letters are read, and the active members then vote on accepting the pledges as new members based upon their efforts put forth as pledges, on their scholarship and character, and on their outlook to be promising new members of HKN.

The pledge process finally comes to a close with the formal initiation held at the end of Pledge Week, followed by the traditional HKN/IEEE Banquet. The pledges are then considered fully active, and are expected to carry on the high standards set forth by the past and present members of the Gamma Chi Chapter of Eta Kappa Nu.

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#### Homework Solutions

In addition to the sale of laboratory manuals, the sale of lower-division class, even-numbered homework solutions has been done to help ease the difficulty of homework to the freshmen Engineering students. These solutions give just the final answer, so most of the work needs to be done by the student. The feedback has been very positive by both student and professor.

#### Locker Rental

The Gamma Chi Chapter has at its disposal fifty lockers which are located in the Electrical Engineering Study Hall. As an on-going fund raiser, these lockers are rented out to the students on a first-come first-served basis. Each semester these lockers are all rented out with usually two or three students in a locker. Plans are being developed to increase the number of lockers as well as adding other types of storage facilities to the students.



A look at the Lockers which are rented out each semester. They are located in the Electrical Engineering Lounge/Study Hall.

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#### FUND RAISING

The Gamma Chi Chapter has numerous fund-raising projects throughout the semester in order to help defray the cost of the socials, the banquet, and other unforeseen expenditures which occur each semester. These fund-raisers include the sale of an Eta Kappa Nu T-shirt, an activity known "locally" as the Road Rally, the sale of laboratory manuals, the sale of lower-division homework solutions, the rental of lockers, and in conjunction with the student branch of IEEE the profits obtained from the student use of a copy machine.

#### T-Shirt Sales

The past two years have shown an increase in the amount of pride shown by the active members of the Gamma Chi Chapter. In order to facilitate this increase in student support, the Gamma Chi Chapter decided to create an Eta Kappa Nu T-shirt and sell it. As expected, it was a huge success. Over seventy shirts were sold in a little less than one month. Plans are being drawn up to increase sales with a design contest and the possibility of joining resources with IEEE. This would open the selling to all Electrical Engineering students and faculty and not just Eta Kappa Nu members.

#### The Road Rally

The Road Rally is an event in which groups of three or four people "race" around the city of Las Cruces in a car on a pre-designed course that only the organizers know. In order to complete the course, each car is given a list of clues and a compass. Usually, the course is very detailed and many teams end up extremely confused and even lost. In the end, the car that makes it through the course in the least amount of time and mileage is declared the winner. For years, the Gamma Chi Chapter organized the Road Rally for the students at New Mexico State University, but two years ago it was inexplicably stopped. Due to new interest and ambitious officers, last semester saw the resurrection of this fantastic event. Gamma Chi was the sole organizer, and it became a huge success once again. Plans are now being made year round in order to make the Road Rally more enjoyable and successful.

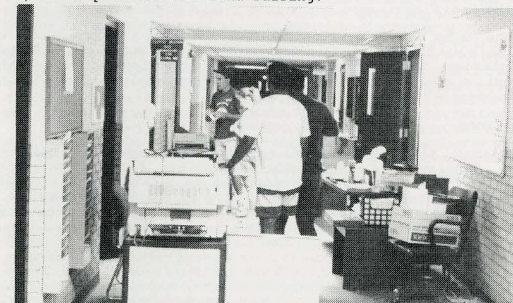
#### Laboratory Manuals

As with every Electrical Engineering Department and Curriculum, laboratories are a major requirement. The professors in the Department at New Mexico State University came to the Gamma Chi Chapter with the proposition of selling the laboratory manuals to the Electrical Engineering Students. After several semesters of experimentation with copy companies and distribution procedures, the Gamma Chi Chapter has made the sale of these manuals into their most profitable fund-raiser. There have been relatively no complaints from either professors of students as to the cost or presentation of these manuals. Finally, a good system has been established.

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#### Copy Machine

Finally, the Gamma Chi Chapter along with the Student Branch of IEEE purchased a copy machine. This copy machine is used almost constantly by the students for the nominal fee of ten cents a copy. After making the payment on the machine each month, the profits from the use of the copier is split between the two owners (HKN and IEEE) to help with their fund raising.



The installation of the brand new Copy Machine. Both IEEE and HKN are joint owners of the machine.

As one can observe, the Gamma Chi Chapter is extremely involved in many various fund raising projects. These projects are not exclusive and try to incorporate all of the Electrical Engineering Students. With the money raised from these undertakings, a very elaborate banquet is put on for the entire Department as well as a couple of socials for the Eta Kappa Nu members. Due to all of the events sponsored by Eta Kappa Nu, fund raising has become the backbone of the Gamma Chi Chapter.

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## SOCIAL ACTIVITIES

### Banquet

After initiation each semester, HKN puts on the Electrical Engineering Banquet to honor the newly inducted pledges, and also to promote fellowship between the students and faculty. The banquets have always been entertaining with various skits and dramas such as "The EE Melodrama for the 90's -- Resistor Man" Nerds Night Out, the Dud's Dating Game, and Circuits Lab 101. The entertainment features many of our very own members impersonating faculty, acting out various dance and speaking routines and in general, showing that it is alright to laugh at ourselves.

We also take time to recognize each pledge, an outstanding pledge, and also to make mention of any pledges that went above and beyond what was expected.

Our speakers have covered various topics ranging from "Chemistry & Energy" to "The Tales of an Experienced Engineer". In these talks we learned that, calculus causes warts, and that along with the hard work and long hours that are required for school, we still need to take time, to enjoy the opportunities and friends we have made.

### Smoker and Social Events

With the large number of signatures that each pledge is required to obtain, HKN sponsors a smoker or signature party each semester. All members of HKN and pledges are invited to attend. The smoker is normally held at a members house or at the home of a gracious faculty member. We always have an ample supply of food and drinks, and on most occasions we barbecue hamburgers and hot dogs. The smoker is a good time to fellowship with other HKN members, meet new people, and also to learn various tidbits of information.

Because each pledge is required to have a certain number of signatures, the members can ask the pledges a question of their choosing. The questions can range from who plays second base for the Chicago Cubs to what is the wavelength of a HeNe laser. Most questions are straightforward, but some do require a bit of research, and more often than not, someone at the smoker knows the answer.

We also have other social events during the semester. The conclusion of the road rally is always a joyous occasion, especially for those who finish, and we also honor our graduating seniors with an end of the semester party. The HKN meetings are also considered a social event. We try to have pizza, chips and salsa or some other light snack and drink for each meeting. All in all, we want to keep our members active and involved, and give them a needed break from the hectic routine of school.

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## COMMUNITY SERVICE

Some of the most important projects performed by Eta Kappa Nu are those done solely to benefit the community. The last year, the Gamma Chi Chapter has done three major projects for the community. The members visited the local High Schools; they spent time running a blood drive; and they helped tutor at a local Elementary School.

### High School

During the past two semesters some Eta Kappa Nu members have gone to the local High Schools (Las Cruces High, Mayfield, and Onate) and have given a brief demonstration of some electrical phenomenon. In addition to this, they would talk about what the Electrical Engineering Department has done for industry the past year and what an Engineering Degree will do for a person. Literature supporting the University is handed out to those students interested. This project helps to recruit local students to the Engineering College at New Mexico State University as well as demonstrate the importance of not only staying in school, but continuing on with some sort of education beyond High School.

### Blood Drive

Over the last few years the American Red Cross has had an active campaign for donating blood at NMSU. Fortunately, Eta Kappa Nu has been able to assist them. Every semester HKN runs one of the many stations on campus for a day. Members take care of all of the paperwork required to donate blood and are present from 8:30am to 3:30pm. It is an honor to assist the American Red Cross for such a worthy cause.

### Tombaugh Elementary

Eta Kappa Nu members have also been active at a local Elementary School teaching fifth graders how to run some basic computer programs. This interaction helps the youngsters to become exposed to a very important tool in society. This tutoring is done for roughly three hours a week for a period of about a month. Therefore, the students and the members have ample time to give some much needed instruction.

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## UNIVERSITY SERVICES

The Gamma Chi Chapter of Eta Kappa Nu is not only active in community services, but in services for the general student body as well. The active members and pledges alike are involved in various activities which benefit the Electrical Engineering Department, other electrical engineering students, and the university population in general.

### Tutoring

The Gamma Chi Chapter offers free tutoring to any student who needs help with their studying or course work. Both active members and pledges tutor students taking introductory electrical engineering courses, as well as various other engineering, physics, and mathematics courses.

### Evaluations

Towards the end of each semester, HKN members administer course, faculty, and laboratory evaluations for the Electrical Engineering Department to be filled out by all students attending the courses. These evaluations are used by the faculty members as feedback to give them ideas on how to improve upon the content and methods of teaching in these courses.

### Scholarships

Every semester, the Gamma Chi Chapter awards scholarships to two or three HKN members based upon need, academic achievement, extracurricular activities, and religious involvement. These scholarships are called the Klipsch/HKN scholarships, and are funded by an endowment donated by Mr. Paul W. Klipsch, inventor of the famous "Klipschorn Loudspeaker" and a graduate of what is now New Mexico State University.

### Tours

Occasionally, students from the local high schools and from other high schools throughout the state come to see what our university has to offer. Each semester, several HKN members volunteer their time and efforts to give these high school students tours of the Electrical Engineering Department, and of the rest of the College of Engineering in general. It is hoped that these tours will have a positive impact on the students to encourage them to seek higher education after high school.

### Program Sales

Every semester, HKN members volunteer to sell programs at our home NCAA basketball and football games. This alleviates any costs that would be needed to hire people to sell these programs, and it generates extra revenue for the university sports program.

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## ETA KAPPA NU Epsilon Beta Chapter Arizona State University

### 1991-92 Annual Report



THE ETA KAPPA NU ASSOCIATION  
THE INTERNATIONAL ELECTRICAL ENGINEERING HONOR SOCIETY



### Statement of Purpose

The Eta Kappa Nu Association is the International Honor Society for Electrical Engineers. Outstanding undergraduates, graduate students and distinguished professional engineers are elected to a chapter or local HKN branch. Eligibility is dependent on marked ability, as evidenced by scholarship, personal character, useful voluntary services and distinguished accomplishments. Besides the stimulation and reward of scholarship, Eta Kappa Nu has a far broader purpose than merely to award a badge of distinction to scholars. Its main purpose is for the members to be a constructive force, helping fellow members and non-members alike to improve the standards of the profession, the courses of instruction, and the institutions where the chapter is established.

Epsilon Beta Chapter of Eta Kappa Nu  
Arizona State University • Engineering Research Center 101A  
Tempe, AZ 85287-5706  
Electronic Mail: ETAKN@ASUACAD.BITNET  
Phone: (602) 965-3128

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### Message From the President

Growth has characterized the Epsilon Beta Chapter of Eta Kappa Nu for the past few years. The 1990-91 year saw the creation of many activities that made Epsilon Beta one of the more unique chapters of HKN, so much so that it received the National Outstanding Chapter Honorable Mention Award for the 1990-91 year.

Never content to rest on our laurels, Epsilon Beta has continued to grow in size, stature, and substance. Not only has the chapter continued already established programs, but it has modified them and created new ones to keep the chapter in touch with changing times.

Just about every aspect of Epsilon Beta has shown some degree of growth in the 1991-92 year. A new officer position, Activities Coordinator, was created in response to our increasing number of activities. Three new committees (Environmental, Public Relations and Student Advisory) were also formed to manage new programs and handle some organizational duties. A recycling program was added to our community service projects, a happy hour and post-initiation party were new social activities, and T-shirts were sold as a fund-raiser for the first time this year.

Two areas where growth was most evident, and made the most impact, were academic and industry related activities. This past year saw a heightened level of HKN involvement with the ASU EE curriculum. Not only did Epsilon Beta proctor and record mid-semester EE teaching evaluations, but our officers also met with the EE Department Chair and a special committee to discuss and recommend curriculum improvements.

The crowning achievement of the 1991-92 year was the creation of our Motorola/Eta Kappa Nu Work-Study Program. This landmark program provides part-time employment at Motorola's Semiconductor Products Sector in Tempe, Arizona for members of the Epsilon Beta Chapter.....exclusively! After devising an impartial selection process, officers of Epsilon Beta recommended HKN members for employment at Motorola to take on challenging and worthwhile projects. I would personally like to thank Doug Buzard for all of his hard work as our main liaison between HKN and Motorola, as he was instrumental in establishing this exciting new program.

Another person who deserves special mention is David West, President of Epsilon Beta for the Fall '91 semester. David was responsible for much of the chapter's recent growth, including the new officer position and public relations committee, our points system, arrangements to bring such distinguished guests as National HKN President James D'Arcy and ASU President Lattie Coor to speak at our initiation ceremony, and countless other contributions. One of the main ideas David wanted to instill in new members was the importance of remaining active in Eta Kappa Nu well beyond their initiate semester. David graduated from ASU last Fall, but he was pleased to see that his efforts were not in vain. Not only have the Fall initiates remained active, but several have gone on to hold important committee and officer positions.

It is my personal hope that present and future members of Epsilon Beta never become complacent; satisfied with only maintaining the status quo of programs and activities. Whether it is something as simple as establishing office hours for officers and committee chairs or as complex as our joint venture with Motorola, there is always room for improvement and expansion in Epsilon Beta. Looking at some of the plans the 1992-93 officers have in mind, it appears that our chapter's future is in good hands and in no danger of stagnation. So long as the desire for growth is present in Epsilon Beta, it will continue to be what I feel is an important voice and driving force in the academic and professional world of electrical engineering.

Sincerely,

James Bertko  
James Bertko  
President, Epsilon Beta, Spring 1992

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Eta Kappa Nu Officers 1991-92

Fall 1991

President:	David Ian West
Vice-President:	James Bertko
Corresponding Secretary:	Susan Kersey
Recording Secretary:	Ashim Shatil Haque
Treasurer:	Michael Vicker
Bridge Correspondent:	Tatyana Dhaliwal
Activities Coordinator:	Stephen Sadler
College Council Representative:	David Hsiung

Spring 1992

President:	James Bertko
Vice-President:	Douglas Buzard
Corresponding Secretary:	Susan Kersey
Recording Secretary:	Anthony Fiandaca
Treasurer:	Daniel Murray
Bridge Correspondent:	Craig Smith
Activities Coordinator:	Stephen Sadler
College Council Representative:	David Hsiung

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Committees

COMMITTEES were formally established to alleviate some of the work involved in organizing Epsilon Beta's numerous activities from the officers. Besides distributing the workload to more people, committees also serve the purpose of developing leadership skills in those members who chair a committee. These are members who may want to take a more active role in HKN, but may not be ready for an officer position. The different committee titles and functions are as follows:

COMMUNITY SERVICE coordinates Epsilon Beta's philanthropic activities such as the Adopt-A-Highway program.

ENVIRONMENTAL initiated a recycling program for members, and is developing other programs to raise awareness of important environmental issues.

FUND-RAISING handled the details of organizing our various fund-raising activities, such as the selling of tickets for E-Day (a picnic for students in the engineering college).

PUBLIC RELATIONS is responsible for publicity and correspondence, from flyers and announcements in the campus newspaper to letters and phone calls. In the Spring, this committee also took on some fund-raising responsibilities when that committee was disbanded. This included putting together our resume book.

SOCIAL EVENTS organizes and initiates all of our social activities, from sporting events and potluck parties to happy hours.

STUDENT ADVISORY is our newest committee, established in the Spring '92 semester. It is responsible for overseeing the operation of our tutoring program. It also coordinated the proctoring of mid-semester teacher evaluations for all upper-division classes in Arizona State University's Electrical Engineering Department.

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Meetings

GENERAL MEETINGS were held once a month during both the Fall and Spring semesters to keep members informed about current and future HKN activities. For the Spring '92 semester, free food and guest speakers were added as a regular feature of general meetings. The agendas for the past year's general meetings are as follows:

Fall 1991

- 1st General Meeting (9-10-91)
- \* Pass around attendance log
  - \* Introduction of officers/Welcome back
  - \* Discuss new committees/Committee signups
  - \* Distribute and discuss calendar of events
  - \* Describe points system
  - \* Announce guest speakers for initiation ceremony
  - \* Announce technical tours

- Initiate Meeting (after General Meeting)
- \* Describe what HKN is all about
  - \* Discuss "mandatory" initiate participation events
  - \* Describe initiation ceremony
  - \* Discuss fees, certificates, etc.

- 2nd General Meeting (10-15-91)
- \* Attendance log
  - \* Update on current/future events
  - \* Initiate registration form distribution
  - \* Stadium cleanup announcement
  - \* Update points system and calendar of events
  - \* Committee reports
  - \* Announcement of dates for Motorola tour, soccer game and potluck party
  - \* T-shirt design contest
  - \* Officer elections announcement

- 3rd General Meeting (11-12-91)
- \* Attendance log
  - \* Remind initiates about fee deadline and initiation
  - \* Pass around signup sheets for stadium cleanup, preregistration and ERC tour
  - \* Show current points
  - \* Update on future events
  - \* Give old certificates to members who didn't pick them up yet
  - \* Take nominations for officer positions that will be vacated after the fall semester

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4th General Meeting (11-27-91)

- \* Attendance log
- \* Announce time and place for broomball game
- \* Awards for outstanding initiate, member, committee, etc.
- \* Elections of new officers
- \* Closing remarks by Dave West

Spring 1992

- 1st General Meeting (1-28-92):
- \* Food
  - \* Pass out attendance log and agenda for meeting
  - \* Distribution of member database information sheets
  - \* Introduction of officers/Announce officer and committee chair office hours
  - \* Distribution of calendars
  - \* Guest Speakers: Denise Frakes, United Blood Services. Topic: ASU Blood Drive
  - \* Jean Eisel, ASU Career Services. Topic: Resume Workshops
  - \* Announce deadline for resume book submissions
  - \* Describe committees and pass out committee sign-up sheets
  - \* Discuss/describe Motorola/HKN work-study program
  - \* Describe HKN recycling program
  - \* Special Election: Recording Secretary for spring semester

Special Initiate Meeting (following General Meeting):

- \* Importance of Eta Kappa Nu
- \* Educational, professional, social
- \* Describe points system
- \* Initiate and member requirements
- \* Discuss initiation ceremony, fees, etc.

2nd General Meeting (2-25-92):

- \* Food
- \* Pass out attendance log and agenda for meeting
- \* Take names of members who want to order pins
- \* Announce cancellation of Adopt-A-Highway for spring
- \* Announce Engineering Research Center tour details (time, meeting place, etc.)
- \* Describe mid-semester teaching evaluations and assign classes
- \* Discuss tutoring, pass out sign-up sheet
- \* Guest Speaker: Brent Weech, Environmental Committee. Topic: Recycling
- \* Environmental committee and Public Relations committee announcements
- \* T-shirt design vote
- \* Announce contest to design a seal for Engineering College
- \* Get student input for discussion with EE chair about curriculum changes

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Community Service Activities

ADOPT-A-HIGHWAY is a cleanup program in which both members and initiates remove litter from a one-mile stretch of Arizona highway. Afterwards, a pizza party is held for all who participated. This is a semi-annual event. Unfortunately, due to highway construction, the program was cancelled for the Spring semester.

A BLOOD DRIVE was held in both the Fall and Spring semesters. Besides the week-long campus-wide drives held by United Blood Services, a special one-day drive was co-sponsored by the ASU Engineering College. Not only were HKN members and initiates encouraged to donate, but the Epsilon Beta Chapter worked exclusively at the sign-up/check-in table for the entire day to ensure the drive's success.

The Eta Kappa Nu RECYCLING PROGRAM collects recyclable materials ranging from newspapers and aluminum cans to plastic and glass. Items are collected from members, initiates, and the Engineering Club Room where our office is located. These materials are then dropped off at local recycling centers.



This sign along the B-line highway reminds drivers of Epsilon Beta's community service responsibility.

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3rd General Meeting (3-24-92):

- \* Pass out attendance log and agenda for meeting
- \* Announce results/success of mid-semester teaching evaluations
- \* Sign up people to sell E-day tickets, raffle tickets and T-shirts
- \* Sign up people to perform pre-registration duties
- \* Social Events committee announcements
- \* Guest Speaker: Karen Fisher, Anderson Consulting. Topic: What is a Consulting Firm?
- \* Remind initiates about Initiation ceremony details (time, place, etc.)
- \* Nominations for 1992-93 officers
- \* Food

4th General Meeting (4-28-92):

- \* Pass out attendance log and agenda for meeting
- \* Sell last few T-shirts to members
- \* Last-minute officer nominations
- \* Discuss establishing a selection committee for Motorola work-study program
- \* Awards (Outstanding Initiate, Member, Committee, etc.)
- \* Elections
- \* Sign-up new committee chairs
- \* Food!

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OFFICER MEETINGS were held every Monday to discuss future Eta Kappa Nu actions, and to divide up the work involved in running Epsilon Beta Chapter's activities smoothly. Besides officers, all committee chairs attended these meetings to update officers on committee activities.

COMMITTEE MEETINGS were held as often as the different committee chairs saw fit. However, a strict point was made to hold the meetings after Monday so that committee chairs could get assignments at the officer meetings, then distribute the work among committee members more efficiently.

Fund-Raising Activities

E-DAY TICKET SALES is a service performed by Eta Kappa Nu whereby we sell tickets for the semi-annual picnic (called E-Day) sponsored by the ASU Engineering and Applied Sciences College Council. The tickets are sold to students at a table set up by HKN, and a share of the money brought in is kept by Epsilon Beta for performing the service.

The HP28s CALCULATOR RAFFLE was held at E-day this year. Tickets were sold primarily by initiates, who are required to sell ten, but members also sold tickets. A table was set up the week before E-day to sell the tickets for one dollar each. Other prizes besides the calculator were raffled off, including passes for admission to the local Improvisation comedy nightclub and gift certificates for the Olive Garden Italian Restaurant.

STADIUM CLEANUP is one of Epsilon Beta's most profitable fund-raisers. It is also one of the most arduous to perform. The project involves cleaning the bleachers of 1/4 of ASU's Sun Devil Stadium after a Fall semester football game. The work usually goes well into the night, but students are rewarded for their hard work. Besides the \$500 paid to Eta Kappa Nu by the university, a party is held afterward that includes enough pizza to feed all who participated (well, there goes the 500 bucks).

T-SHIRTS were sold as a fund-raising activity for the first time this spring. A contest was held for members to produce a design for the shirts. The winning design featured two cartoon characters on the back experimenting with electricity (well, actually electrocution) and boasted the slogan: "ELECTRICAL ENGINEERING: FEEL THE POWER!" To make the shirt marketable to all EE students (not just HKN members), two designs for the front pocket area were printed. One design featured the initials and title of HKN, while the other bore the initials EE and the title of Electrical Engineering, for non-HKN members. The original order and a re-order of T-shirts both sold out quickly.

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## Social Events

**BROOMBALL** is a game that involves the rules of hockey, an ice skating rink rented after closing, ordinary sneakers, brooms, a small orange ball, two teams...and a lot of sore behinds! The game, usually played after a warming-up happy hour of beer and pizza, pits Eta Kappa Nu against the not-really-so-dreaded Tau Beta Pi team.

A **HAPPY HOUR** was held in the Spring semester for HKN members and initiates at a local sports bar (Don't these kids ever study?). The event was co-sponsored by several other engineering clubs, including the Society of Women Engineers and the ASU branch of IEEE. The turnout was tremendous, as socializing and sand volleyball matches went on well into the evening hours.

An **INITIATION PARTY** was initiated in the Spring semester for all initiates after their initiation at the initiation ceremony. Members were also invited to attend to welcome and congratulate the newest members of Eta Kappa Nu.

The **POTLUCK PARTY** held at the house of Dr. DeMassa (our faculty advisor) is quickly becoming a popular and continuing tradition. Students come together on a Saturday afternoon to socialize by the pool and sample a wide variety of college-student cooking cuisine, from macaroni & cheese to toast. Seriously, a delicious assortment of foods is always supplied, from chicken dishes to homemade ziti and casseroles.

A **SOCCER GAME** between Epsilon Beta and the more-dreaded-than-the-Tau-Beta-Pi-Broomball-Team EE Faculty Team is a semi-annual event which is now an HKN tradition. Also quickly becoming a tradition is the embarrassing loss of the Epsilon Beta team to the EE faculty. But it was all in good fun and the victories were well earned, as the EE faculty played these matches with an almost professional ability. However, Epsilon Beta is launching an investigation into the sudden "temporary" acquisition of EE faculty members from Brazil.

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## Academic Services

**CURRICULUM INVOLVEMENT** reached an all-time high this year. At the invitation of the ASU EE department chair, Eta Kappa Nu officers discussed changes that they, and other HKN members, would like to see in the ASU EE and engineering core classes. The suggestions were so well received that another meeting was arranged between our officers and the ASU Undergraduate Curriculum Committee. We presented our suggestions in a one-hour discussion and also gave each member of the committee a written outline of our ideas.

**EE PRE-REGISTRATION** is a service performed by HKN members every semester. Epsilon Beta is completely responsible for the early class registration of all EE students. This involves advising students on classes, checking their registration forms for proper prerequisites, approving, stamping and signing their forms and passing them on to be processed by the registrar's site. This also doubles as a fund raiser, since we are paid by the EE department for performing this service.

The **ERC TOUR** provides undergraduate students with a tour of the lab facilities in the Arizona State University Engineering Research Center that normally only graduate students get to see. These facilities and equipment include a class 100 cleanroom, power & communications laboratories, gaseous lasers and a molecular beam epitaxy machine.

**MID-SEMESTER TEACHER EVALUATIONS** were initiated by the ASU Engineering College Council to give all engineering instructors specific, anonymous feedback about their classes and style of teaching. By administering them in the middle of the semester, it was hoped that teachers could correct any serious problems that students recognized before the end of the semester. Epsilon Beta was responsible for getting teachers' permission, proctoring, and compiling the results for these evaluations in all upper division EE classes. Our Student Advisory committee did a tremendous job dividing up the work among our members. As a result, the Electrical Engineering classes had 100 percent participation for the evaluations, also due in large part to the cooperation of the ASU EE Department.

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## Industry-Related Activities

A **RESUME BOOK** was compiled by Epsilon Beta and distributed to local and out-of state EE companies. This book is basically a collection of resumes of Epsilon Beta members, both undergraduate and graduate students. It is intended to be an aid in helping these students find a part-time, full-time, or summer position in the EE industry. A fifty dollar donation is requested, although not required, from each company that receives and uses the book.

**TECHNICAL TOURS** included a semi-annual, extensive tour of Motorola SPS which involved descriptions and demonstrations of every aspect of operation, from design to testing to packaging. A tour of Intel was also added in the Spring semester. Even more companies are being contacted for technical tours in the future.

The **MOTOROLA/ETA KAPPA NU WORK-STUDY PROGRAM** is probably our most remarkable and ambitious achievement to date. After several Fall semester meetings with engineers and administrators at Motorola Inc. Semiconductor Products Sector in Tempe, Arizona, a new program was established. This joint venture between Motorola and Epsilon Beta provides part-time employment, with practical electrical engineering experience, exclusively for Eta Kappa Nu members! It was the decision of those at Motorola that members of Eta Kappa Nu possessed the academic knowledge and maturity to take on challenging projects that only required part-time attention.

The officers of Epsilon Beta devised a points system to evaluate (without any personal bias) members who applied for positions. This system took into account an applicant's grades, service to Eta Kappa Nu, work experience, and if the applicant had taken classes that were related to the project's area of emphasis. After the points were totaled up, the name of the most qualified applicant would be passed on to Motorola for employment.

The program is still in its early stages, so only a few projects have been commissioned, but Motorola has been very pleased with the members employed so far, and more projects have been promised to come our way in the future.

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## On Education

**ASU HONOR STUDENTS SPEND THEIR SUMMER AT MOTOROLA** submitted by Doug Buzard, Daran Davis, Mike Vicker, James Victory

Four Arizona State University students, all members of the Eta Kappa Nu Electrical Engineering Honor Society, worked at Motorola this summer. The program was organized by Eta Kappa Nu, Ira Miller of the Design System Engineering group, and Carlos Genardini.



L to R: Mike Vicker, Jim Victory, Ira Miller (Mggr., Design Systems), Doug Buzard and Daran Davis

The intent of the program is to give students the opportunity to gain valuable work experience, while giving Motorola access to some of the top electrical engineering students at ASU.

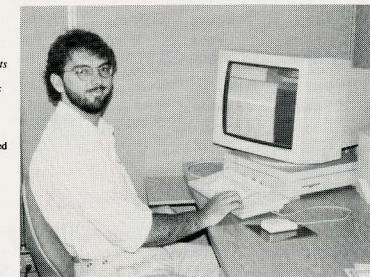
The students, Doug Buzard, Daran Davis, Mike Vicker, and James Victory, were selected

by Eta Kappa Nu and approved by Motorola. Some of the projects the students were involved with included test automation, technical documentation, CAD process implementation, and CAD design library management.

Motorola benefited from the fresh ideas offered by these students who were instrumental in the completion of several critical projects during the summer.

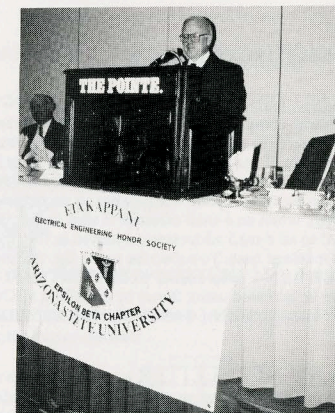
These projects gave them invaluable experience unavailable in the university environment.

The program will continue in the future with new students working on a part time basis during the school year. Two of the students, Mike Vicker and James Victory, are staying on to continue graduate research work. Overall, the first three months of the program has been a great success. ♦

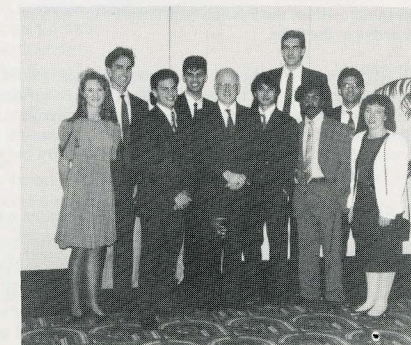


Equally proud of our joint venture, Motorola included an article about it in the company newsletter (above). Daran Davis takes a break from his automatic testing routine to pose for the camera (inset).

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President D'Arcy addresses the Fall initiates as President Coor (right) and Dean Backus (left), look on.



After the ceremony, President D'Arcy posed with our officers for an HKN "family portrait."

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## Pledge Activities

**INITIATION** is not only an induction ceremony for initiates, but also a banquet which always features distinguished guest speakers. In the Fall semester, we were very honored to welcome the National President of Eta Kappa Nu, James D'Arcy, to Arizona State University. Mr. D'Arcy was given a tour of the campus and then spoke at the initiation ceremony. The ceremony, privately dubbed "The Night of a Thousand Presidents", also featured speeches by ASU President Lattie Coor, former Epsilon Beta President Arya Behzad and, of course, that semester's Epsilon Beta President, David West.

The Spring semester also featured several distinguished guests. The Dean of the ASU College of Engineering, Dr. Charles Backus, spoke at the ceremony, focusing on the importance of continuing the educational experience well into professional life. Our other featured speaker was Carlos Genardini, Vice President and General Manager of the Bipolar Analog IC Division of the Logic and Analog Technologies Group at Motorola SPS in Tempe. After his introduction, including his complete title, there was still enough time for Mr. Genardini to discuss the future of the electrical engineering industry, with particular emphasis on advances at Motorola. Also present at the ceremony was former International President of Eta Kappa Nu, William Murray, who was there to see his son, John, initiated into Epsilon Beta.

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David West presents the Fall 1991 initiates to the families and guests attending the initiation ceremony at the Pointe on South Mountain.

A **POINTS SYSTEM** was established this past year which awarded members and initiates with points for participation in Epsilon Beta's plethora of activities. Points were awarded for everything from tutoring to committee participation. The system was mainly devised to allow the officers to decide which members and initiates should receive awards for exceptional service in a more analytical and non-biased method. Students who accumulated points close to the amount of those who received the outstanding initiate and outstanding member awards were given honorable mention awards for their exceptional service.

In the Spring semester, an experiment with the system was performed whereby initiates were required to achieve a minimum amount of points by the middle of the semester. If they did not reach this goal, they would not be allowed to join for that semester, but could be initiated in a future semester if they fulfilled the points requirement. The amount of work involved in accomplishing this requirement was not unreasonable and was felt to represent a level of dedication to HKN that all members should have. We are happy to report that all initiates who wished to join Epsilon Beta that semester achieved this goal and went on to serve the chapter admirably.

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Initiated Members 1991-92

Fall 1991

Doug Buzard  
James Cain  
Roberto Cervantes  
Chen-Hsiu Chen  
Anthony Fiandaca  
Ruby Figor  
Matthew Fox  
Costandi Gerousis  
Eddie Jung  
Greg Martinez  
Louis Morgan

John Musa  
Eric Nethercutt  
Jeff Peterson  
Dean Pohl  
Craig Smith  
Wiwiek Soetanto  
Nick Spankowski  
Chark Stanford  
Cal Topp  
Eva Tsang  
Anna Yee

Faculty Initiate  
Dr. David Allee

Spring 1992

Khaldoon Abugharbieh  
Shannon Bouchard  
Barry Chan  
Hok Leng Chuah  
Christine Cultreri  
Travis W. Gallion  
Mariselle E. Gonzalez  
Glen John Grochowski  
Hendrix Hartana  
Anna Haywood  
Bert Herald  
Jason Hutchins  
Steven G. Kafka

Kenneth Lee  
John Murray  
Richard Nevarez  
Douglas Norman  
Douglas Alan Perry  
Matthew Schmehl  
Vickie Scott  
David Seidner  
Brian Silverman  
Stanley A. Soesilo  
Zahra Valaie  
Brent Newell Weech  
Lisa Wong

John G. Young

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Awards

Epsilon Beta is always proud to recognize those members and initiates who demonstrate extraordinary service above and beyond that which is expected of them. Outstanding Initiates received HP28s calculators and Outstanding Members received congratulatory pen and pencil sets. All award recipients, including honorable mentions, received special certificates.

Fall 1991

Outstanding Initiate:  
Honorable Mention: Doug Buzard  
Anthony Fiandaca  
Anna Yee

Outstanding Member:  
Honorable Mention: William Schindele  
Melissa Chu  
Lily Tom

Outstanding Committee: Public Relations

Spring 1992

Outstanding Initiate:  
Honorable Mention: Brent Weech  
Travis Gallion  
Vickie Scott

Outstanding Member:  
Honorable Mention: Louis Morgan  
William Schindele

Outstanding Committee: Public Relations

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Thanks

Epsilon Beta would not have accomplished all that it did this past semester without the help of countless people at ASU, as well as those from the electrical engineering industry who made several of our programs a reality. The list below contains the names of those people who were essential to the success of Epsilon Beta for the 1991-92 year.

Karen Anderson (ASU EE Department)  
Manny Aroz (ASU Engineering Student Academic Services)  
Dr. Charles E. Backus (Dean, ASU College of Engineering)  
Kathy Brower (ASU EE Department)  
Melanie Collinsworth (ASU Engineering Dean's Office)  
Lattie Coor (President, Arizona State University)  
James D'Arcy (National President, Eta Kappa Nu)  
Dr. George Davis (Chairman, ASU EE Undergraduate Programs)  
Dr. Thomas DeMassa (Epsilon Beta Faculty Advisor)  
Dr. David Ferry (Chairman, ASU EE Department)  
Sandie Frailing (ASU Engineering Student Academic Services)  
Carlos Genardini (Corporate V.P., Motorola SPS, Inc.)  
Becky Houston (ASU Engineering Dean's Office)  
Dr. Michael Kozicki (Professor, ASU EE Department)  
Ira Miller (Design Systems Manager, Motorola, Inc.)  
Jody Peterson (ASU Engineering Dean's Office)  
Moya Porter (ASU EE Department)  
Cheryl Ream (ASU EE Department Chair's Office)  
Ann Zell (ASU EE Undergraduate Programs)  
Richard Wade and the ASU Engineering College Council

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The Future

To continue Epsilon Beta's tradition of growth, the 1992-93 officers and committee chairs are already planning new events and programs for the coming semesters. These plans include a clean-up program for a local river preserve, community service at St. Mary's Food Bank, obtaining donations for and participating in a program to build low-cost housing for the less fortunate, and an extension of our already detailed Motorola tour to examine the cleanroom facilities as well.

Eta Kappa Nu Officers 1992-93

President: Doug Buzard  
Vice President: Anthony Flandaca  
Corresponding Secretary: Travis Gallion  
Recording Secretary: Brian Silverman  
Treasurer: Brent Weech  
Activities Coordinator: Shannon Bouchard  
College Council Representative: Jason Hutchins

Committee Chairs 1992-93

Community Service: Susan Kersey  
Environmental: Dennis Noffz  
Fund-Raising: John Young  
Social Events: Steve Sadler  
Student Advisory/Motorola Selection: Vickie Scott

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Chapter Award

National recognition has always been a goal of the Epsilon Beta chapter at Arizona State University. This year our goal was realized when Epsilon Beta was presented with the National Outstanding Chapter Honorable Mention Award for 1990-91. This award was officially presented at the Spring 1992 initiation banquet. Although no officers from the 1990-91 year were present, they were recognized in the acceptance speech and their names are listed below, since it is their efforts that earned this award.

1990-91 Eta Kappa Nu Officers

President: Arya Behzad  
Vice-President: Nick Avaneas (Fall '90)  
David West (Spring '91)  
Recording Secretary: Brian Hanson  
Corresponding Secretary: Rebeca Obregon-Jimenez  
Treasurer: Vincent Kwok (Fall '90)  
Katheryn Jarvis (Spring '91)  
College Council Rep.: Mike Wong  
Bridge Correspondent: David Hsiung



Jim Berko (center), with ASU EE Department Chair Dr. David Ferry (left) and former International HKN President William Murray (right), accepted the award on behalf of the 1990-91 officers.

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Miscellaneous

An ETA KAPPA NU DISCUSSION LIST called HKN-L was set up on the ASU mainframe computer network as part of a program called a LISTSERV. The intention of the discussion list is to enable the exchange of ideas between all members of Eta Kappa Nu, regardless of their location, in a simple, inexpensive way, namely electronic mail. The LISTSERV maintains a distribution list of everyone who wishes to participate in a discussion group. Then, when an e-mail message is sent to the discussion group, it is distributed to all e-mail addresses contained in the distribution list, creating a public message base. To subscribe to the list, the user must send the command SUB HKN-L (user name) to LISTSERV@ASUACAD. The discussion list can be accessed using Bitnet by e-mailing HKN-L@ASUACAD or, for Internet, HKN-L@ASUVM.INRE.ASU.EDU is the address.

The ETA KAPPA NU NEWSLETTER is mailed to both members and prospective initiates at the beginning of every semester. This newsletter contains information about the different types of established HKN activities and those planned for future implementation. This allows potential initiates the opportunity to see what Eta Kappa Nu has to offer, and also updates the growth of the Epsilon Beta chapter for members who may not be very active at the time.

OFFICE HOURS were established in the Spring semester for all HKN officers and committee chairs. Individual officers and committee chairs decided on one hour, one day a week when they would make themselves available on a regular basis in our office. This created an opportunity for members and initiates to "track down" these very busy people much more easily.

New OFFICE EQUIPMENT in the form of an HP computer was donated to Eta Kappa Nu (and Tau Beta Pi) by the ASU Engineering Student Academic Services Department. Along with the computer, a laserjet printer, a plotter and an image scanner were also donated. The new equipment allowed Epsilon Beta to run more efficiently, utilizing the higher quality database, word processor and desktop publishing software included on the computer's hard drive.

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Appendix A: Epsilon Beta's Financial Report

Starting Balance:	\$1328.83
<b>Expenditures</b>	
Breakfast Mixers:	\$181.52
General Meetings (food/drink/etc.):	\$245.03
Initiation (banquets/party/etc.):	\$3200.52
Misc. Food (pizza parties/etc.):	\$194.04
Office Expenses:	\$127.94
Resume Book:	\$105.50
Sporting Events (field deposits/food/etc.):	\$251.00
T-Shirts:	\$345.00
Misc. Expenses (fees/membership pins/etc.):	\$3005.95
<b>1991-92 Total Expenditures:</b>	<b>\$7656.50</b>
<b>Income</b>	
<b>Fall</b>	
1990-91 Annual Report Reimbursement (EE Dept.):	\$286.09
Booth Sitting (E-Day):	\$25.00
E-Day Ticket Sales:	\$97.50
Initiate Fees/Banquet Guest Dinners:	\$1620.00
Membership Pins:	\$134.20
Pre-Registration:	\$300.00
Resume Book:	\$100.00
Savings Account Interest:	\$7.43
Stadium Cleanup:	\$500.00
<b>Spring</b>	
E-Day Ticket, T-Shirt, and Raffle Ticket Sales:	\$1087.28
Initiation Fees/Banquet Guest Dinners:	\$1795.00
Pre-Registration:	\$300.00
Reimbursement for D'Arcy Trip (ASASU):	\$423.00
Resume Book:	\$50.00
<b>1991-92 Total Income:</b>	<b>\$6725.50</b>
<b>Ending Balance:</b>	<b>\$397.83</b>

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Appendix B: Epsilon Beta Summary Sheet

	Fall 1991	Spring 1992	
Number of Active Members:	49	48	
Number of New Initiates:	23	27	
Number of Officer meetings:	22	19	
<b>Programs and Activities</b>			
ACTIVITY NAME	NEW OR CONTINUED	MAN HOURS	FALL/SPRING OR BOTH
General Meetings	Continued	340	Both
Officer Meetings	Continued	530	Both
Adopt-A-Highway	Continued	145	Fall
Blood Drive	New	25	Both
Recycling Program	New	65	Both
-Day Ticket Sales	Continued	80	Both
HP28s Calculator Raffle	Continued	65	Spring
Stadium Cleanup	Continued	210	Fall
-Shirt Sales	New	115	Spring
Broomball	Continued	50	Both
Happy Hour	New	75	Spring
Potluck Party	Continued	60	Spring
Soccer Game	Continued	45	Both
Curriculum Involvement	New	70	Spring
EE Pre-Registration	Continued	260	Both
ERC Tour	Continued	55	Both
Teacher Evaluations	New	380	Spring
Breakfast Mixer	Continued	70	Both
Tutoring	Continued	850	Both
Resume Book	Continued	60	Spring
Technical Tours	New	340	Both
Motorola Work-Study	New	750	Spring
Initiation Ceremonies	Continued	620	Both
Points System	New	80	Both
Initiate/Member Awards	Continued	30	Both
HKN Discussion List	New	40	Spring
HKN Newsletter	Continued	20	Both
Office Hours	New	110	Spring
New Office Equipment Installation	New	5	Spring
1991-92 Annual Report	Continued	45	Spring

Submitted On: 10-12-92 Epsilon Beta President (signed): *James B. Berko*  
Epsilon Beta Faculty Advisor (signed): *Thomas A. DeMassa*

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1991-92 Chapter Activity Reports

Epsilon Alpha  
Cleveland State University

The 1992 school year has come to an end. I have enclosed a copy of the treasury report. Below, I will explain what the organization did this year.

HKN was an invisible organization until the Fall of 1991. Most people did not even know of HKN. Tony Pishnery (1991-92 President) and I, Nikola Visic (1991-92 Treasurer), were the two people who made HKN visible and a strong organization. What we did was make fixed meeting times and dates at the beginning of each quarter so that all members knew exactly when the meetings were. Also, what I did was send out e-mail to the members' VAX accounts. I also created an HKN Happenings bulletin board. By making HKN visible, people came to meetings. A way we got HKN members active was by giving the members something to do. Several members were in charge of the display case. Other members were in charge of Engineers week. Also, to get more people involved, we had non-officers run the ceremony. By doing that, we automatically activated an additional six to eight members. Today at CSU, HKN is known for its fun and educational field trips. HKN is also known for the tutoring we give to the students and especially to each other. People have come to me and swear that they will study harder so that they may qualify to become a member of HKN. HKN is now a very respected organization.

Money is needed in order to have an organization run. Our only fund raiser this school year was working home football games at the Cleveland Stadium. Also, we generated some income from our banquets. A third source of income came from an organization called Joint Engineering Council (JEC). JEC would reimburse HKN for banquets.

After the fund raising, Tony and I decided to treat those who helped during the football games by organizing a ski trip to Seven Springs, Pennsylvania. I organized a field trip to NASA Lewis Research Center. Those who went to NASA also received a free lunch on HKN. During Engineer Week, HKN holds an event called the Ping Pong Pusher Contest. The purpose of this contest is to build a vehicle that collects as many ping pong balls in one minute to a targeted area. HKN also funded part of the Engineers Week Party. Another field trip HKN organized was a trip to Toronto. I obtained a contact at the University of

Toronto. It was a three day trip which included sight seeing of Toronto, a day at the Toronto Science Museum, and a tour of the University of Toronto. The trip was paid for by HKN. Our final trip was to the Cleveland Museum of Natural History. This was a tour that is not open to the public. HKN had a chance to see facilities and objects not shown in the museum. An example of what we saw and held were the actual bones of the one million year old woman named Lucy.

OFFICERS

President	Nikola Visic
Vice President	Tanya Wiles
Treasurer	Michelle Betzel
Secretary	William Neumann

TREASURY REPORT

Starting Balance.....	\$488.15
Earned Income	
Football Game .....	302.50
Fall Banquet.....	1391.00
Football Game .....	353.38
Football Game .....	231.00
Football Game .....	189.75
Football Game .....	229.63
JEC money for banquet .....	320.00
Spring Banquet .....	596.00
Total.....	3613.26
Money Spent	
HKN Headquarter fees.....	391.00
Material for display case .....	13.00
Refreshments for HKN/IEEE party .....	30.00
Ski trip .....	499.88
Fall Banquet .....	728.35
Material for display case .....	16.92
HKN Headquarter fees.....	621.00
Engineer's Week party fee at Sports World .....	55.56
HKN/NASA field trip/lunch .....	65.00
Gas for Toronto trip.....	75.53
Tickets for Toronto science museum.....	50.53
Rental van .....	319.72
Hotel .....	351.48
Dinners in Canada.....	134.39
Refreshments for new initiates.....	25.20
Spring banquet.....	469.17
HKN Headquarter fees.....	184.00
Natural History Museum .....	70.68
Total.....	4101.41
End Balance.....	0.00

Thank you,  
  
Nicola Visic  
HKN President

Lambda Chapter  
University of Pennsylvania

In October 1991, the Lambda Chapter of Eta Kappa Nu sponsored, in conjunction with the EE Department and the IEEE, a pizza social for the First Year EE and undecided students to provide them an opportunity to interact with the EE faculty and students and ask any questions that they may have.

In early October, the Lambda Chapter of Eta Kappa Nu began the candidate selection and initiation process of new members. We extended the community service requirement to increase the awareness of the inductees to the inner city problems in West Philadelphia. The new members either worked in soup kitchens or participated in after school science workshops with children at local elementary schools. On 15 April 1992, seven CSE and EE pledges were officially inducted. The initiation ceremony was followed by a celebratory dinner at a local Philadelphia restaurant.

To help solve the complaint that incoming engineers do not have any contact with the engineering school in their first year, the chapter organized a first year student mentoring program called 'Finding out Moore' (In reference to "The Moore School" of Electrical and Computer Science Engineering). Senior volunteers will receive the name and address of an incoming first year student. The volunteer will contact the student over the summer and again at the beginning of the semester. The mentor will be available for questions, help, and will give a tour of the EE or CSE department. There will also be an introductory bar-b-que with EE and CSE students and faculty. We hope this will help the new students in the first couple of weeks of college.

Two chapter members served as student representatives on the EE Department's Undergraduate Affairs Committee throughout the 1991-92 academic year. The UAC serves to address current problems in the EE Department as well as help determine future changes.

In mid April, chapter members participated in a phonathon to contact high school students accepted by the University of Pennsylvania to allow them an opportunity to ask any questions they may have about the EE and CSE departments, housing, social life, etc...to aid them in making a decision regarding their acceptance to the University.

OFFICERS AND DATA

Fall 1991-Spring 1992

President .....	Katrina Alger
Vice-President .....	Min Xiao
Treasurer .....	Mark Pearce
Secretary.....	Derek Barboza
Faculty Advisor .....	Dr. Sumit Roy

Fall 1991

No. Members.....	7
No. New Initiates.....	7
No. Business Meetings.....	5

Spring 1992

No. Members.....	14
No. New Initiates.....	0
No. Business Meetings.....	5

PROGRAM AND ACTIVITIES

The Activity, Old, New, or C (Continued), and Man Hours are listed below, respectively:

Fall Semester 1991

Pizza Social	New	3
VAC	C	20

Spring Semester 1992

Science Workshop	New	80
Soup Kitchen	New	80
VAC	C	20
Finding Out Moore	New	18
Phonathon	C	5

Katrina Alger  
President, Lambda  
Chapter

Mark Pearce  
Treasurer

Zeta Kappa Chapter  
Tennessee State University

INTRODUCTION

The Electrical Engineering Department is the largest department with 343 students in the college of Engineering and Technology. The following is a summary of the activities and events of this chapter this past school year.

1.1 Tutoring

There were six groups of tutoring sessions on various subjects each day and on weekends. All these tutorial sessions were run by the chapter members or officers. The Circuits class tutorial sessions met on every Monday and Thursday nights from 6:00 pm 'till around 7:30 pm. Traditionally, this is the most difficult class for the non-electrical engineering major students, as well as many entering electrical engineering students during their sophomore year, as this is their first subject in their major fields of studies. During the tutorial periods, every student had to go to the board and do the problems that had been assigned as homework problems or assigned study problems. The Eta

Kappa Nu members then helped the students on the way as they solved the problems on the board. These methods of tutoring went the same way for all other courses the chapter members tutored. The newly elected officers have agreed to continue this tutoring session which is also being supported by the college of engineering and technology.

1.2 Fund Raising Activities

Throughout the whole school year, the chapter members sold computer diskettes to the engineering students and also around the university. The money made was used for the Awards Banquet and the Induction Ceremony. This was our only fundraiser activity this year. The incoming officers have made plans for next year with more ways to raise money for the chapter and have begun acting on their planning.

1.3 High School Forum

Each semester, the school invites potential high school juniors and graduating seniors to visit every department. The HKN members (all of them are also IEEE members) show them around the laboratories, and help perform simple experiments. The HKN members act as counselors for the day's activities and have lunch, provided by the college, with the students. Before the day is over, there is a forum between the visiting students and the HKN members and faculty of the department. We have discussion, questions, and answers at the end of these sessions.

1.4 Distinguished Lecture Series

This was the first year the College of Engineering and Technology had the Distinguished Lecture Series. There were a total of eight different speakers from different fields and areas of engineering concentrations. The HKN was in charge of one of them. On November 7, 1991, the speaker was Mr. Keith Cooley from Cadillac Motor Car Division, General Motors Corporation, Detroit, Michigan. The title of his speech was "The Cadillac Story." It was the third of the eight part Distinguished Lecture Series.

1.5 Annual Spring Picnic

This is the annual event organized by the College of Engineering and Technology, Electrical Engineering Department and Zeta Kappa Chapter. This picnic was for all students, faculty, and staff. There were friendly competitions on many events like volleyball, tug-of-war, and base-ball games between department and HKN Chapter. This year, the events were again held in the nearby state park. These events were certainly a success. Many students and faculty members that attended the events found it to be both fun and enjoyment. The entire group of students and faculty put down their differences on

that day and played games together. It is a tradition for the school, and all hope it will continue for many years to come.

1.6 EE Professor of the Year

Each year, the Zeta Kappa Chapter polls its members for the incoming and outgoing chapter members to select the HKN/EE Professor of the Year. This event is held in the spring and the award is presented at the Annual Induction Banquet. The recipient of this award has his name engraved on a plaque, which is displayed in the EE department office and a personal plaque for him to keep. This year's winner was Dr. Charles Stroud. Dr. Stroud is a Visiting Professor from AT&T Bell Laboratory. His specialty is in VLSI and Digital Systems.

1.7 Annual Induction Banquet

After interviewing all the initiates and reviewing their credentials, we selected the new members who were then inducted. We had a banquet to honor our new initiates. We also invited future potential HKN members to attend. This year, ten members were inducted into the Zeta Kappa Chapter.

ELECTED OFFICERS

2.1 Outgoing Officers

President .....	Lisa Bohanon
Vice-President.....	Jaicento Griffith
Treasurer .....	Tara Walker
Secretary .....	Kim Gilbert
Bridge Correspondent.....	Kah-Eng Kuah
Faculty Advisor .....	Dr. Mohan Malkani

2.2 Incoming Officers

President .....	Toni Spears
Vice-President.....	Lamont Baker
Treasurer .....	Lisa Calloway
Secretary .....	Christopher Perkins
Bridge Correspondent.....	Dusty Walker
Faculty Advisor .....	Dr. Mohan Malkani

CONCLUDING REMARKS

The few activities that this Chapter organizes reflect that, although we have a small group of members; they have, however, done a great job this year. Plans are being made for the chapter to improve and become more active next year. The Dean of College of Engineering and Technology has also issued a challenge for HKN to lead in many of the college functions and activities next school year. It is hoped that, in a few years, this chapter will have become one of the leading chapters in the country.

Kah-Eng Kuah  
Bridge Correspondent



# Epsilon Phi Chapter California Polytechnic State University San Luis Obispo, CA

Dear Sir,  
Enclosed is the Annual Chapter Report Summary from our Epsilon Phi Chapter. As you look over our list of activities, you will notice that they are few.

Regrettably, we at Cal Poly are currently of the mindset that is concerned more with non-academic matters. One such thing is a \$124 late add-on fee increase for the current term, which is only now being billed to us. Another is the lack of obtainable classes due to cut-backs (for example, the senior technical elective requirement was recently raised to 3 classes, but the number of technical elective sections for Fall Quarter was dropped from 12 to 3, with no increase in class size). Other problems involve bureaucratic administrative setbacks: a \$1 fee increase that was overwhelmingly approved last year by the student body to open our only school library on Saturdays was turned down just days ago by the head of the university—we are one of the few California public universities whose library opens only 6 days a week, closes early every night, and closes for mid-term holiday weekends.

If this seems like a bevy of complaints, it certainly is, and there are many other tales that should not saddle the thoughts of an outside observer. The result is that the environment of this institution is becoming less and less conducive to academia as time passes. We of the Epsilon Phi chapter feel that if we continue to strive for the existence of academic honor societies on this campus, and if we succeed in both survival of our chapter and organization of students and faculty toward improvement of our current financial and bureaucratic situation, then perhaps we will see a day when our library is open 7 days a week, and students can participate in the study of their chosen fields instead of protesting over a lack of classes.

Just as every dark story should be balanced with a brighter one, Cal Poly does have its organizational successes. Of these, the most notable is the local chapter of SWE (Society of Women Engineers), and over the last few years, we have been attempting to organize cross-club activities and corporate presentations with SWE, IEEE, ACM, and others. Perhaps we will not soon be building monuments or donating sculptures bearing the Eta Kappa Nu name to our university campus, but our plans for the near future will be no less honorable to ourselves, if somewhat less heralded

compared to chapters with greater faculty and student support.

We intend to continue as best as we can, working more intelligently to increase academic interest in the electrical engineering field, and striving to assist fellow students through tutoring and invitation of corporate representatives to our campus. Just as importantly, we hope to foster within the Cal Poly student body a feeling of organization, the sense that all of our diverse students and faculty share a common environment and resources. We need to work together to maintain our high standards of academic excellence, lest we open our eyes one day to find ourselves cleaning up after the pack.

Now for the foundation beneath the dream, since if only aspirations were important, then all candidates in a presidential election would be worth choosing. For the 1992-93 school year, we are inviting various companies to come and give presentations to our students, including IBM, Anderson Consulting, and others. We will continue to contact the highest academic achievers in our majors, inviting them to join our organization for pleasure, benefit, and esteem, and will offer our members and their guests various social outings or picnics. We will again participate in the Engineering Day at the Mall, primarily aimed toward junior high and high school students, in which various engineering organizations showcase projects and explain to onlookers the exciting fundamentals behind the displays. Our resume book will again be compiled and sold to companies, and we will continue to try to organize the local engineering clubs for corporate information presentations and campus activism to improve the academic environment.

In these ways and others, we of the Epsilon Phi chapter of Eta Kappa Nu hope to make our own small contribution to the overall improvement of education in the engineering fields and other fields. It may not seem like much, but if a thousand ants can build a hill, then perhaps our engineering solutions may help ease some of the educational problems. Besides, I like to think that we hold an advantage over the ants.

## OFFICERS AND DATA

### Fall and Spring 1991-92

President.....Marvin Hamon  
Vice-President.....Robert Nieman  
Treasurer.....Joshua Park  
Recording Secretary.....Christy Guerrero  
Corresponding Secretary.....Christy Guerrero  
Bridge Correspondent.....Robert Gee  
Faculty Advisor.....Eugene Fabricius

**Fall 1991**  
No. members.....30  
No. New Initiates.....11  
No. Business Meetings.....6

**Spring 1992**  
No. Members.....41  
No. New Initiates.....0  
No. Business Meetings.....6

**Third 1992**  
No. Members.....41  
No. New Initiates.....13  
No. Business Meetings.....8

## PROGRAMS AND ACTIVITIES

The **Activity, Old, New, or C** (Continued), and **Man Hours** are listed below, respectively:

**Fall 1991**  
IBM Presentation New 20  
Lockheed Presentation New 10  
Anderson Consulting C 3

**Spring 1992**  
Picnic New 12  
Disneyland Trip New 15  
Intel Presentation New 7  
Engineering Day at the Mall C 30

Sincerely yours,

Robert Allen Gee  
Bridge Correspondent and  
Industry Representative, 1991-92

## Beta Gamma Chapter Michigan Technological University

## OFFICERS AND DATA

**Fall 1991**  
President.....Donald Sherman  
Vice-President.....Scott Ackerman  
Treasurer.....Joel Kuhn  
Recording Secretary.....Mike Nurnberger  
Corresponding Secretary.....Brenda Bujanowski  
Bridge Correspondent.....Anthony Welter  
Faculty Advisor.....Dennis Wiitanen  
No. Members.....46  
No. New Initiates.....4  
No. Business Meetings.....4

**Spring 1992**  
President.....Brian Johnson  
Vice-President.....Al Stadheim  
Treasurer.....Brian Keyse  
Recording Secretary.....Jeff Borg  
Corresponding Secretary.....Dave Greyerbiehl  
Bridge Correspondent.....Marc Stoll  
Faculty Advisor.....Dennis Wiitanen  
No. Members.....48

No. New Initiates.....11  
No. Business Meetings.....5

## PROGRAM AND ACTIVITIES

The **Activity, Old, New, or C** (Continued), and **Man Hours** are listed below, respectively:

**Fall 1991**  
Options Night C 20  
Initiation Smokers C 9  
Informal Initiation C 40  
Formal Initiation C 17  
Lab Fee Forum New 8

**Spring 1992**  
Initiation Smokers C 10  
Professor of the Year C 20  
Informal Initiation C 45  
Formal Initiation C 18  
Electronic Bunny Sales C 120  
HKN Shirts New 6  
Spring Banquet C 32

## Zeta Beta Chapter Texas A & I University

## OFFICERS AND DATA

### Fall & Spring

President.....Lifford McLauchlan  
Vice President.....Sukento Sukirya  
Treasurer.....Jaime Garza  
Recording Secretary.....Yen How  
Corresponding Secretary.....David Hutchison  
Bridge Correspondent.....Mark Cortez  
Faculty Advisor.....Dr. John S. Linder  
No. Members.....25  
No. New Initiates.....13  
No. Business Meetings.....15

## FALL ACTIVITIES

### Initial Meeting

The activities for the year were planned during the initial meeting. Some of the activities set up were funding for the Monument, establish scholarship and equipment endowment funds, set the initiation week and banquet, and set some company tours up.

### Monument

The Zeta-Beta chapter decided to erect a monument to symbolize the perseverance and dedication the professors and students have instilled in the department. The first step we took in starting this project was to contact the Zeta Pi Chapter, State University of New York at Buffalo to obtain literature pertaining to their monument design.

The Zeta Beta Chapter decided to go with the monument design of Zeta Pi and began the process of getting the site approved by the university. The monument dealer assisted us in the dimensions, the foundation layout, and the price of the stone.

The monument is a podium shaped

column with the wheatstone bridge set in the front. There will be an inscription on the top and front of the column.

The inscription was completed and a contractor was obtained for the foundation.

Funding for the construction of the monument was provided through HKN alumni, faculty, and fajita sales. The stone has been purchased, and the location to set the monument has been established and approved. The actual setting and dedication of the monument will be set in April 1992.

### Fall Initiation Week

The initiation week was scheduled during the week of November 4-8, 1991. The forecasted events are listed below, indicating: Date, Officer in Charge, and Event:

**Monday**, Day of Wheatstone, Lifford McLauchlan, Library Clean Up.  
**Tuesday**, Day of Faraday, Patricia Falcon, Library Clean Up  
**Wednesday**, Day of Ampere, Jaime Garza, Fajita Sale  
**Wednesday**, Day of Volta, Yen How  
**Thursday**, Day of Ohm, David Hutchison, Car Wash  
**Friday**, Day of Coulomb, Mark Cortez, Game Day

Points were awarded to the initiates based upon their participation in the events. The outstanding initiate award was then presented to the initiate with the highest total and was also based on his/her character.

The initiation banquet was held the evening of November 9, 1991 at Shirli's Restaurant. The guest speaker for the evening was Dr. Clark of NASA from Washington, D.C. His speech concerned the opportunities in the space industry.

The awards presented at the banquet were the Best Initiate Award, and two Outstanding Service Awards.

### Scholarship and Equipment Funds

The Zeta Beta Chapter members wanted to engage in a project that would be beneficial not only to its members but also for the rest of the electrical engineering students, thus the purpose for the EE/CS Student Scholarship Fund. The members recognized that the project would be time consuming but considered it to be a worth while project. Because of the time required, we enlisted the aid of the student section of IEEE.

A student committee board was set up to overlook the responsibilities of the project. Some of the responsibilities of the committee are to set the guidelines and eligibilities of the scholarship, obtain alumni names, and find means for funding. The committee consists of one delegate and officer from each of the organizations, and no more than three members from each organization.

The electrical engineering department approved the scholarship fund and set up the account with the university. We hope to award four scholarships once the interest accumulates at a level to permit the awards of all four scholarships.

The equipment endowment fund was set up for the upper level electrical engineering labs and was named in honor of Professor Homi Gorakhpurwalla. The Texas A&I EE alumni at Rockwell International will provide the initial donations to set up the account. The student committee is also responsible for this fund.

## SPRING ACTIVITIES

The funding for the monument continued and the student committee board continued organizing the endowment funds. A special meeting was set up to determine the interest in taking a company tour.

During Engineering Open House, several area high schools send students to Engineer's Day at Texas A&I. At Texas A&I, the students go on tours as well as enter contests such as the Truss Bust. Several HKN members helped conduct tours for the area high school students. They also helped administer the tests.

### National Eta Kappa Nu Awards

The Zeta Beta chapter did not have a chance to nominate members for the Alton B. Zerby Outstanding Electrical Engineering Student Award or the Norman R. Carson Award for the Outstanding Electrical Engineering Junior since the material concerning these did not arrive before the end of the semester.

### Monument

The monument was erected in late March. Bushes and other plants will be added later to beautify the area. The monument and foundation were cleaned during initiation week.

### Spring Initiation Week

The initiation week was scheduled during the week of April 6-10. The forecast of events are listed below in this order: Date, Officer in Charge, and Event.

**Monday**, Day of Volta, Yen How, Library Clean Up  
**Tuesday**, Day of Ohm, David Hutchison, Library Clean Up  
**Wednesday**, Day of Ampere, Jaime Garza, Fajita Sale  
**Wednesday**, Day of Faraday, Sukento Sukirya  
**Thursday**, Day of Wheatstone, Lifford McLauchlan, Monument Clean Up  
**Friday**, Day of Coulomb, Mark Cortez, Game Day

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Points were awarded to the initiates based upon their participation in the events. The outstanding initiate award was then presented to the initiate with the highest total and was also based on his/her character.

The initiation banquet was held in the evening of April 11, 1992 at Shirli's Restaurant. The guest speaker for the evening was Mrs. Cathy Worzack. Mrs. Worzack talked about a new object oriented language used at Hewlett Packard. The awards presented at the banquet were the Best Initiate Award and an Outstanding Service Award.

TABLE OF CONTENTS

The **Activity**, **Old**, **New**, or **C** (Continued), and **Man Hours** are listed below, respectively:

**Fall Semester 1991**

Initial Meeting	New	3
Monument	C	40
Fundraisers		
Fajita Sales	Old	18
Scholarship Fund	C	5
Equipment Fund	C	5
Initiation Week		
a. Activities	Old	30
b. Banquet & Prep.	Old	6
Eng. Student Council	Old	15

**Spring Semester 1992**

Monument	C	50
Fundraisers		
Fajita Sales	Old	27
Scholarship Fund	C	5
Equipment Fund	C	5
Initiation Week		
a. Activities	Old	30
b. Banquet & Prep.	Old	6
Eng. Open House	Old	5
Eng. Student Council	Old	15

**Zeta Pi  
SUNY at Buffalo**

**Welcome** to the Zeta Pi chapter of Eta Kappa Nu! Located at the State University of New York (SUNY) at Buffalo. We are proud to be part of the world of electrical engineering at one of the nation's finest institutions.

**The year 1991-92** saw many activities for the Zeta Pi chapter which profited its members, the engineering department, the university, and the whole community. One of the most common activities was review sessions for sophomore and junior level electrical engineering classes. Throughout the course of the year, all officers participated in either organizing or presenting a review session. These sessions were always well attended, and the students greatly

appreciated that fellow students were trying to give them a helping hand.

**The past year** also saw both a fall and spring initiation ceremony. Fall initiation was held at a local banquet house and new initiates were inspired by short talks from several professors.

**One service** juniors in the electrical engineering department are very grateful for is our compilation of class surveys into a technical elective booklet. We solicit the ratings and comments of fellow students on all technical electives in the department and publish the results in a very informative booklet.

**Another informative activity** was electrical engineering junior night. Several professors were on hand to discuss academic paths as well as careers they may lead to in our field.

**In addition** to academic related activities, we held several charitable events also. Just before Christmas break, we held a food and clothing drive to benefit the city mission. Along with barrels of food and clothing, we were able to raise almost \$400! Also at this time, we sponsored a blood drive which helped the local Red Cross organization.

**Many activities** this past year were continuing and some were new. One thing that can be said for sure is that the upcoming year promises to be even better!

# MOVING?

**Send Address Changes to: HKN BRIDGE  
P.O. Box 2107  
Rolla, MO 65401**

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