



# THE Bulletin

of Tau Beta Pi

March 2004

A Publication  
for the Collegiate  
Chapters

## Why A Liberal Education?

by Henry E. Riggs, California Gamma '58

**U**NDERGRADUATE engineering programs struggle with increasing difficulty to squeeze more and more requirements into the curricula. As pressure increases to re-emphasize rigorous training in engineering science and additional practice in engineering design, there is the inevitable temptation to sacrifice the liberal arts elements of our curricula.

Conventional wisdom suggests that we want our young engineers to be broadly educated, but is it worth asking, Why? How are we so sure that a liberal education, an emphasis on humanities and social sciences, is important for engineers?

Several reasons. First, our graduates deserve the joy in their lives that the arts, literature, and history can provide. Wally Sterling, the president of Stanford University during my undergraduate days there, used to say that as an educated person, you should be able to entertain a group, an idea, and yourself. It's hard to do that on the basis of an education in thermodynamics and circuit theory alone. We are in the business of educating for life, not just for a job.

Second, we all agree that the driving force of science and technology within society is accelerating. Surely this is so within the developed countries of the world, but true to the cliché that we live in a global village, advances in communications have caused or permitted technology to be a driving force in the underdeveloped world as well. The simple question is this: Do we let the avalanche of unfolding new technology shape our



Cartoon by O. Weston

society, or do we harness the new technology to serve us in a world consciously shaped to meet the complex needs of its citizens? In a paraphrase of the old ends-means dichotomy, do the *means—technology*—shape the ends, or do the *ends—the definition of the society or culture that we seek*—shape the ways in which we employ the means? I hope it is the latter. It must be if we are to save this world from ourselves and for ourselves.

Not only does new technology redefine our physical world, it also affects profoundly how we think about our world. In his book *Turing's Man*, David Bolter expresses the issue this way: "It is not that we cannot live without computers but that we will be different people because we live with them. All techniques and devices have the potential to become defining technologies

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Issue available at [www.tbp.org](http://www.tbp.org)

because all, to some degree, redefine our relationship to nature.” A nice phrase, “defining technologies.” And Bolter goes on: “A defining technology develops links, metaphorical or otherwise, with a culture’s science, philosophy, or literature; it is always available to serve as a metaphor, example, model, or symbol.”

So the poet and the engineer are linked. The ideal of a liberal education demands that the poet be technology-literate and that the technologist be well acquainted with poetry and philosophy and history and, goodness knows, psychology. Incidentally, despite some prejudices to the contrary, we in higher education are having a good deal more success with the latter—acquainting the technologist with poetry—than with the former—developing broad technology literacy. Check the transcripts of undergraduates at almost any college or university these days. You will find a very uneven balance of trade between engineering on the one hand and humanities (including the arts) and social sciences on the other. The engineers are taking far more courses in the humanities and social science departments than the humanities majors are choosing in either engineering or science. Which group is getting the more liberal education? Who will be better able to make these linkages between technology and science, philosophy and literature?

And there is a final and overpowering reason why the engineer must be liberally educated. Society’s view of technology, of engineering, and of the engineer is increasingly complicated, perhaps better said: ambivalent. If we ignore the Luddites—both the original and more recent ones—the public’s faith in technology was, until about three decades ago, nearly boundless. We were confident of technological fixes to feed our expanding population; to overcome energy, water, and other resource shortages; and to solve our transportation problems. Even global warming would have been on the list, had we then recognized the problem. But in the last 30 years we have experienced disquieting second-order effects: atmospheric pollution, life-support capabilities exceeding desires, shifts in international commercial power, information overload, and changing personal values. These

and others have shaken our confidence in technology and frightened us away from unfettered pursuit of its application. Ogden Nash captured this increasing anxiety when he said, “Progress might have been all right once, but it has gone on too long.”

Fortunately, we have recovered from the dismal attitudes of the ’70s, when engineers, and perhaps to a lesser extent scientists, were perceived as the problem, not the solu-

tion. I’m glad of that, although continued debate as to the role of technology is both understandable and desirable. It is imperative that the engineer not simply be the passive subject of the debate. The engineer must be educated to participate centrally in these important moral, economic, and political discussions and struggles.

—Reprinted from the

March 1995 BULLETIN OF TAU BETA PI.

Henry E. Riggs is the retired president of Harvey Mudd College.

## Headquarters Server Update

By Raymond H. Thompson,

Systems Administrator

Tau Beta Pi completed the migration of the three Headquarters servers to Windows Server 2003 in December. The prior operating environment was Windows NT, which was serving our needs well, but Microsoft is dropping support for NT. Maintaining security is important, and the continuing exposure to vandals and exploits requires continuous support.

The upgrade did not go as smoothly as planned. Drivers for the network cards would not work, and new cards were required. Then one of the servers refused to power up. This was solved hours later by simply removing and reinstalling the CPU cage. Finally, ColdFusion (the web language) would not complete its installation. There was a flaw in the Macromedia install code that in certain configurations would fail.

Naturally, we encountered the flaw and had to devise a method to get around it.

In order to ensure that the Headquarters software applications would work with Server 2003, the entire installation had been successfully tested and completed without difficulty on a separate system. The difference is that the trial was made on a different machine with a slightly different configuration than the actual server. The lessons learned are that no matter how carefully something is planned, be ready for the unexpected, and that unless the test hardware and software are exactly the same, there will be problems.

After the dust settled, the upgrade was completed. Server 2003 should be a viable and supported product until at least 2007.



## National Chapter Project Rolls Along

THE 2002-06 EXECUTIVE COUNCIL has made another step toward establishing Tau Beta Pi as the premier honor society with the decision to endorse a nationwide chapter project that will “trademark” the Association. At spring District conferences last year, chapters generated hundreds of ideas for such a project, ranging from computer recycling, to tutoring, to water cleanup. From those, the Council chose a national project that combines simple engineering with community service, that is able to be replicated by chapters for any community, and that appeals to local and corporate sponsors. The project is *The Bicycle Project of Tau Beta Pi*.

The idea came from ASME members at Grand Valley State University in Grand Rapids, MI, who have succeeded with a similar program. This exciting project entails chapters’ soliciting bicycles within their communities, refurbishing them, and partnering with local charities to distribute the bikes to area children or homeless citizens. Recipients will also get helmets, locks, basic safety rules, and instructions for the care of their bicycles.

The project has three phases. Phase I was accomplished by starting a pilot test by the Alabama Delta Chapter at the University of Alabama in Huntsville. Phase II included making an appeal at the 2003 Convention for at least one chapter per District to volunteer to pilot a project during the next year. Phase III will be a roll out at the 2004 Convention for chapters to consider this as a preferred project.

Vice President Ellen D. Styles chose Alabama Delta as the pilot group because of its proximity to her and the willingness of the members to complete the project. She met with a few students and provided an overall question-and-answer session as well as a “Get Started/To Do List.” The students eagerly accepted the challenge.

Chapter President Michael L. Youngblood and others located space on the Huntsville campus as a storage and work area. A chapter advisor loaned tools to jump-start the project until funds arrived.

General Dynamics, Styles’ employer, provided a \$1,000 grant in addition to a commitment for assistance with the start-up kits for other chapters. The firm’s employees will also be given the opportunity to help with the project. Alabama Delta was also granted \$500 from the school’s student government association.

With cash in hand, one student developed a training class held in November at the university. Chapter members initially accepted three bicycles for the program, with the promise of five more. After final training, the program will swing into full gear.

In addition to repairing bikes, volunteers can work on developing relationships with bike shops, buying and stocking parts, writing grant proposals, serving as liaisons with charities for collecting and distributing bicycles, or advertising the project.

A win-win situation exists for all involved, and we expect the following results:

- **The Bicycle Project** will provide bicycles for children of economically challenged families struggling to meet their basic needs.
- **The Bicycle Project** will provide a means of transportation for a homeless person in order to assist with getting to an interview and securing or maintaining employment.
- For students and community volunteers, **The Bicycle Project** will provide a way to develop compassion and strengthen their commitment to community service.

More than half of the Districts have at least one chapter committed to establishing the pilot project for their District, for a total of 13 additional start-ups. Still needed are volunteers from Districts 2, 5, 8, 9, 10, 11, and 16. Please contact either Ellen Styles ([ellen@tbp.org](mailto:ellen@tbp.org)) or Pat McDaniel ([pat@tbp.org](mailto:pat@tbp.org)) if your chapter is interested in this project. We will provide step-by-step guidelines, samples of a grant request, and lots of encouragement. This is a great project, so don’t miss the chance to be one of its pioneers.



**General Dynamics employee Mark Morgida, Vice President Ellen Styles, and Alabama Delta President Michael Youngblood and his daughter overhaul a donated bike.**

## 2004 Chapter Anniversaries

100th	<b>Michigan Beta</b> Michigan Tech. University	Aug. 6, 1904
75th	<b>Tennessee Alpha</b> University of Tennessee	Nov. 15, 1929
	<b>Maryland Beta</b> University of Maryland	Nov. 21, 1929
50th	<b>Rhode Island Alpha</b> Brown University	Feb. 12, 1954
	<b>Rhode Island Beta</b> University of Rhode Island	Feb. 13, 1954
	<b>Ohio Zeta</b> University of Toledo	Feb. 20, 1954
25th	<b>Michigan Theta</b> Oakland University	Feb. 17, 1979
	<b>Virginia Gamma</b> Old Dominion University	Mar. 17, 1979
	<b>North Carolina Delta</b> University of NC at Charlotte	Mar. 23, 1979

## NEW! The Best People TBP's Job Connection

Members are invited to take advantage of a new career service set up specifically for Tau Beta Pi by JobTarget, a company serving members of professional societies. Unlike other on-line services, jobs posted to this board are aimed at attracting all disciplines of engineering. This service is also unique to others in that it offers job seekers a way to anonymously post their résumés. Other features include a Job Agent that can be set to screen jobs and email the job seeker when a listing meets his/her criteria.

To access this service, click on the "For Members" section at [tbp.org](http://tbp.org). Because access is protected, you will be asked to supply certain membership information. Post your résumé and browse through the jobs which are updated several times per week. More résumés are especially needed at this time as we begin to market to technology-based companies.

## Seeking Distinguished Alumnus Nominees

THE DISTINGUISHED ALUMNUS AWARD recognizes members who have continued to live up to the ideals of Tau Beta Pi as stated in our Eligibility Code and to foster a spirit of liberal culture throughout their careers. Their personal qualities of excellence and leadership serve as examples to collegiate members so as to influence their professional careers and personal lives.

Honored alumni have made exceptional efforts to demonstrate these ideals and to foster a spirit of liberal culture in local, national, and international arenas. They have demonstrated integrity, breadth of interest, adaptability, and unselfish activity.

Awardees are chosen by a committee of national officers and invited to the Convention to receive a special plaque and to be recognized. A \$2,000 Tau Beta Pi Scholarship will be named in honor of each Distinguished Alumnus.

Nominations are requested from

any member or chapter, which may nominate any alumnus or alumna (except a national official) for the award. There is no limit on the number of nominations. The following documentation in **four** sets must be sent to the Executive Director by March 15:

1. A one-page nomination form of biographical information and a summary of the achievements and/or contributions of the nominee exemplifying the objective of the award. (President's Book, C 32-33.)
2. A citation (one-page limit) appropriate for presentation, documenting the nominee's outstanding adherence to the Tau Beta Pi ideal of *fostering a spirit of liberal culture* in our society. It may be written by the nominating party.
3. Two letters of reference from persons (excluding the nominator(s) or sponsoring chapter president) knowledgeable about the nominee's contributions and achievements.

## New Member Benefits

**THE FOLLOWING SERVICES FOR members may be accessed through [www.tbp.org/members](http://www.tbp.org/members):**

- **TBP (The Best People) Job Connection**—employment service connecting top people with top companies. . . features anonymous résumé posting.
- **AnswerFinancial**—find the best rates for many types of insurance through this free quoting service.

## Educational Loan Fund

Since 1935, Tau Beta Pi has assisted student members with their financial needs while in school or with payment of their initiation fee through our Student Loan Fund. We are pleased to offer this service for students in amounts up to \$2,500 per member.

Repayment is required after three years, and a simple interest rate of 6% is charged from the day the loan is received. Interested students can obtain promissory notes and loan applications from chapter presidents, on-line, or from the national Headquarters.

## AlumNet

Tau Beta Pi's AlumNet Program pairs students with alumni to allow sharing of information about jobs and academe. To get in touch with an alumnus about a certain field, company, or institution, simply register on-line at [www.tbp.org](http://www.tbp.org). Click on the AlumNet link under "For Members" and follow instructions.

Complete the brief, three-to-four line contact request form, and alumnus contact information will be sent to you by email from the program coordinator. It is the student's responsibility to follow-up and to make contact with the alumnus.

Alumni can register on-line in the same way described above. Encourage your peers to try out this service. AlumNet is one more example of the unique value of membership in Tau Beta Pi and another opportunity to gain life-long benefits from the Association.

*"I've had a lot of good luck with the AlumNet program. The networking has been invaluable, and I really feel as though this is a great program for Tau Bates."*

— Raymond Auerbach, AZ Γ '04

## 2004 District Conferences

The District Program provides a vital link between the national organization and individual chapters. Each year the Directors gather students for regional conferences to provide both retiring and new officers opportunities to discuss chapter operations and to socialize. All chapters are urged to elect new officers before their District conference. New and outgoing officers are encouraged to attend.

The 2004 schedule is:

Dist.	Location	Date
1	Amherst, MA	Feb. 28
2	Syracuse, NY	Feb. 28
3	Pittsburgh, PA	Feb. 21
4	Washington, DC	Feb. 28
5	Orlando, FL	Mar. 20
6	Huntsville, AL	Feb. 27
7	Grand Rapids, MI	Mar. 27
8	Urbana-Champ., IL	April 3
9	Columbia, MO	March 5
10	Austin, TX	Feb. 6
11	Minneapolis, MN	April 3
12W	Idaho Falls, ID	Feb. 21
12E	Estes Park, CO	Feb. 28
13	Phoenix, AZ	April 3
14	Moscow, ID	April 3
15	Sacramento, CA	April 24
16	Las Vegas, NV	April 3

## Noblesse Oblige

People with God-given superior talents have the responsibility for superior performance in everything they do, for all their lives. We find this message in the great writings of antiquity; the idea is just as valid today as it was 1,000, 2,000, or 5,000 years ago.

In Tau Beta Pi we quote the medieval French proverb "*noblesse oblige*" to emphasize our belief in the relation between nobility and the highest obligation of good minds. Knowledge begets new knowledge, but it also creates new problems. The problems facing the world today cry out for the best technical efforts and the keenest understanding of human needs, human capabilities, and human values. They will not be solved by those who are willing to contribute only to the extent that they gain for themselves. The hope of the world is the professional person, he who has ability and is willing to give of himself for the betterment of all.

This is the message of the honor society to its new members, just as much as the recognition conferred by election and initiation, which are but a means to the end of developing the professional attitude among the most talented.

Reprinted from THE COUNCIL BULLETIN OF TAU BETA PI.

## Welcome Idaho Beta & Michigan Lambda

One new chapter chartered by the 2003 Convention has been installed with the initiation of its charter members this year. Idaho Beta officially came into being on January 17, 2004, at Idaho State University in Pocatello with Councillor **Alison L. Hu** as official installing officer. Michigan Lambda will be established on March 27 at Grand Valley State University in Grand Rapids with Vice President **Elen D. Styles** performing the official honors.

This will bring the number of active collegiate chapters of Tau Beta Pi to 228. Stories of the installations and the harboring institutions will appear in the Spring and Summer issues of THE BENT.

Integrity and Excellence in Engineering

Tau Beta Pi  
*the engineering honor society*

"I am proud to be a member of an organization in which one can gain valuable leadership experiences, receive a lifetime of career-enhancing benefits, and have the opportunity to give time to rewarding, socially responsible activities."

— Sarah West, student member  
University of Tennessee

Tau Beta Pi  
www.tbp.org

## Now Available

This striking Information Brochure was created to complement the new collection of posters unveiled last semester.

This replaces the "What do . . . have in common?" brochure. Order your supply on-line. We think that you will be impressed by the content and graphics.

## Student Assistance Fund

The Tau Beta Pi Student Assistance Fund was endowed in 1992 through the interest and generosity of C.C. Young, *Illinois Alpha '24*. Its purpose is to make funds available to student members of his and other chapters who would otherwise be without sufficient financial resources to remain in college. Repayment is not required, no interest is charged, and grantees are requested to help others in need should they become financially secure.

Interested students should write directly to Secretary-Treasurer Jim Froula at the national Headquarters in Knoxville, TN.



**THE Bulletin of  
Tau Beta Pi**  
P.O. Box 2697  
Knoxville, TN 37901-2697

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Permit No. 80  
Knoxville, TN

### Important Deadlines

- March 1  
Scholarship Application
- March 15  
Distinguished Alumnus Nomination  
Laureate Nomination
- March 21  
Outstanding Advisor Nomination
- April 1  
Approved Chapter Bylaws  
Constitution Ratification Ballot
- June 1  
Convention Bid for 2007

### THE Bulletin of Tau Beta Pi

(ISSN 8755-5670)

Vol. LXXVI    March 2004    No. 3

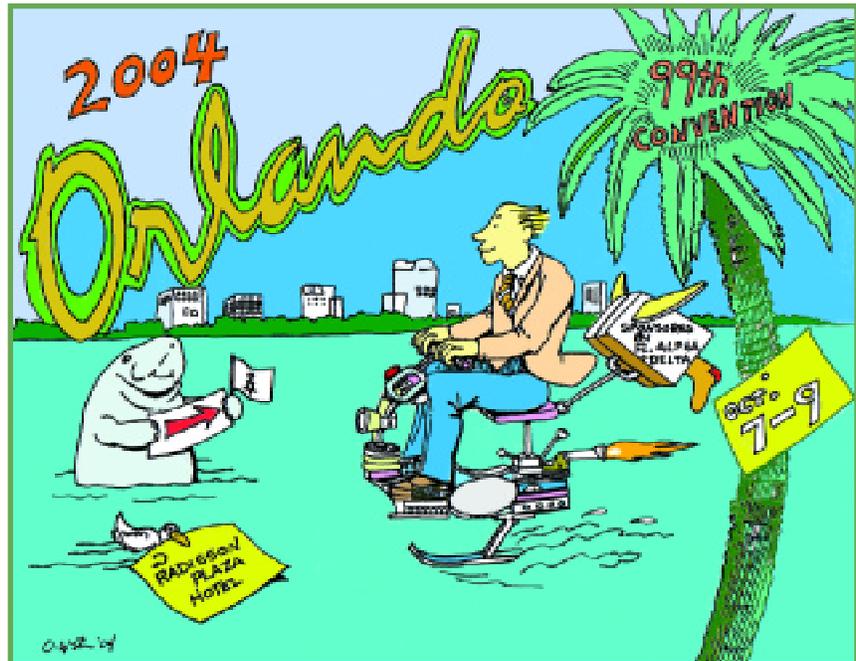
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### LET'S TALK! WEBSITE FEATURES DISCUSSION BOARD

Whether you are a student wondering if anyone out there has a great chapter fund-raising idea, a District Director wanting to start a lively debate about chapter membership, or an alumnus seeking a dialogue from Tau Bates working on the latest advancements in nanotechnology, the Discussion Board was created for you!

There is a link to the Discussion Board at [www.tbp.org](http://www.tbp.org). Since its activation in 2001, there have been thousands of hits, but few people are registering—which you must do to be able to post a message. When you register, your password is immediately emailed to you, so there is no waiting to begin your exchange. Here is an example of another useful benefit of membership in this great Association, so let's not be shy. Let's start talking!