Baylor University

School of Engineering and Computer Science

Board of Advocates

Spring Meeting – April 23, 2004

SBC Communications, San Antonio

Board members attending: Bob Finner, Robert Kincaid, Bill Mearse, Clell Oravetz, Rita Patterson, Dan Richter, Shawn Sedate, Brian Sheets, Steve Smith, Dean Swisher, Trent Voigt, Doug Verret, and Matt Watson

Board members absent: Rob Auld, Doug Holberg, Ed Maggio, Jeff Moody, Craig Nickell, Harold Spangler, and Mike Yates

Others attending: Steve Eisenbarth, Dean Ben Kelley, Jim Farison, Don Gaitros, Leigh Ann Marshall, Carolyn Muska, Greg Speegle, Cheryl Tucker

Welcome

Following a continental breakfast, Bill Mearse convened the meeting. He asked the Board members and others attending the meeting to briefly introduce themselves to the group. Following these introductions Clell Oravetz introduced Mr. John Monday, Vice President for Finance and Engineering Support, SBC. Mr. Monday commented to the Board members about the direction SBC is taking with the economic downturn. He reported that business analysts reported positive news about SBC's earnings. He said that, with the acquisition of AT&T Wireless by Cingular (majority owned by SBC), SBC will be well positioned within the competition for wireless service. "Wireless is the future," according to Mr. Monday, and SBC is working to integrate wire lines and wireless. He spoke further about FTTP (fiber to the premises) and SBC's plans for building broadband capabilities. Other potentials for FTTP include video transmission and voice-over-IP. SBC is looking to position for the future. Mr. Monday concluded his remarks by describing SBC laboratories containing opportunities for future engineers and computer scientists.

Dean's Report

Dean Kelley gave a report to the Board regarding the status of the School of Engineering and Computer Science. After outlining the Board meeting format, Dean Kelley gave a recap on last summer's negative publicity. He countered that with examples of positive publicity, including the most recent issue of the school's magazine, Synergy. He also reported to the group the occasion of hosting Dr. Bill Carden, author of the essay, "How to Kill a University." (The essay can be found at http://www.cribu.org/ .) Dean Kelley's report also included updates on budget, recruitment efforts, the Board of Advocates Scholarship, Rogers Building renovations, faculty issues, the ECS Living-Learning Center, the engineering graduate program, accreditation, and vocational missions.

Breakout Sessions

I. **Internships & Placement**, led by Ms. Carolyn Muska, Career Services, Baylor University
Ms. Muska and Brian Sheets co-led a session with Board members Clell Oravetz, Matt Watson, and Doug Verret. Ms. Muska presented an overview of the Office of Career Services, telling how it fits with Baylor 2012 imperatives, who staffs the office, where it's located, who the constituency is, and what the tools and challenges are. The Board members discussed their views of what companies look for in graduates, and they agreed that graduates should know more about what exists in industry. In fact, candidates are most valued if they (1) understand the company/industry for which they work and (2) have a large amount of computer skill. The group formed a matrix of topics related to industry, curriculum, recruiting, ad internships, and indicated touch points for each category. Specifically:

- Industry
  - How the Department of Labor statistics, provided by Ms. Muska, compare to the reality of offshoring
  - The decline in the number of engineering positions
- Curriculum
  - Emphasizing integration of engineering and computer science, i.e. the use of computer science to solve engineering issues, and vice versa
  - Studying software application integration (SAP, PeopleSoft, Oracle, etc.)
- Internships
  - Determining preferred internships
  - Attracting company attention by (1) advertising Baylor's new graduate engineering degrees and (2) contacting alumni and professional contacts to develop knowledge and interest in ECS students
  - Companies to evaluate the student as a good fit and prior success with the University
- Recruiting
  - Need for a centralized database containing University, ECS, and alumni information
  - Need for benchmarking with other universities and companies by asking the questions
    - What has been done that was (un)successful?
    - Why was a specific candidate hired?
    - What hard/soft skills are desired?

2. **Business & Global Opportunities**, led by Dr. Don Gaitros, Baylor University
Attending this breakout session were: Dr. Don Gaitros, Dr. Steve Eisenbarth (minutes), Dean Swisher, Bob Finner, Bill Mearse, Dan Richter, Shawn Sedate, Cheryl Tucker (minutes)

Dr. Gaitros asked the Board members to introduce themselves and tell about any international business experience.

Dean Swisher – He told of dealings with the Japanese scare.
Dan Richter – He mostly has a US base, which he stated was a real positive for his company. He has had dealings in the Middle East, India, and Philippines, with limited success.
Shawn Sedate – He said they buy globally and locally. As a retailer, they search globally for product.
Bill Mearse – He has dealt with 50 countries globally with 20 different industry groups. His speciality is with the oil/gas industry with Conoco/Phillips. They do consulting, systems integration, and

outsourcing (since the 80s in Manilla). He stated that he has learned that we need to focus on innovative ideas and stay ahead of the rest of the world. The world will follow America and we must stay ahead of the curve.

<u>Bob Finner</u> – He is with TRANE and they deal mainly with North American residential areas. They also do a lot of commercial globally. For example, he was in France for 4 years. For TRANE, the #1 growth area is China.

Dr. Gaitros began the presentation dealing with the "Super-Sized Economy."
---One situation may be a pro for one company and a con for another. Dr. Steve Gardner stated that we are still the super power, but the polar relationships have shifted. China's and India's economies will be bigger than the US by 2050. 3,000,000 US jobs have gone offshore since 1999. Many are white-collar, high tech jobs. US companies are helping with internet, sharing knowledge databases, and wireless technology.
---The magnitude of offshore outsourcing and the reason for decline in high-tech jobs in the US is unknown. This could be because of weak domestic economy, weak world economy, productive improvements, or offshore outsourcing
---The question becomes how does BU prepare our students? Baylor produces problem solvers, innovators, mature students, with some skills and global knowledge. Mr. Finner brought up an example from TRANE. They need employees to know how to lead a team in Shanghai, test product in Malaysia, produce product in Taiwan, and sell product in USA. He suggested that we need to have in some class, a strong overseas ethical infrastructure taught. It's not always what one does personally, but how people perceive things. The members discussed a possibility of student sharing forums, where foreign graduate students could lead out and share with Anglo students. Perhaps student organizations could pursue these forums.
---What the US must do to maintain its superpower status? We must have better education--China, India, and EU are catching up. We must improve our math, science, and engineering in middle and high schools. The US needs to be a destination for highly talented foreign scientists.
---The US needs to make major investments in Research and Development. Funding must increase to stimulate high-tech.
---Where are the high-tech jobs?
---What is ECS doing about business and global opportunities? Baylor has 23 exchange programs, 25 summer programs, 32 semester programs, and ECS has our Maastricht program. In our program, they mainly teach Entrepreneurship, technical writing, math, and business law to our students over there. Our ECS degrees require various amounts of foreign language to graduate.
---The Board members were encouraged by said ECS is going in the correct direction with these actions. The slide dealt with "what professionals need in the way of global education"—project management skills, management skills for remote teams, deal with cultural differences, solve business problems with technical solutions, good written and oral communications, leadership skills, skills in software testing, solid business skills, and international experience. Some Board members suggested trying an overseas internet project--use the Maastricht students, choose a project, and work it out on the phone and over the internet. This would be cheaper than physically going to Maastricht. The bridge building project would be a great example to try. Perhaps a summer sabbatical could be awarded to a faculty member to develop this idea.
---Dr. Gaitros explained that we only really touch the surface of the above issues in our current classes. The Board members suggested making a design project and let the students actually try to convince a business to use the design. The Board members stressed that a student must be well-rounded with more than just book learning. Bill Mearse and Dean Swisher said they would volunteer to come to the school to stress this point if we desire.

---What is CSI doing for tomorrow? The department wants to study software engineering with more business courses and new courses, develop a software engineering degree/program, and are presently working on a $100,000 National Instrument program development. CSI would like to have an ethics/tech writing/tech speaking course(s). Bill Mearse was concerned about the danger of diluting a course too much to be any good. The Board members suggested taking out foreign language and teaching more communication/cultural skills because so much of the world speaks English. Bill Mearse stated that he would be glad to talk to the Provost about reducing foreign languages from a businessman's perspective if we deemed appropriate. This would not be to get rid of it all together, but to reduce it or enhance it with multicultural communications skills—perhaps even to replace a foreign language class with a globalism-business course. The Board members would like to see a relationship between ECS and Entrepreneurship grow.

---In summary, the Board members discussed:

(1) Creating a forum of international students and US citizen students. Bill Mearse or Dean Swisher volunteered to come speak to the group.
(2) The foreign language in the curriculum—there needs to be more culturally oriented classes. There also needs to be more oral communications practiced than written communications.
(3) There is not as much outsourcing as one would think.
(4) There needs to be more work done together remotely.
(5) Trends in high school and lower are not meeting college needs.

3. **Funding & Resources**, led by Mr. Mark Minor, University Development, Baylor University Gary Stokes (University Development), Jim Farison, Bobby Kincaid, Rita Patterson, and Steve Smith attended this session. Mark Minor's presentation covered (1) his position and role at Baylor, (2) Baylor's national rankings and programs, (3) faculty and student strengths and student costs, (4) Baylor budgets and enrollments, and (5) contribution results during recent years. After the presentation, the discussion began and continued until a few minutes after noon. Mostly, it was determined that the school needs to:

- Take a stronger, more dedicated effort to tap into corporations in the Dallas area (Trent Voigt was fairly adamant in this because he thinks there is no real technology school up there besides UD and it isn't really that good)
- Prepare a list of specific needs that MGOs, the dean, and others can use with potential donors
- Think about relating to corporations through a "job-shop" kind of arrangement in which they can come to Baylor and have small teams of juniors, seniors, and grad students solve problems or design discrete products/software for them. Trent said he's been doing this with some vendors in India (outsourcing) for little projects in the $10,000 range but would rather let Baylor students do it. He believes there are many companies like his in the Dallas area that would jump at the chance to do this.

ECS Faculty Research & Graduate Programs; Their Influence on Undergraduate Education

Following a lunch break, the Board of Advocates reconvened for a presentation by Dr. Greg Speegle, Associate Professor of Computer Science and Director of the Computer Science Graduate Program. Dr. Speegle summarized the role of the University in its graduate programs and stated there is tremendous competition for resources by both undergraduate and graduate programs at Baylor. He proposed maintaining a balance between the two with a focus on research and teaching. Dean Kelley

added that ECS aims to hire tenure track faculty who are capable and willing to be active in both teaching and research.

Closed Session

The Board of Advocates convened in a closed-door session, without Baylor personnel present. The Board listed several initiatives:

- The University Development major gift officers need to learn the humanitarian spin of ECS initiatives in order to better direct donations to ECS.
- ECS should develop corporate partnerships, such as Curves, Int'l, and seek those partnerships in DFW and Austin metropolitan areas.
- The School of Engineering and Computer Science should work to team the departments of engineering and computer science with partners in the Business School.
- Faculty research and teaching should be measured by faculty member and by department.
- The School should establish and define metrics for processes such as tenure and teaching.
- The School should seek to validate and realign with Baylor 2012 changes, if necessary and communicate its strategy for meeting 2012.
- Before the next Board of Advocates meeting, provide more pre-meeting information. During the next meeting, presentations should be balanced with time for Board interaction. Additionally, Board should meet in closed session for some time during each meeting.
- ECS should stop advertising during Baylor sports broadcasts.
- ECS should stop requiring foreign language and focus more on global cultural issues facing business.

Meeting Conclusion

Following the closed session, the Board reconvened with Baylor personnel for the day's summary. Brian Sheets presented the summary of the Internships & Placement breakout; Steve Eisenbarth summarized the Business & Global Opportunities breakout, and Trent Voigt summarized the Funding & Resources group.

Dean Kelley recognized Board members who were rotating off the Board of Advocates (Rob Auld, Ed Maggio, and Gary Stripling). He also announced Board members who were beginning a new three-year term: Bob Finner and Brian Sheets.

The next meeting of the Board of Advocates will be October 8, 2004, at Baylor University. Following the Friday meeting, the Fall Student Forum will again be held. On Saturday, October 9, the Baylor football team will host Missouri. (The Board stated the importance of students being involved in activities outside the classroom, such as in students clubs. They thought it would be a good idea to have one or more board members give a talk to the students during or before the Fall meeting about the importance of extra curricular activities.)

The meeting concluded at 4:00 pm.